Title: Beyond the surface: board of directors' effectiveness regarding tasks and corporate social responsibility activities in Nigeria

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BEYOND THE SURFACE: BOARD OF DIRECTORS' EFFECTIVENESS REGARDING TASKS AND CORPORATE SOCIAL RESPONSIBILITY ACTIVITIES IN NIGERIA

By

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A thesis submitted to the University of Bedfordshire in partial fulfilment of the requirement for the degree of Doctor of Philosophy

July 2018

DECLRATION

I, Abubakar Mohammed Zayyana declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

“Beyond the Surface: Board of directors’ effectiveness regarding tasks and corporate social responsibility activities in Nigeria”

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6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. Parts of this work have been presented at conferences as indicated on page viii

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BEYOND THE SURFACE: BOARD OF DIRECTORS' EFFECTIVENESS REGARDING TASKS AND CORPORATE SOCIAL RESPONSIBILITY ACTIVITIES IN NIGERIA

ABUBAKAR MOHAMMED ZAYYANA

ABSTRACT

Despite the growing interest on board literature, what makes a board effective is still unclear. Recent events highlighting corporate abuse cast doubt on the efficacy of the existing governance codes. The main aim of this research is to investigate board effectiveness beyond board demographic variables. Specifically, the study examines the systematic relationships between board characteristics, board processes, board tasks and corporate social responsibility (legal and ethical) activities in Nigeria. In this research, corporate social responsibility activities, rather than corporate financial performance are considered. This is essential, as in addition to the Nigerian corporate governance code requirements, unethical and illegal activities of directors are the genesis of most of the previous corporate scandals. Moreover, an effective CSR strategy has the potential to influence financial performance in the long-term.

Building on previous studies, an existing framework has been adapted; however, the results of semi-structured qualitative interviews show that certain board processes (cognitive conflict and effort norms) as well as board tasks (resource provision and strategy advisory) need to be amended in order to suit the Nigerian context. Additionally, the current study employs the theoretical lenses of the agency, resource dependency and stakeholder theories to investigate board effectiveness.

A survey questionnaire generated through Qualtrics software was sent to all directors (1,430) of firms listed on the Nigerian Stock Exchange. A response rate of 214 (189 usable), representing fifteen per cent of the total sample was received and Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to test the hypothesised relationships. The empirical findings show that board processes variables are more important than board characteristics in regard to board effectiveness in Nigeria. Among the board processes variables, knowledge utilisation has the strongest effect on board task (control and service), followed by board level of challenge. Commitment amongst board members has a significant impact on service task, but not on control task. Both board control and service tasks have greater influences on legal and ethical corporate social responsibility activities in Nigeria. Finally, board processes do not have mediating effects on the relationship between board characteristics and board tasks. However, board (service and control) tasks mediate the link between knowledge utilisation and CSR legal and ethical activities, but only service task has an indirect effect on the relationship between board commitment and CSR. Surprisingly, these board task variables serve as suppressors, rather than mediators on the relationship between board challenge and CSR.

The current study contributes empirically and theoretically to board literature by examining factors responsible for board effectiveness, beyond board characteristics (the usual suspects) in Nigeria. Similarly, the study contributes to board processes literature by introducing a new input-process-output model that includes CSR activities. The findings of this research are expected to provide information to boards of directors and policymakers on what boards do to influence board task effectiveness and determine the effects of board task on corporate social responsibility activities. The study provides evidence which highlights the important need for board scholars to consider other variables, such as board processes and tasks, rather than fully relying on board structure when investigating board effectiveness.

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DEDICATION

I hereby dedicate this thesis to the Almighty God (SWT) for keeping me alive and healthy to complete this study. I also wish to dedicate this thesis to my late parents Alhaji Mohammed Zayyana and Hajiya Amina Mohammed for their efforts and roles in my upbringing.

CONFERENCES PRESENTATIONS FROM THIS THESIS

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LIST OF ABBREVIATIONS

CG	Corporate Governance
OECD	Organisation for Economic Co-operation and Development
RBS	Royal Bank of Scotland
UK	United Kingdom
US	United States
CEO	Chief Executive Officer
LBN	Lever Brothers Nigeria
NSE	Nigerian Stock Exchange
CBN	Central Bank of Nigeria
PLC	Public Listed Company
NEDs	Non-Executive Directors
EDs	Executive Directors
CSR	Corporate Social Responsibility
IFF	Illicit Financial Flows
APC	All Progressive Congress
CDI	Corruption Perception Index
PLS-SEM	Partial Least Squares Structural Equation Modeling
FX ACT	Foreign Exchange Control Act
NEPD	Nigerian Enterprises Promotion Decree
SEC	Security and Exchange Commission
CAMA	Companies & Allied Matters Act
FRC	Financial Reporting Council
JSTOR	Journal Storage
ABS	Association of Business School

ROA	Return on Assets
CF ROTA	Cash Flow Return on Total Assets
ROI	Return on Investment
ROE	Return on Equity
EPS	Earnings Per Share
FTSE	Financial Times Stock Exchange
BEE	Black Economic Empowerment
S&P	Standard and Poor
CSRP	Corporate Social Responsibility Performance
FAMA	Fortunes America's Most Admiral
CPDR	Corporate Philanthropic Disaster Response
KLD	Kinder, Lydenberg, and Dominis
ASX	Australia Securities Exchange
GRI	Global Reporting Initiatives
CDP	Carbon Disclosure Project
GHGE	Greenhouse Gas Emissions
NPOs	Non-Profit Organisations
CMR	Complete Member Research
CBI	Convention on Business Integrity
CGRS	Corporate Governance Rating System
SCGN	Society for Corporate Governance Nigeria
CAC	Corporate Affairs Commission
ICAN	Institute of Chartered Accountants of Nigeria
MD	Managing Director
CMB	Common Method Bias
PIS	Participant Information Sheet
REC	Research Ethics Committees

BMRI	Business Management Research Institute
MCAR	Missing Completely At Random
EM	Expectation Maximization
CB-SEM	Covariance-Based Structural Equation Modeling
SEM	Structural Equation Modeling
HR	Hierarchical Regression
OLS	Ordinary Least Squares
AVE	Average Variance Extraction
SPSS	Statistical Package for Social Sciences
VIF	Variance Inflation Factor
VAF	Variance Accountant For
NHS FTs	National Health Service Foundation Trusts.

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.0 Introduction

In this chapter, the introduction and background of the research are discussed. It presents a brief background to the research and definitions of corporate governance (Section 1.1). The statements of the problems that triggered this study are discussed in section 1.2, followed by the research questions and objectives in section 1.3. Justifications for conducting this study were given in section 1.4. Research contributions were highlighted in section 1.5. Finally, this chapter presents the structure of this thesis in section 1.6.

1.1 Brief Research Background

The importance of good corporate governance (CG) practices are recognised all over the world, as it is generally believed that a sound and healthy business environment improves overall economic stability and general well-being of a society. The term CG had been unpopular in previous decades, but has become an attractive concept especially after the collapse of some big firms. These previous corporate scandals were attributed to ineffectiveness of board of directors. The board of directors' effectiveness is crucial in the business environment and in the economic growth of any nation; therefore, it is essential to understand what board effectiveness is and what makes a board effective?

This increasing attention to corporate governance can be viewed coming from different interest groups, including the Media; with wide coverage and debate on the topic, reviews and updates of corporate governance codes from various governments in both developed and developing nations, and introduction of legislation relating to CG by some governments (such as the Sarbanes-Oxley Act 2002). Academicians have also made abundant contributions to corporate governance, in general and board of directors in particular; however, the literature is increasingly fragmented, coming from diverse disciplines, such as economics, accounting, finance and management that also use a variety of theoretical perspectives. There is no unanimity on what board effectiveness is and the key determinants of board effectiveness are vague and varied.

Similarly, there is no universal definition of corporate governance. Nevertheless, most of the definitions consider one, two or all the principles of corporate governance which include transparency, accountability, responsibility and fairness. Sir Adrian Cadbury explains that a governance system involves financial and non-financial controls by which corporations are directed and controlled (Cadbury, 1992). However, this is a narrow definition; a broader one was given by the Organisation for Economic Co-operation and Development (OECD) as the system that manages the relationship between a board, stockholders and other stakeholders, and it serves as a vehicle where the objectives of a firm are set and channels of obtaining these objectives and monitoring performance are clearly determined (De Andres *et al.*, 2005).

Additionally, corporate governance is viewed as a relationship between different actors, both within and outside the firm which includes board members, managers, shareholders and other stakeholders (Maier, 2005). These broader definitions of corporate governance are more acceptable in the business world nowadays because corporations, through their boards, are expected to satisfy the interest of both shareholders and stakeholders and to operate in ethical and moral behaviors which enhance long-term benefits.

At the centre of corporate governance debate and reforms are the board of directors (Roberts et al., 2005). As mentioned earlier, the previous corporate crises were attributed to the ineffectiveness of these corporate leaders, thus effective boards are expected to mitigate causes of the previous scandals. For businesses to flourish, effective boards are essential, especially in Nigeria where corruption is endemic (Idemudia and Ite, 2006), there is weak legislation, inadequate social amenities and incompetency of board of directors is common in the business environment. Previously, Nigerian companies and the government paid minimal attention to issues relating to corporate governance, but recent events have brought corporate governance and board of directors to the forefront.

Corporate governance scholars continue to make contributions on board of directors. However, these studies mimic the tradition of other researchers from previous studies (Daily et al 2003), where the emphasis is on board structure and firm financial performance with minimal considerations on the directors functioning and corporate social responsibility activities. There is a growing need for comprehensive research on board effectiveness, in which emphasis will be given not only on board structure and financial performance, but other variables, such as board processes, board task and corporate social responsibility activities. This thesis investigates board effectiveness beyond the traditional approach and examines the relationships between board characteristics, processes, board task and corporate social responsibility activities in Nigeria.

1.2 Statement of the Problem

The concept of corporate governance is more salient after the global financial crisis and high-profile failures of some big companies, in both developed and developing countries. There is a general consensus that poor corporate governance practice, specifically the board of directors' ineffectiveness and unethical activities, led to the previous corporate scandals (Yuksel, 2008; Mallin, 2010; Lakshan and Wijekoon, 2012).

Enron, for example, which was founded in 1985, collapsed in December 2001 simply because of unethical behaviour of the executives, Arthur Anderson, (the firm' external auditor), and the board of directors (Ailon, 2015). The executives engaged in fraudulent activities and overstated the company's assets, the external auditors connived with the management to defraud the firm, and the board members failed to effectively perform their oversight function.

The crisis affecting the Royal Bank of Scotland (RBS) and some other large UK banks in 2008 show clearly the corporate governance abuses by the boards of these banks. Similar to the US banking crises, the directors of these UK banks engaged in excessive risk-taking that resulted in higher performance in the short-term, so that they could receive huge bonuses. Sir Fred Goodwin, the then CEO of RBS, engaged in the extravagance of the bank's assets and directors received unjustifiable remunerations which were far above their performance (Mallin, 2010).

Similar corporate scandals were also witnessed in Nigeria. The scandal of Lever Brothers Nigeria (LBN) in 1998 is a popular case to cite. The directors of LBN engaged in inside dealings and fraudulent business transactions. According to a documentary report by Ahunwan (2002), Lever Brothers engaged in financial transactions with companies in which some directors of LBN held shares. Evidence also emerged that a moral hazard arose, as a particular director of the firm had over eighteen cars at the expense of the shareholders and almost all major contracts were handled by him indirectly. Sources indicate that recruitment and certain crucial decisions of the firm were based on favoritism and ethnicity, rather than competency. In 1998, LBN was suspended by the Nigerian Stock Exchange for submitting a misleading annual return (Ahunwan, 2002).

Similarly, between 2006 to 2009, the Central Bank of Nigeria (CBN) declared ten commercial banks as insolvent and dismissed eight of these banks management teams for corporate governance abuses and unethical activities (Peters and Bagshaw, 2014). Moreover, corrupt behaviours, poor governance practices and fraudulent activities were engaged in by the directors of some firms, such as Cadbury Nigeria, Halliburton Nigeria and a numbers of banks, including Oceanic Bank, Intercontinental Bank and Union Bank. These were reported to be the genesis of their failures (Adegbite and Nakajima, 2011; Ejuvbekpokpo, 2013).

Recently at the Oando's Nigeria PLC 40th annual general meeting, investors held a protest requesting for the immediate resignation of their group CEO, and change of the management team as well as the board of the firm, based on allegations of gross mismanagement and corporate governance abuses. The aggrieved shareholders completely rejected the higher remuneration package enjoyed by the CEO, and they heavily criticised the 2016 annual report and accounts for material misstatement, deeming it misleading (Ogwu, 2017). Ernest & Young, the company's auditors, raised concerns about the possibilities of Oando's continuance as going concern; 33.9 billion Naira is reported as the comprehensive loss in 2016 and 56.6 billion Naira in 2015 (Ogwu, 2017).

Due to the failure of governments in Nigeria to provide adequate social amenities, corporations are implicitly expected to provide those social services by the host community (Eweje, 2007); such expectations include provisions of portable water, health facilities, good roads, educational support and programmes that reduce the negative effect of their operations to the environment. Failure of firms to provide these facilities can lead to situations where by the host community turns against them, such as the case of people of Ogoni land in the Niger Delta region and the Dutch Shell Petroleum Development Company (SPDC).

The Niger Delta region serves as the main area in Nigeria where activities of oil extraction and production take place and it accounts for large amount of the country's revenue (Ejumudo et al., 2012). However, the region is extremely underdeveloped with a lack of basic amenities, abject poverty and social unrest. SPDC has been exploring oil in the region since 1958 (Eweje, 2007) and their activities have destroyed the livelihoods (farming, hunting and fishing) of their host community, due to the environmental degradation of farmlands and fishing as a result of oil exploration and production (Ejumudo et al 2012). The company has been widely criticised by the community for unethical and irresponsible attitudes.

As such, the company has been facing difficulties due to youth restiveness which has resulted in a wide negative campaign, revolts, riots, armed robberies, kidnappings and vandalism of company equipment. Consequently, this has led to a reduction in daily production and sends a dangerous signal to potential investors in the region (Eweje, 2007) and by extension to the whole country. It can be argued that proper and sufficient CSR initiatives will reduce or eliminate the youth restiveness and other disputes between the host community and companies. As such, an effective and responsible board should be able to curtail these unethical behaviours which lead to social unrest through establishing a sound and an effective social responsibility strategy.

In all the corporate crises discussed above one thing is common: board ineffectiveness. The board of directors as the main internal corporate governance mechanism, failed to perform their duties effectively and are therefore, heavily blamed for the crises. In both developed and developing countries, each of the aforementioned scandals led to increased attention on how to improve the existing corporate governance system, in order to ensure boards performed their duties effectively, as well as improve firms' performance. With this, the confidence of investors and the general public could be restored. Most recommendations of the corporate governance codes intend to strengthen the board's structure and ensure directors are capable of mitigating the causes of the previous crises. However, regardless of the various efforts to improve board structure, there are still cases of corporate abuses and board ineffectiveness. Recent happenings of corporate abuse cast doubt on the efficacy of these codes. Moreover, despite abundant literature on boards, there is still no consensus on what board effectiveness is and what factors are responsible for an effective board.

1.3 Research Questions and Objectives

Existing board literature is skewed towards a direct 'input-output' approach, where the impacts of board characteristics on a firm's performance, whether financial or social, are directly investigated (see Figure 1.1). Notwithstanding, recently there has been a paradigm shift in the board literature where some scholars, mostly from developed nations, have employed input-process-output approach (see Figure 1.2) to study board effectiveness (Forbes and Milliken, 1999; Wan and Ong, 2005; Bettinelli, 2011). The current study continues in this direction. The main aim of this research is to examine board effectiveness beyond the input-output approach and open, for the first time, the 'black box' in order to examine the systematic relationships between individual board characteristics, board processes, board task and corporate social responsibility (legal and ethical) activities, with evidence from directors of listed firms on the Nigerian Stock Exchange (NSE).

This study follows the tradition of board research by considering board effectiveness in relation to board task (Zahra and Pearce, 1989; Forbes and Milliken, 1999; Minichilli *et al.*, 2012) and corporate social responsibility (Wang and Coffey, 1992; Johnson and Greening, 1999).

In view of the above aim, this study has the following research objectives:

RO1: To investigate the influence of individual board characteristics, as outlined in the Nigerian corporate governance code, on board processes of the Nigerian listed firms

RO2: To examine the effect of board processes on board tasks of the Nigerian listed firms

RO3: To establish the link between board tasks and corporate social responsibility (legal and ethical) activities, in the context of the Nigerian listed firms

RO4: To find the mediating effect of board processes on the relationship between board characteristics and board tasks

RO5: To investigate the indirect effect of board tasks on the relationship between board processes and corporate social responsibility (legal and ethical) activities, in the context of the Nigerian listed firms

In order to achieve the stated aim above and address the research objectives, this study has the following questions:

RQ1: What is the relationship between board characteristics and board processes of the Nigerian listed firms? This involves examination of the effects of board size, board composition, board gender diversity and CEO duality on board commitment, challenge and knowledge utilisation.

RQ2: What is the empirical relationship between board processes and board tasks (control and service tasks) in the Nigerian context?

RQ3: To what extent do board tasks influence corporate social responsibility (legal and ethical) activities in the context of the Nigerian listed firms?

RQ4: What is the mediating, indirect effect of board processes on the relationship between board characteristics and board task in the Nigerian context?

RQ5: What is the mediating, indirect effect of board tasks on the relationship between board processes and corporate social responsibility (legal and ethical) activities in Nigeria?

Table 1.1: Research Objectives and Questions

Research Objectives (ROs)	**Research Questions (RQs)**
RO1: To investigate the influence of individual board characteristics, as outlined in the Nigerian corporate governance code, on board processes of the Nigerian listed firms	RQ1: What is the relationship between board characteristics and board processes of the Nigerian listed firms? This involves examination of the effects of board size, board composition, board gender diversity, and CEO duality on board commitment, challenge and knowledge utilisation.
RO2: To examine the effect of board processes on board task of the Nigerian listed firms	RQ2: What is the empirical relationship between board processes and board task (control and service tasks) in the Nigerian context?
RO3: To establish the link between board tasks and corporate social responsibility (legal and ethical) activities, in the context of the Nigerian listed firms	RQ3: To what extent do board tasks influence corporate social responsibility (legal and ethical) activities in the context of the Nigerian listed firms?

RO4: To find the mediating effect of board processes on the relationship between board characteristics and board tasks	RQ4: What is the mediating, indirect effect of board processes on the relationship between board characteristics and board task in the Nigerian context?
RO5: To investigate the indirect effect of board tasks on the relationship between board processes and corporate social responsibility (legal and ethical) activities, in the context of the Nigerian listed firms	RQ5: What is the mediating, indirect effect of board task on the relationship between board processes and corporate social responsibility (legal and ethical) activities in Nigeria?

1.4 Rationale for the Study

Previously, the board of directors' effectiveness in both developed and emerging economies received little attention in the corporate environment and academic circles. However, this has changed over time as now many countries have established a good system of corporate governance which is expected to guarantee board effectiveness. Moreover, scholars continue to make empirical contributions in this regard. Nevertheless, these studies keep on using the traditional approach and methodology of earlier findings on board effectiveness, even if such an approach seems obsolete. Thus, what is lacking now is a new perspective in board literature.

Generally, evidence of what makes boards effective is still contradictory. These equivocal evidences are due to the input-output approach followed by researchers (Daily *et al.*, 2003), whereby boards are treated as a 'black box' with considerable efforts to investigate the impact of some board characteristics (input), such as board size, diversity, proportion of outside directors and CEO duality on firm performance (output).

Gabrielsson and Huse (2004), reviewed studies of board effectiveness from six different academic sources and reported that 99 out of 127 articles have used an input-output approach. Similarly, a narrative (systematic) review of literature conducted in this thesis, (see Chapter 4), evinces that the majority of articles reviewed investigates the direct relationship between input and output. These kinds of studies use archival data and employed agency theory, either alone or as a leading theoretical framework, for example see Dalton et al., (1999), Dahya and McConnell (2005), O'Sullivan et al., (2016) and Volonté (2015). Similar studies from emerging markets include Abor and Biekpe (2007), Kajola (2008), Babatunde and Olaniran (2009), Ehikioya (2009), Uadiale (2010), Ujunwa (2012), Akpan and Amran (2014), Ilaboya and Obaretin (2015) and Wahba (2015).

Empirical studies from this approach present equivocal findings (Pye and Pettigrew, 2005) and an over-reliance on these 'usual suspects' led researchers to ignore the influences of board internal processes on board-level and firm-level performance. Recently researchers were called to dismantle the fortresses (Daily *et al.*, 2003) and open the 'black box' to identify the intervening processes between board characteristics and corporate performance (Pettigrew, 1992; Huse *et al.*, 2011).

Additionally researchers should not restrict firm performance on financial performance. Benefits from corporate social responsibility (CSR) should also be considered as it enhances firm performance, especially in the long-term. Previous studies that investigate the link between board characteristics and CSR are mostly from the US and are minimal (Wang and Coffey, 1992; Ibrahim and Angelidis, 1995; Johnson and Greening, 1999; Dixon-Fowler et al., 2017; Hafsi and Turgut, 2013; Leslie et al., 2013; Shaukat et al., 2016). There is a dearth of research on this aspect (Coffey and Wang, 1998; Webb, 1998; Villiers et al., 2011), especially in developing countries.

In Nigeria, a handful of studies, such as Uwuigbe and Uadiale (2011) and Oba and Fodio (2014), tried to link board structure with CSR. These studies and those conducted in developed economies concentrated mostly on an input-output approach, CSR disclosure, and used secondary (archival) data as the only source of data. Similarly, these studies continue to present equivocal findings. Therefore, more studies are needed to investigate *what* board structure *does* to affect social performance instead of *which* board structure affects CSR performance. In other words, scholars should consider the impact of board processes on the relationship between board structure and firm (financial or social) performance.

The few studies that contemplate this approach of considering the influence of board processes are mostly from developed economies and are focused on the relationship between board structure, processes and board or firm effectiveness (Wan and Ong, 2005; Zona and Zattoni, 2007; Minichilli *et al.*, 2012). The only exception is the doctoral thesis of Ogbechie (2012) which investigates the relationships between board structure, processes and task effectiveness of Nigerian listed firms. However, this study did not examine the influence of board task on firm-level effectiveness. Similarly, Ogbechie's work uses limited variables and a traditional analysis tool that does not account for measurement error.

To the best of the researcher's knowledge no empirical study has been conducted, especially on a developing nation, which investigates the systematic relationships between board characteristics, board processes, board task, and CSR. Following Li et al., (2008), this study argues that the effectiveness of any board characteristic, depends on its positive impact on CSR activities which provides long-term corporate performance. Therefore, it is essential for board processes' scholars to consider CSR as the dependent variable.

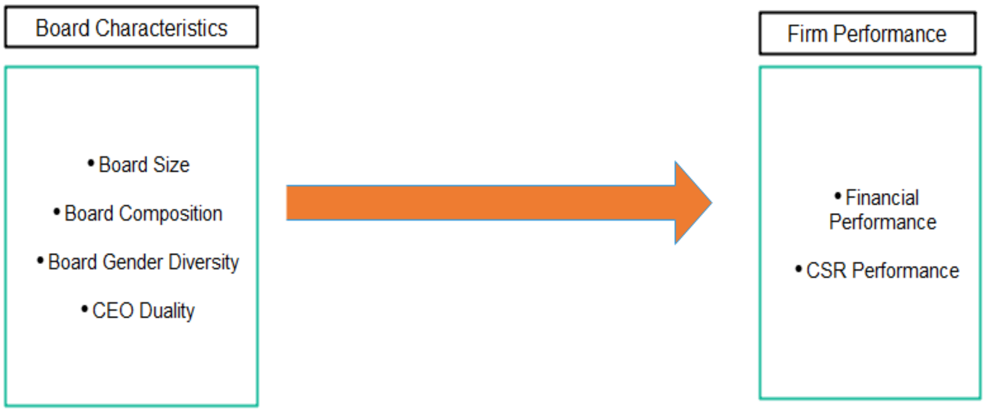

Figure 1.1: Traditional Input-Output Approach

Source: Daily et al., (2003)

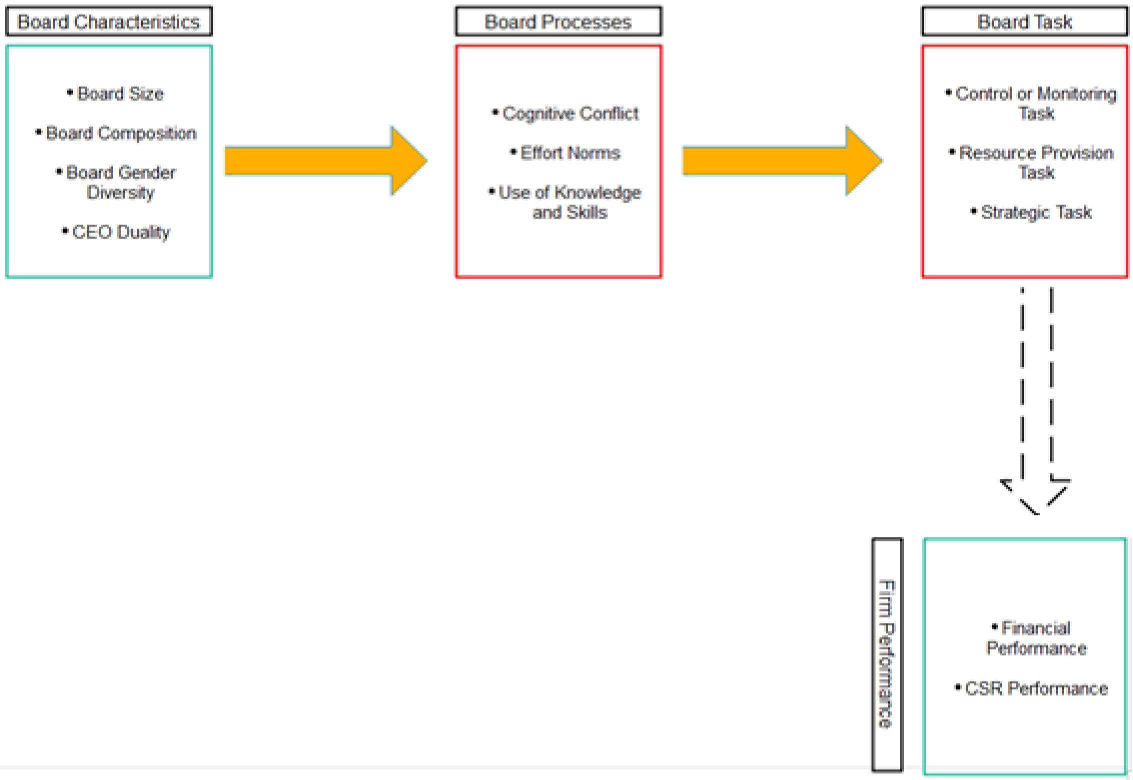

Figure 1.2: New Perspective: Input-Process-Output Approach

Source: Forbes and Milliken (1999)

1.4.1 Importance of the Study to Nigeria

There was a great hope for Nigeria held by its citizens after attaining independence from Britain in 1960. However, fifty-eight years later, the country is still heavily underdeveloped with a lack of basic social amenities, such as electricity, potable drinking water, health facilities, good roads and effective transportation system. Unemployment is rapidly increasing among the youth and people are leaving under abject poverty. The country is sharply divided along religious, ethnicity and tribal tensions.

Another major problem in the country is corruption. Recently, Global Financial Integrity (2015) has ranked Nigeria as the 10th biggest exporter of Illicit Financial Flows (IFF) from 2004 to 2013. IFF is caused mainly by corruption and is the most damaging economic problem faced by the emerging economy. Despite the fact that fighting corruption is one of the three main agendas of the present All Progressives Congress (APC) administration, Nigeria has recently ranked as one among the most corrupt countries worldwide according to the Corruption Perception Index (CPI) released by Transparency International (2017).

Generally, existing studies suggest that Nigeria has a long history of corruption and an unethical attitude in both government and business activities (Idemudia and Ite, 2006). Moreover, most of the previous corporate scandals occurred due to incompetency and questionable, unethical and corrupt behaviours of board members. These scandals disrupted the economic stability of the country as it destroyed investors' confidence and led to job losses in a country that is suffering from massive youth unemployment. Mr. Akanki in his paper noted that these Nigerian social-economic problems, mentioned above, have greater consequences for businesses (Ahunwan, 2002).

Notwithstanding, Nigeria, as the most populous Black country in the world with a population of over 180 million, abundant in land and natural resources (CIA, 2014) may serve as a potential for investment. This was noted among others by former U.S president Bill Clinton who, however, has called for the country to reorganise its house in order to attract more investors (Okike, 2007).

Nigeria relies entirely on one source of revenue; the country's economy largely depends on the oil sector, as it supplies 95 per cent of its foreign exchange earnings (Amaeshi *et al.*, 2006). However, rather than relying on oil and gas alone, especially with the recent oil price meltdown ($36/barrel), it is essential for Nigeria to have a sound corporate environment through effective corporate governance in order to attract foreign direct investments which can improve productivity and enhance economic growth.

Furthermore, Nigeria has weak institutions, and at the same time, needs strong foreign investors. With a weak legal system operating in Nigeria, foreign investors may be scared to seek legal redress when their rights are violated (Collier, 2008). An effective board serves as a mechanism for ameliorating this weakness of legal institutions. Similarly, causes of the previous corporate scandals and the previous collapse of the Nigerian stock market can be eliminated with effective, ethical and incorruptible boards of directors.

Another worrisome situation is that the government in Nigeria has failed to provide social basic amenities and adequate infrastructure for the people. As a result, Nigerians focus more on corporations to provide such amenities through CSR (Adegbite and Nakajima, 2011). Failure of corporations to provide these basic needs of society may cause tensions that are likely to result in kidnappings, riots, insecurity and social unrest, which may consequently affect the survival of these firms. This can be resolved with effective and responsible boards of directors.

Corporate governance aims to address two major agency problems: principals-agents and majority-minority shareholders conflict of interest. These two problems are present in the Nigerian corporate environment. Firstly, the classical principals-agents agency problem whereby agents maximizes their utilities at the expense of the owners (Jensen and Meckling, 1976), occurs in Nigeria and is worsened by the endemic corruption and lack of basic social amenities. Thus the managers (agents) use corporation's assets unjustifiably to provide themselves with these amenities, for example electricity, water and health facilities abroad. Moreover, the ownership structure is highly concentrated in Nigeria (Ahunwan, 2002), and the expropriation of the minority by the majority shareholders is common in the country, just like other developing nations with similar ownership structures. Therefore, as the key corporate governance players, effective boards are expected to mitigate the agency problems mentioned above.

The Nigerian Corporate Governance Code (2011) and the new proposed National Code intend to address the problems mentioned above, while also ensuring that boards are effective and corporations operate effectively in the best interest of multiple principals (stakeholders), rather than one single principal (owner). In other words, these codes aim to prevent poor governance practices and ensure the effectiveness of the board of directors in performing their tasks and safeguarding the interest of stockholders and stakeholders. In this regard Nigerian boards became an interesting subject to conduct research on in order to find what actually makes boards effective in curtailing these unwarranted behaviours and satisfy the interest of various stakeholders, based on the expectation of the country's corporate governance code.

Empirical studies on boards in Nigeria are scanty and mostly based on an input-output approach, mainly to investigate the relationship between board characteristics and financial performance (Kajola, 2008; Babatunde and Olaniran, 2009; Ehikioya, 2009; Uadiale, 2010; Ujunwa, 2012), or explore the impact of board characteristics on CSR disclosure (Uwuigbe and Uadiale, 2011; Uwuigbe *et al.*, 2011; Oba and Fodio, 2014). These studies mostly used archival data and failed to recognise the intervening board processes that influence the relationship between input and output. To the best of the researcher's knowledge, there is no empirical study that investigates the relationships between board characteristics, board processes, task effectiveness and CSR activities in Nigeria.

This study believes that board effectiveness is determined by certain process variables that need to be understood through different empirical board research. A theoretical framework developed by Forbes and Milliken (1999) has been adapted, amended, expanded and empirically tested in Nigeria, a developing country. Forbes and colleague developed an input-processes-output framework, but did not test it empirically. Nevertheless, Wan and Ong (2005), Zona and Zattoni (2007) and Bettinelli (2011) tested similar frameworks in Singapore and Italy, respectively.

However, both scholars used a limited (or none) number of board characteristics. Wan and Ong (2005) consider proportion of NEDs and CEO duality as the dependent variables, while Bettinelli (2011) uses only board composition, with a proportion of outside directors as proxy, as predictor variables. Zona and Zattoni (2007) did not include board structure in their model. Moreover, both studies employed similar methodology in their analysis. Bettinelli (2011) and Zona and Zattoni (2007) used Ordinary Least Squares (OLS) regression analysis, whereas Wan and Ong (2005) employed multiple and hierarchical regressions to test the hypotheses. These methodologies do not perfectly account for measurement error and unaccounted measurement errors would attenuate the studies' findings (Brown, 2015). Additionally, these studies do not consider the influence of board task on overall firm performance.

This current study examines the systematic relationships between board characteristics, board processes, board task and corporate social responsibility activities with evidence from directors of quoted firms in Nigeria, a developing country. Importantly, a second generation multivariate analysis tool (Partial Least Squares-Structural Equation Modelling) which correctly accounts for measurement error, has been used as the main data analysis tool. Moreover, this study serves as an extension to the work of the previous scholars, as four board characteristics (board size, proportion of NEDs, CEO duality and board gender diversity) are considered as the exogenous variables. In addition to board task effectiveness, the relationship between board task and firm performance (with CSR as the endogenous variable) is examined in this study. Thus, the current study investigates board effectiveness at both board and firm levels.

1.5 Contributions

In order to ascertain board effectiveness, this study opens the 'black box' and examines the systematic relationships between board characteristics, board processes, board task and CSR legal and ethical activities with empirical evidence from a developing economy, Nigeria. The study makes the following contributions:

- It contributes empirically and theoretically on board literature by examining factors responsible for board effectiveness beyond board characteristics, the usual suspects, in the Nigerian corporate environment and its context as a developing nation.

- The study introduces a new model of input-processes-output approach that includes corporate social responsibility activities (see Figure 3.8). Most of the studies of this line investigate the relationships between board structure, processes and board task effectiveness (Wan and Ong, 2005; Zona and Zattoni, 2007; Minichilli *et al.*, 2012). This research is an extension of these studies, therefore, making a contribution to the relevant literature.

- The majority of board scholars investigate the influence of the board on either firm-level effectiveness (e.g. Ibrahim and Angelidis, 1995; Liu et al., 2015; Ehikioya, 2009; Wahba, 2015) or board-level effectiveness (e.g. Bettinelli, 2011; Minichilli et al., 2009; and Wan and Ong, 2005). This study presents a comprehensive picture of board effectiveness in which both the board's and firm's levels of effectiveness are considered.

- The current study provides information to policymakers and to boards of directors on what boards *do* in order to influence their effectiveness and determine the effects of board task on corporate social responsibility activities in the Nigerian context.

- The methodology adopted makes this the first empirical study in Nigeria to use structural equation modeling, particularly partial least square-structural equation modeling (PLS-SEM) to examine direct and indirect relationships of board characteristics, processes, board task and corporate social responsibility (legal and ethical) activities of the Nigerian listed firms.

1.6 Research Stages

The main aim of this research is to investigate board effectiveness beyond the traditional input-output approach. Specifically, the study examines the relationships between board characteristics, board internal processes, board task and corporate social responsibility activities. Figure 1.3 below shows the stages involved in this research. After the brief research introduction and background, the context (Nigeria) under investigation is discussed. The research process continues with discussion of corporate governance theories that are suitable for this study, followed by definitions and explanations of concepts included in the research model. The next stage (chapter 4) involves conducting a narrative (systematic) literature review in which empirical findings from previous relevant studies are analysed and literature gaps are identified. A theoretical framework developed by Forbes and Milliken in 1999 is adapted in order to address the research questions and achieve the research aim.

At the next stage, the methodology appropriate to collect and analyse data is identified and discussed. The quantitative approach is the main research methodology employed in this study. However, some interviews were conducted to determine whether the framework adopted was applicable in the Nigerian context. The findings of the interviews lead to necessary amendments to the initial framework and literature is consulted to develop the research hypotheses. Subsequent stages of the thesis involve quantitative results presentation and discussion, followed by highlighting limitations, future directions, implications, and concluding remarks.

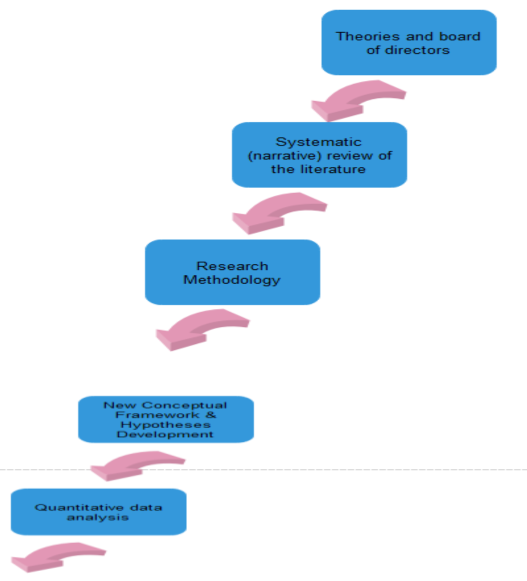

Figure 1. 3: Research Stages

1.7 Structure of the Thesis

The structure of the thesis is arranged into eight chapters. Following the introductory chapter, a brief history of Nigerian corporate governance development is presented in Chapter two. Also, a summary of the relevant provisions of the Nigerian Security and Exchange Commission Corporate Governance Code (2011) is presented in this chapter. Moreover, the main theories employed for this study were also introduced. These theories are agency theory, resource dependency theory, and stakeholder theory. The chapter also briefly introduces all the variables included in this study, defines the variables and provides a background discussion of each variable. Moreover, the chapter discusses the concepts of corporate governance and corporate social responsibility.

Chapter three presents a systemic (narrative) literature review of the selected relevant literature on board effectiveness and literature gaps are identified. At the end of the chapter, the research conceptual framework and hypotheses to be tested in order to address the research questions are presented. In Chapter four, research methodologies used by previous relevant scholars are discussed. The research philosophical assumptions, research methodology employed for data collection and analysis are also presented in this chapter. The chapter also gives detailed explanations and justifications for the chosen analysis tool (partial least squares structural equation modeling). Discussions and results of data screening are likewise presented in this chapter and it comprises discussions on missing data, non-response bias, common method bias, and normality distributions. The chapter summarises the qualitative design process and the main findings from the interviews conducted.

The next chapter (five) presents the research findings. It starts with the presentation of the descriptive analysis of all variables under investigation, followed by the results of the measurement (outer) model. It is at this stage that the results of validity and reliability tests are discussed. Also in this chapter, findings from an evaluation of the structural (inner) model are presented. This includes results from path coefficients, R squares, effect size, the model predictive relevance (Q^2) and the significance of the results through bootstrapping analysis.

Chapter six summarises and discusses the study findings. Research contributions and policy implications are highlighted in this chapter. Moreover, the chapter presents concluding remarks and identifies the limitations of the current study. Directions for future scholars are offered. Relevant supporting documents are attached as appendices.

CHAPTER 2: THE RESEARCH CONTEXT, THEORIES AND BOARD OF DIRECTORS

2.0 Introduction

In Chapter one above, the importance of the current study to Nigeria is highlighted. Similarly, previous corporate governance abuses of some companies and more recent cases are discussed. In this chapter, the history and development of corporate governance in Nigeria are introduced in section 2.1. The chapter also presents a summary of relevant provisions of the Nigerian Security and Exchange Commission governance code (2011) in section 2.2.

A board is the highest decision-making body of an organisation and is expected to perform multiple tasks. Each task has a different implication for the diverse corporate governance theories available. This study uses multiple theories to study the influence of board members on multiple tasks and firm-level effectiveness. This Chapter discusses the three common corporate governance theories employed in this study. Furthermore, the chapter introduces the variables included in this study.

Board characteristics variables included in this study are: board size (total number of directors), board composition (proportion of NEDs), CEO duality (separation of duties between CEO and chairman) and board gender diversity (proportion of women directors). The board processes examined include commitment (efforts made by directors inside and outside the boardroom), challenge (directors' level of disagreements or differences on opinions and ideas) and knowledge utilisation (the extent to which the board utilises the human capital available in the boardroom). The ability of directors to perform their monitoring roles (control task) and provide adequate resources to the firm (service task) are the two variables considered as board tasks in this study. Legal and ethical corporate social responsibility activities are the two CSR dimensions examined in this research.

Section 2.3 discusses board and theoretical perspectives relevant to this study. Agency theory, resource dependency theory and stakeholder theory are the three theories that serve as the theoretical lens of this study. Sections 2.4 and 2.5 present brief explanations and definitions of relevant board characteristics and processes, respectively. Section 2.6 explains briefly the board tasks mostly considered in the literature. Section 2.7 introduces the concepts of corporate governance and corporate social responsibility. A summary of the chapter is presented in section 2.8.

2.1 Brief History of Nigerian Corporate Governance

Nigeria, a country situated in West Africa which borders with Cameron and Chad in the East, Niger in the North and Benin in the West. The country is considered to be Africa's most populous nation with over 180 million people and more than 500 ethnic groups situated within the 36 states and the Federal Capital Territory, Abuja (see Figure 2.1). Nigeria is the world's eighth largest oil producer (CIA, 2014). The country had been under British colonial rule, but regained independence in 1960. This led to many aspects of the country having close ties to Britain including its corporate governance system.

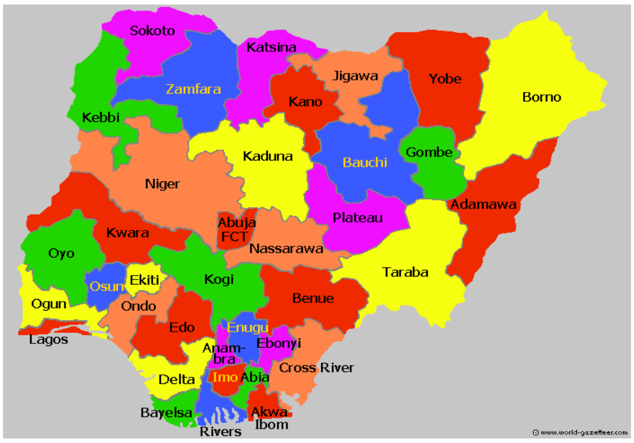

Figure 2.1: Map of Nigeria

Source: Nigerian High Commission

The first set of companies that started operating in Nigeria were foreign firms registered in England, notable among them is the Royal Niger Company (formerly known as National African Company). These firms' shareholders are mostly foreign investors and their activities are guided according to the laws and ideologies of the British corporate governance system (Orojo, 1992). It was not until after Nigeria attained independence in 1960 that the Companies Act (1968) was introduced and replaced the Companies Ordinance of 1922 which completely served the interest of British investors.

Later, the Nigerian government came up with policies and strategies aimed to improve indigenous ownership. Firstly, only the government could control the ownership of public infrastructures, such as electricity, telecommunication, shipping, ports and air travel. Secondly, for the other sectors, the government restricted foreign ownership through the Foreign Exchange Control Act (FX Act) of 1962 and the Nigerian Enterprises Promotion Decree (NEPD) of 1972 (Ahunwan, 2002). Figure 2.2 summarises the history and development of the Nigerian corporate governance.

The FX Act (1962) restricted the transfer of shares to non-Nigerians and the NEPD Decree (1972) created three types of schedules of enterprises: (1) those exclusively for Nigerians (2) those that foreign investors cannot hold more than 40 per cent and (3) those enterprises in which foreign investors cannot hold more than 60 per cent. However, in order to ensure sufficient capital is injected into the economy and managerial expertise is employed, the Nigerian Privatisation and Commercialisation Decree provides an opportunity for foreigners to retain up to 40 per cent of the privatised companies.

In 1990, the Companies and Allied Matters Act (CAMA) replaced the Companies Act (1968). It is worth mentioning here that the Nigerian corporate governance system cannot completely be separated from CAMA. Despite the fact that corporate governance is not an identical concept, certain CAMA provisions (see Sections 279 and 280), especially pertaining to the board of directors' responsibilities, are still the foundation of good governance practice in Nigeria (Okike, 2007). However, the Act failed to sufficiently address the corporate challenges faced at that time. Therefore, the Nigerian government through the Security and Exchange Commission (SEC), in conjunction with the Corporate Affairs Commission (CAC), set up a committee of seventeen members headed by Atedo Peterside, who was charged with the responsibility of identifying and addressing the weaknesses of current governance practices among public businesses in Nigeria and devise a code of best corporate governance that meets international best practice. The committee issued their report in 2003 in which provisions are contained that are aimed to strengthen the governance system in the country and by which all public listed companies in Nigeria are expected to comply or explain otherwise. It is essential to highlight that it was not until 2011 that an updated version of the code of best corporate governance practice was introduced and a further revision produced in 2014.

Corporate abuses and failures of some firms, both within and outside Nigeria, made the SEC (2003) Corporate Governance Code inefficient to deal with these challenges. The Nigerian government was reluctant to make changes to the then current governance system and this led to certain sectors, such as Banking, Insurance, Pensions and Communications industries, establishing their own corporate governance codes to address issues not dealt with by the SEC (2003) Code.

Post consolidation of the Nigerian banking industry in 2005, the Central Bank of Nigeria (CBN) issued a code of corporate governance in 2006 and was applicable to all licensed banks and other financial institutions operating in Nigeria. The CBN code (2006) recommends that the responsibility of the chairmen shall be clearly separated with that of the Managing Director (MD) or CEO, and having same family members serving as chairman and CEO/MD of the same bank at a particular point of time is also discouraged. The code further requires adequate disclosure and transparency of financial statements. The CBN code recommends banks to establish risk management, audit and credit committees as a minimum.

In a similar development, after reform of the Nigerian pension sector, the Nigerian Pension Commission (PENCOM) issued their own industrial code of corporate governance in 2008. The PENCOM code (2008) places emphasis on a balanced board that comprises of inside and outside directors with at least one independent director. The code also recommends the separation of duties between chairman and CEO/MD of pension firms, so that an independent and accountable board can be achieved. PENCOM (2008) requires boards to organise the firm’s business operations and appropriate strategy which ensures the interest of shareholders and other stakeholders are satisfied (Aguilera and Cazurra, 2004).

In March 2009, the Nigerian Insurance Commission (NAICOM) introduced a code of corporate governance and the application of the code was made mandatory for all the insurance companies under the supervision of NAICOM. The code charges board of directors to set the firm's strategy and oversee the management activities. It recommends a board size of not less than seven and not more than fifteen and should consist of executive and non-executive directors with at least one independent director. NAICOM code (2009) emphasises the need boards to have two separate individuals to occupy the positions of chairman and MD/CEO.

The Nigerian Communication Commission (NCC) introduced corporate governance best international practices for the telecommunication sector in 2014 and compliance was necessary for all telecommunication firms operating in Nigeria that are licensed by the NCC (see section 1 of NCC code 2014). The code insists that telecommunication firms operate in the best interest of all stakeholders and report unambiguous and transparent financial statements to their stakeholders in a timely manner. It recommends the separation of duties between chairman and CEO, and urges companies to establish board committees that are appropriate in performing their responsibilities.

These different sectorial corporate governance codes create confusion, as sometimes a particular mechanism may have different provisions. Fortunately, the Nigerian government through the Financial Reporting Council (FRC) harmonised these corporate governance codes that are currently in existence across many sectors and established the National Code of Corporate Governance.

The harmonised code was supposed to come into effect from October 2017, but the code was suspended due to a court injunction issued that prevented further consideration on the draft copy of the new National Corporate Governance Code. Fortunately, the court case is over and the FRC reissued a new draft of the harmonised code on 13 June 2018 in Lagos with twenty-eight principles of corporate governance and 230 practices on how Nigerian firms should implement the principles. As the new National Code is not in use yet, the SEC Code (2011) and its updated versions are still in operation for public listed companies. Figure 2.2 summarises the history and development of the Nigerian corporate governance.

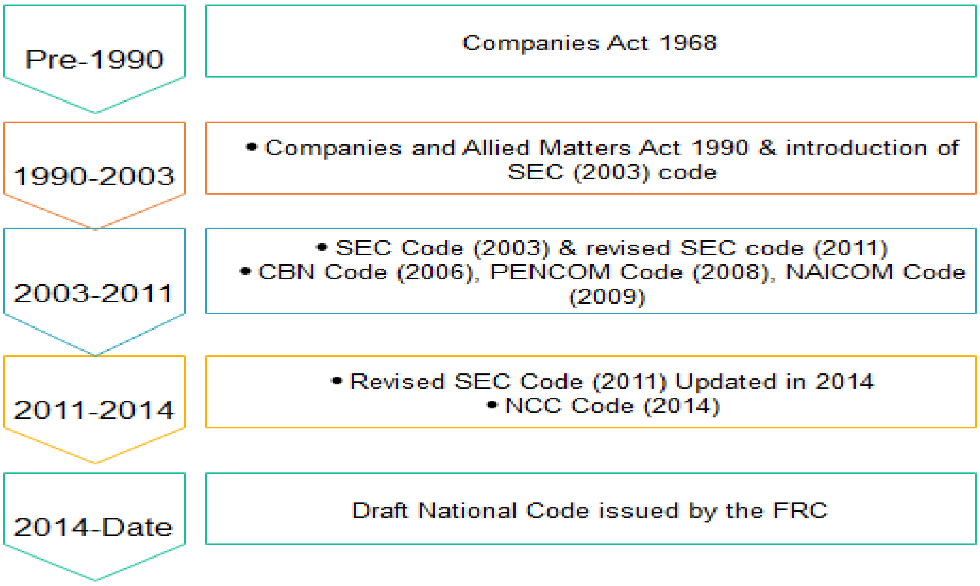

Figure 2.2: History and Development of CG in Nigeria

Source: Author and Synthesis of the Literature

2.2 Brief Summary of Nigerian SEC Code (2011)

Corporate governance, in general, and what makes a 'good board,' in particular, were neglected in Nigeria, as it was not until 2003 that a code of good corporate governance was established and a revised version issued in 2011. As mentioned earlier, the country operates a series of CG codes with different sectors practicing different codes which include the SEC Code 2011, CG Codes for Nigerian banks 2006 (revised in 2012), the Code for Licensed Pensions 2008, the Code for the Insurance Commission 2009 and the Code for the Nigerian Communications Commission. Fortunately, the government harmonised these codes into the National Code of Corporate Government and the aim is to have a unified CG system. However, as mentioned earlier, the provisions of the new code are not on commencement yet.

Primarily, Nigeria practise governance which upholds shareholders' supremacy more than any other country in Africa (Rossouw, 2005). However Nigeria's corporate governance development shows a paradigm shift from extensive shareholders' wealth maximisation to enlightened shareholders' value, where interests of other stakeholders are also considered. Provisions of the Security and Exchange Commission (SEC) Code of Corporate Governance (2011) are set in a way that the companies through the board of directors are properly and ethically managed and ensure satisfaction of both shareholders and other stakeholders. The code states that "the principal objective of the board is to ensure that the company is properly managed" (SEC code 2011, p.8) and operates ethically according to Nigeria's laws.

For shareholders and stakeholders' interests to be protected, Nigerian boards are expected to provide both monitoring and service roles to the firms. According to the SEC (2011) code: "it is the responsibility of the board to oversee the effective performance of the management in order to protect and enhance shareholder's value and to meet the company's obligations to its employees and other stakeholders" (p.8). The interest of stakeholders should be satisfied through effective CSR initiatives, which may also improve the overall firm's performance. The SEC code (2011) code recommends the firms to pay adequate attention to the interests of their various stakeholders and the boards should "report annually on the nature and extent of its social, ethical, safety, health and environmental policies and practices" (p.34).

Furthermore, the code recommends that the board should set the firm's strategy and provide strategic advice and guidance, and to also ensure that available human and financial resources are utilised towards attaining those goals. Similarly the, SEC code (2011) code considers board members to be "individuals with upright personal characteristics, relevant core competencies and entrepreneurial spirit" (p.10), as such board members serve as means of resources to the firm.

For boards to achieve these double responsibilities, that is to provide monitoring and service roles in order to satisfy the interests of both the owners and other stakeholders, the SEC code (2011) Code prescribes board size not to be less than five but more importantly, "of a sufficient size relative to the scale of complexity of the company's operation and be composed in such a way as to ensure diversity of experience without compromising independence, compatibility, integrity and availability of members to attend meetings" (p.9).

The SEC code (2011) stresses that firms are to establish appropriate board committees, in addition to audit, risk management and governance/remuneration committees. The board should also have an appropriate mixture of executive and non-executive directors with majority board members to be NEDs and at least one to be an independent non-executive director (SEC, 2011). Section 5.1b of the code emphasises that boards are to be independent of the management and recommends that the position of Chairman and CEO shall be separated. Moreover, more than two family members should not sit on a particular board at the same time (SEC, 2011).

The current study's aim is to investigate the relationships between board characteristics, board processes, board task and CSR legal and ethical activities. This is in order to determine exactly what makes Nigerian boards effective in performing these tasks (monitoring and service) and satisfying the interest of various stakeholders (shareholders inclusive) through CSR initiatives, as required by the Nigerian Code.

2.3 Research theoretical Perspective

Generally, boards' fiduciary duties can be classified into control, resource provision and strategic advisory roles. These involve monitoring of the executives and provision of critical resources needed and strategic decisions for the firm (Goodstein *et al.*, 1994). Studies on the effectiveness of boards to perform these duties are still not clear. Some studies argue that boards are symbolic, passive and serve as the mere 'rubber-stamp' of the executives (Mace, 1971; Lorsch and MacIver, 1989), while others indicate that board members are no longer a 'rubber stamp' and that they perform their fiduciary duties effectively (Morgan, 1999). Corporate governance theories such as agency, stakeholders and resource dependency theories present the theoretical explanations of how boards perform their fiduciary duties and how that influence corporate financial or social performance.

This research uses multiple theories to study the influence of board members on multiple tasks and firm-level effectiveness. Agency theory, resource dependency theory and stakeholder theory are the three theories that serve as the theoretical lens of this study. The three corporate governance theories mentioned above are employed and are complementing each other in order to fully capture board effectiveness in Nigeria. An effective board should sufficiently monitor and control the opportunistic agents (agency theory), provide adequate guidance, strategic advice and critical resources to the firm (resource dependency theory) for the betterment of all those that can affect or be affected by the firm (stakeholder theory). These three theories are integrated into this research, as a single theory will not be able to sufficiently capture a complete picture of board effectiveness (Kiel and Nicholson, 2003).

According to the SEC Code (2011), firms shall pay adequate attention to the interests of their various stakeholders, and the boards to “report annually on the nature and extent of its social, ethical, safety, health and environmental policies and practices” (p.34). Also, the code recommends that the board should set the firm’s strategy and provide strategic advice and guidance. Furthermore, the Nigerian code also requires the protection of shareholders’ interest (especially minority) through the board monitoring role. Agency problem needs to be addressed as it is common in any non-transparent country such as Nigeria (Yakasai, 2001).

It is believed that giving the Nigerian Code requirements mentioned above, these three theories employed in this research, are the most appropriate to use in any corporate governance study in Nigeria (see Adegbite and Nakajima, 2011). Additionally, the research conceptual framework requires the use of multiple theories rather than a single theory to be able to fully capture board effectiveness.

2.3.1 Agency Theory

The model of a man described by agency theory can be traced back in the work of Adams Smith which argues that it is difficult for a manager to behave as if he owns the firm’s assets (Fama, 1980). This typically indicates that there may likely be a divergent of interests between the manager and the owner of the assets. In fact, Berle and Means (1932) emphasise a need to separate ownership and control. The executives should have the responsibility of decision management while shareholders (represented by a board) are responsible for decision control.

In a principal-agent relationship, owners (principals) contract the executives (agents) to manage the day-to-day activities of the firm on behalf of the former (Jensen and Meckling, 1976) and this scenario leads principals to lose total control of their investment. The possibilities of engaging in opportunistic behaviour by the agents are very likely, because the managers are more knowledgeable, skillful and informed than the shareholders.

Jensen and Meckling (1976), describe agency theory as a relationship between the agents and principals whereby the latter delegate duties to the former and expect the agent to perform such duties in his (the owner's) best interest. For Jensen and Meckling, managers may engage in opportunistic behaviour at the expense of the shareholders; therefore, certain internal and external control mechanisms need to be in place to checkmate any utility maximization of the agents.

Typically, the interests of the shareholders differ from that of the managers. For the former, their aim is to maximise profit and ensure maximum return on their investment, while an agent's interest is to maximise his utility (Jensen and Meckling, 1976). In a situation whereby the two divergent interests are aligned, that is shareholders' wealth maximisation and agent self-benefits maximisation are aligned, the agency problem will not arise. An agency problem occurs when the executives engage in self-serving behaviour at the expense of the shareholders' wealth. In this situation, internal and external corporate governance mechanisms are required to mitigate the agency problems that are likely to arise (Jensen and Meckling, 1976).

The board of directors is the main internal corporate governance mechanism (Bawhede, 2010), and according to agency theory, these corporate leaders are expected to provide effective monitoring of the executives and ensure their behaviours are consistent with the interest of shareholders. Executive incentives are another internal governance mechanism that motivates the executives to act in the best interest of the owners (Dalton *et al.*, 2007). If these internal corporate governance mechanisms fail to address the agency problems, external mechanisms, such as merger, acquisition and divestitures, are imposed to mitigate agency costs (Walsh and Seward, 1990).

Agency theory considers the board and its attributes, such as board size, the proportion of non-executive directors and the separation of duties between the CEO and chairperson, as the main internal CG mechanisms. The fiduciary duty of the board is to control, monitor, compensate and discipline the agents (Bawhede, 2010), so that the agents act in the best interest of the owner. This addresses the agency problems that may arise in the principal-agent relationship. Additionally, another set of agency problems that may arise, which is common in Nigeria and other developing countries, is the abuse of minority shareholders' rights by the majority stockholders. Nigerian corporate governance emphasises the responsibility of the board of directors to curtail both the two dimensions of agency problems that may arise. The SEC (2011) Code recommends boards to ensure sufficient monitoring of managers, so that their actions and inactions are in the best interest of the shareholders. At the same time, the Code wants boards to mitigate the abuses of minority shareholders' rights by the large shareholders.

The main focus of agency theory is shareholders' wealth maximization. However, maximum return on investment, especially in the long-term, may be possible, if firms operate ethically and are socially responsible to the society. Failure of an organisation to address social responsibility issues may harm the shareholders' wealth through actions, such as payments of penalties, product boycott, employee ineffectiveness and negative press (Lenssen *et al.*, 2007). This may damage the firm' reputation and may subsequently lead to its collapse.

Raelin and Bondy (2013) argue that the agency theory does not only explain the principal-agent (shareholder-manager) relationship, but also the shareholder-society relationship. They termed the former as the first layer and the latter as the second layer of agency theory, advocating that the board should satisfy the interest of shareholders without compromising the interests of society. Both layers are important for an effective board and good corporate governance practice. Directors should design appropriate strategic plans, such as CSR initiatives and effectively monitor managers to ensure that the strategic plans are adhered to.

2.3.2 Resource Dependency Theory

Resource dependency theory is rooted in sociology and organisational disciplines and received more attention in the 1970s (Zahra and Pearce, 1989). Rather than view the board as monitors of the executives, this theory considers the board of directors as a mechanism to acquire critical resources needed by the firm. A director is expected to provide human and relational capital to the firm (Hillman *et al.*, 2000). Human capital refers to the director's competencies, knowledge, skills and expertise, while relational capital is the network and connection a director possesses, such as ties with other boards (Hillman and Dalziel, 2003) and the society in which the firm operates.

For example, appointing a director who gets access to critical resources, such as lawyers, accountants and doctors, onto the board provides an opportunity for the firm to acquire knowledge and information relating to these resources for free or at a reduced cost. Similarly, politically-connected directors are likely to receive favours from the government for their focal firms. Price (1963) concludes that appointments of this kind of director to the board benefits their focal firms by influencing their constituencies.

Provision of these resources through social ties have a significant effect on board-level and firm-level performance (Nahapiet and Ghoshal, 2000). In view of the resource dependency theory, board effectiveness is determined by the ability of the directors to provide the critical resources needed for the firm. This can be achieved if the board has directors with a diverse background, experience, expertise and the right connections inside and outside of the industry in which the firm operates. This theory argues that the responsibility of board members is more aligned to providing useful information, expertise, skills, advice and counsel to the firm or contributing to the firm's reputation rather than monitoring of the executives. The Nigerian Corporate Governance Code stresses to the boards of the listed firms the need to ensure that they serve as means of resource to their firms. The Code recommends boards to set the firm's strategy, provide strategic advice and guidance, as well as making sure that human and financial resources are available and utilised effectively.

The ability of the board to provide resources to the firm reduces uncertainty (Pfeffer, 1972), decreases dependency on external contingencies and lowers transaction costs (Salancik and Pfeffer, 1978). This provision of adequate resources by the boards may enhance a firms' competitive advantage, at the same time guarantee adequate support from the various stakeholders. In this vein, stakeholders' wants and needs are satisfied through corporate social responsibility activities which are possible through the availability of resources in the firm.

Moreover, board members are expected to have a societal and professional background, so that resources and timely information from the external environment can easily be tapped and made available to the firm (Zahra and Pearce, 1989). They should also provide the firm with information about the wants of various stakeholders. In this capacity, the board serves as boundary spanner between the firm and the external environment (Pfeffer and Salancik, 1978).

Linking resource dependency theory with stakeholder theory, Pfeffer and Salancik (1978) argue that a board's effectiveness is their ability to manage the demands of the various stakeholder groups that provide the support and resources needed by the firm. According to the resource dependency theory, the responsibility of a board is to serve the firm with the crucial resources needed through appropriate ties with the external environment and provision of useful advice and counsel to the managers when making strategic decisions. Serving the firm in this way is also a means of ensuring decisions are made in the best interest of the society who provides the resources.

2.3.3 Stakeholder Theory

The basic assumption of stakeholder theory is that the traditional emphasis on shareholders' wealth maximization at all costs should be avoided and corporations should operate in the best interest of all stakeholders (shareholders' inclusive). Freeman (1984) opines that boards should be accountable to "any individual or group who can affect or is affected by the achievement of the organisations' objectives" (p.46), such as shareholders, employees, customers, creditors, government and society at large.

For instance, if a firm collapses, employees may face difficulties in getting another job and so, workers will have an interest or 'stake' in the affairs of the company. Similarly, customers may be unable to obtain a replacement of the firm's product, if it stops operations and creditors may lose their money, if the firm is unable to pay its debt (bankrupt). Likewise, the community may be adversely affected by unemployment and a lack of CSR activities, if the firm closes. Moreover, these groups of stakeholders affect the firm in a way that the company cannot operate effectively without their contributions. Therefore, stakeholder groups are important organs that firms need to consider in their decisions. The argument here is that firms have responsibilities beyond the fiduciary duties to shareholders (Carroll, 1979).

However, some scholars such as Sternberg (1997) argue that for board members to be accountable for all stakeholders, they are actually accountable to no one. As such, the author contends that managers are free to engage in self-serving behaviour at the expense of owners' capital. Nevertheless, it is essential to note that the perspective of stakeholder theory does not mean that shareholders' interests are to be compromised rather the aim is to achieve a win-win situation between shareholders and stakeholders. That is when satisfying the interests of the shareholders, the needs and wants of the stakeholders should be addressed as well (Kakabadse *et al.*, 2005). In fact, the instrumental stakeholder approach maintains that satisfying the interests of stakeholders enhance maximization of shareholders' funds, especially in the long-term. Generally, directors are encouraged to consider the interest of other stakeholders and environmental issues in their decisions (Freeman, 1984).

For the board to be effective, stakeholder theory advocates that the board should be comprised of representatives from important stakeholders groups, such as those mentioned above. The argument being that it serves normative and instrumental purposes as firms feel morally obliged and at the same time it 'gives a sense of belonging' to these groups, which enhances the support base from the groups and facilitates the firms' reputation and legitimacy. There is no doubt that shareholders' wealth maximization is the main responsibility of Nigerian firms and should be taken seriously, but it should not be performed illegally and unethically. The Nigerian governance system places the responsibility on boards to ensure firms operate ethically and abide by the laws of the land (SEC, 2011) and also ensure justification for sharing the value created. Accordingly, the board should make certain the benefit generated is shared among the shareholders and employees, as well as maximum consideration is given to the interests of other stakeholders (SEC, 2011).

There is an intertwining relationship between the concepts of stakeholder theory and corporate social responsibility, as literature from the two concepts is built on each other. The latter is about the social responsibility a firm needs to fulfill, while the former is about being responsible and accountable to various stakeholders (Kakabadse *et al.*, 2005). Both stakeholder theory and CSR focus on the responsibilities of board members beyond satisfying the interest of shareholders alone, instead focusing on the interests of all stakeholders. Accordingly, boards of directors should be knowledgeable and inform the executives of the importance and expectations of various stakeholders, so that it can be articulated in the strategy decision-making (Wang and Dewhirst, 1992; Mallin and Michelon, 2011) to ensure these expectations are met and this can be achieved through effective CSR strategic planning.

The three corporate governance theories discussed above are employed as the theoretical framework of this study. The SEC (2011) Code emphasises firms to pay adequate attention to the interests of their various stakeholders, and the boards to "report annually on the nature and extent of its social, ethical, safety, health and environmental policies and practices" (p.34). Also, the code recommends that the board should set the firm's strategy and provide strategic advice and guidance. Furthermore, the Nigerian code also requires the protection of shareholders' interest (especially minority) through the board monitoring role. Agency problem needs to be addressed as it is common in any non-transparent country such as Nigeria (Yakasai, 2001).

2.4 Board Characteristics

Four board characteristics are considered in this study: board size, board composition, CEO duality and board gender diversity. These characteristics are often used in investigating board effectiveness and are termed the ‘usual suspects’ in corporate governance literature (e.g. Gabrielson and Huse 2004). However, findings on these ‘usual suspects’ are mixed. Therefore, more empirical studies are needed in a different context and using different methods and approach, in order to ascertain the effectiveness of these variables.

2.4.1 Board Size

Board size refers to the total number of directors sitting on a particular board (Judge and Zeithaml, 1992). A board can be small, medium or large, each with different advantages and implications supported by different organisational theories and a country’s system of governance. For instance, in the UK and other Anglo-Saxon countries boards are encouraged not be too large. In Nigeria, good corporate governance practice (SEC code, 2011) recommends that board size should not to be less than five, but more importantly, “of a sufficient size relative to the scale of complexity of the company’s operation” (p.9). Therefore, Nigerian companies are encouraged to have a board that is not too small, but of a size that suits their needs.

According to agency theory, a small board is more coordinated and independent in controlling the agent (Jensen, 1993). Whereas a large board is ineffective, as it may result in sub-teams within the board which could lead to the board becoming inactive in monitoring the executives and easily dominated by the chief executive. However, the proponents of large boards argue that the greater number of directors available on the board, the more resources of human and relational capital can be acquired from the external environment (Pfeffer and Salancik, 1978). This increases the chances of appointing experts and skilful women and minority groups on the board, which enhance diverse views in decision making (Pearce and Zahra, 1992). This is consistent with the resource dependency theory which argues that the main duty of the board is to provide critical resources, (such as knowledge, finance, reputation, strategy advice, and counsel), to the firm, rather than monitoring managers as postulated by agency theory.

Pressure from stakeholders may force a firm to have a larger board size (Hillman *et al.*, 2001). This is in line with the stakeholder theory which supports boards that consist of representations from each stakeholder group. In this situation, the company sends a positive signal to the community that the firm is a moral citizen and subsequently, enhances corporate legitimacy.

However, it is essential to understand that the relationship between board size and corporate performance is not as straightforward as expected, as it likely depends on the contextual and firm-specific contingencies (Essen *et al.*, 2013). For example, in a highly competitive and complicated industry a larger board size, which provides diverse knowledge and experience from many directors, is more beneficial than a small board because these benefits outweigh problems associated with the large board (Kaymak and Bektas, 2008). While a small board is more appropriate for small firms with less complicated activities and operations.

2.4.2 Board Composition

Board composition is mostly referred to as the mixture of executive and non-executive directors. A board member can be either an executive or non-executive director (NED). The former is an insider that manages the day-to-day activities of the firms, while NED is an outside director that is independent of the management and serves as a representative of the shareholders. Short et al., (1999), termed NEDs as "corporate watchdogs" (p.339), as they checkmate the activities of the executives to ensure corporations are directed according to the established procedures. A non-executive, also referred to as outside director, may be affiliated or a completely independent director. An affiliated director has either personal or professional ties with the firm, while an independent NED has no link with the firms, either directly or indirectly.

Like in the UK, firms in Nigeria operate unitary board system where all decisions and directions of the firms are taken. Such boards find it necessary to have mixture of inside and outside directors on the board which may facilitate board independence, integrity and diversity of knowledge and experience (Okike, 2007). Ejuvbekpokpo and Usuike (2013) explain that the Nigerian CG Code recommends that more than half of the board be made up of NEDs and should be able to provide independent judgment, plus the "necessary scrutiny to the proposals and actions of the management on issues of strategy, performance evaluation and key appointments" (p.55). This implies that an adequate proportion of NEDs on the board is expected to improve board control task, which consequently enhances overall corporate performance. Nevertheless, theories and empirical evidence continue to present contradicting remarks on the effectiveness of NEDs in performing their fiduciary duties.

According to the agency theory, a board that is dominated by executive directors (ED) lacks the necessary independence to perform their monitoring role and therefore, emphasised the need for a reasonable proportion of NEDs on the board (Dahya and McConnell, 2007). However, it is argued that the proportion of outside directors does not guarantee board independence, as boards are found to be executives' rubber stamp, answerable to CEOs, as well as play symbolic and passive roles (Mace, 1971). The NEDs that serve as a mechanism that provide independence to the board are ineffective monitors of the executive, as it was found that executive directors decide on their appointment and remuneration (Dahya and McConnell, 2007). Furthermore, it is argued that a higher proportion of NEDs on the board is likely to have an adverse effect on other board roles, such as resource co-optation and strategy advisory, as the board may concentrate on excessive monitoring (Baysinger and Butler, 1985; Gomes and Novaes, 2006).

Nevertheless, resource dependency and stakeholder theories argue that NEDs possess diverse experience, knowledge, networks and acquire critical resources and the reputation needed by the firm, through establishing an external relationship with various stakeholders (Certo et al., 2001). Outside directors have access to resources needed to manage stakeholders' claims as they possess different backgrounds and experience from education, law and not-for profit organisations and are representative of the external environment (Zhang *et al.*, 2013). Similarly, it is argued that a proportion of NEDs on the board increases the ability of the board to have different viewpoints on the issues that deal with the environment and stakeholders (Haniffa and Cooke, 2005).

Zahra et al., (1993) argue that maintaining a proportion of outside directors represents a more diverse board with the possibility of appointing more gender, ethnic and racial diversity. This increases the social responsibility related to community, minorities and women (Johnson and

Greening, 1999). Additionally, outside directors serve as a mechanism to acquire resources through board interlock, as they serve in more than one board, have the privilege to co-opt resources from another firm quickly at less cost, and they are able to effectively manage environmental and community expectations (Oh *et al.*, 2006).

Therefore, this study concludes that an adequate proportion of non-executive directors improve board task, as the monitoring and resource provision capabilities of the board increase with the additional number of NEDs. Similarly, appropriate board composition enhances corporate social responsibility activities, which in turn leads to better firm-stakeholder relationships.

2.4.3 CEO Duality

Two board leadership structures are common in corporate literature and practice: CEO duality and non-duality. The latter leadership structure exists when the roles of CEO and chairman are not exercised by one individual, while CEO duality is a situation whereby the chief executive also serves as chairman of the board. The board leadership structure has been an on-going debate and empirical studies present contradicting results in regard to the effectiveness of CEO non-duality on firm performance. Moreover, just like the empirical findings, the theoretical explanations of CEO duality are nebulously presented.

Proponents of agency theory argue that CEO duality presents excessive power to management and decreases board independence; therefore, separation of the duties between CEO and chairman is necessary in order to improve board independence and effectiveness (Tuggle *et al.*, 2010). Separation of leadership positions is important so as to maintain a check and balance between the executives and the board. Fama and Jensen (1983) argue that CEO duality represents "the absence of separation of decision management and decision control" (p.314). Thus, having a single individual serving as both chairman and CEO jeopardises board independence, which means that the board cannot perform their oversight functions effectively.

However, some organisational theories support firms in combining the role of chief executive and that of chairman to a single individual. Duality presents a strong unity of command which may promote effectiveness, faster decision-making (Muth and Donaldson, 1998) and fewer costs in information transfer (Schooley *et al.*, 2010). Barnea and Rubin (2010) linked stakeholder theory and CEO duality. They argue that a joint leadership structure improves CSR initiatives, as the chief executive may have intrinsic motivations (to portray a good legacy and enhance personal and organisational reputation), rather than utility maximization claimed by the agency theory. It also sends a positive signal to various stakeholders that 'someone is in control' and that there is a clear person to hold accountable for their needs.

However, the duality leadership structure is likely to lead to excessive pressure on CEOs to pursue short-term economic performance, at the expense of long-term strategic plans, such as CSR. With less pressure CEOs with non-dual roles may have the opportunity to consider the interests of both stockholders and stakeholders (Zhang, 2012).

Notwithstanding, it is important to highlight that no single board leadership structure fits all firms. CEO duality is appropriate for some firms while the separation of the roles is more beneficial for others (Singh and Gaur, 2009). It is also essential to mention that the benefits of either combining or separating the duties of CEO and chairman to the firm, depends on other factors such as firm size, complexity and economic stability. For example, a larger firm with complex activities can benefit from separation of the two important roles, while a small firm with less operational activities may find a strong unity of command is required (Kiel and Nicholson, 2003). Moreover, the 'real' independence of the chairman also determines whether CEO non-duality is beneficial to the firm or not.

2.4.4 Gender Diversity

Women are driving the workforce of many governmental and non-governmental organisations around the globe. This may be due to higher educational qualifications they possessed or due to various pressures on gender equality from different governments and organisations. Board gender diversity refers to a mixture of both female and male directors on a particular board, rather than having ‘all men.’ Various theories have different implications and explanations on the benefits or otherwise of gender diversity.

According to agency theory, gender diverse boards are more independent than ‘all men’ boards and as such, are more effective in performing their control role. Hillman and Dalziel (2003), argue that board needs a composition of directors with appropriate skills, experience and capabilities to effectively monitor executives which will consequently improve corporate performance. This would be possible with women directors on the board as they possess different perspectives, skills and experience than their male counterpart. Thus, boards that have an adequate proportion of female directors are expected to be effective monitors, which in turn enhance firm performance. Erhardt *et al.* (2003), opine that diversity may lead to conflict and communication difficulties that are common in a diverse group, yet the diversity can also enhance the control role of the board and mitigate any agency problem that may arise due to poor monitoring, which in turn improves firm performance.

Taking the perspectives of resource dependency and stakeholder theories, Bear et al., (2010) explain that women directors have a higher educational qualification, more experience in small enterprises and broader professional backgrounds than their male colleagues. The authors argue that including women directors on the boards will provide different perspectives for strategic decision-making, such as CSR initiatives. Furthermore, it was argued that gender board diversity enhances its support base and legitimacy in the community, as it sends a positive signal to other stakeholders, especially women and minorities within and outside the board that the firm is ethically and morally responsible (Zhang *et al.*, 2013). Additionally, Nielsen and Huse (2010), Mallin and Michelon (2011) and Setó-Pamies (2015) argue that women’s psychological characteristics, such as assisting, soothing, kindness, sensitivity and concerns for others’ people problems, facilitates their readiness to engage in CSR activities.

However, Forbes and Milliken (1999) explain that gender diversity may likely have an adverse effect on the board decision-making process because it creates a small group within the board and leads to less unity and cooperation among directors. Further, in-depth evaluation of strategies due to diverse opinions may slow down the decision-making process and this may harm stakeholders' claims that require a fast response (Ujunwa, 2012).

It is essential to note that unlike in developed economies, the perception of having women as leaders in emerging nations, (like Nigeria), is unfavourable. Ideally, women are considered in those countries as weak and inactive leaders. Abdullah et al., (2016) reported a biased evaluation by the market in Malaysia as a result of having female directors on the board which led to a negative effect on the market-based performance. Nevertheless, the Nigerian corporate governance system encourages board diversity and companies listed on the NSE have started appointing female directors on their board, but still more needs to be done in this respect.

In conclusion, the board characteristics discussed above were heavily researched, but as mentioned earlier their impact on board effectiveness and firm performance are inconclusive. The approach and methodology employed to study these 'usual suspects' could be the genesis of contradicting results (Daily *et al.*, 2003). Instead of investigating the direct effect of board characteristics on board effectiveness and firm performance, board scholars were called to open the 'black box' (Pettigrew, 1992). This study answers the call and examines the influence of board processes variables on the relationships between board characteristics and board tasks effectiveness. The next section discusses board processes variables that were introduced in the theoretical paper of Forbes and Milliken (1999) (see figure 4.6).

2.5 Board Processes

Research on boards of directors and corporate performance has continued to receive condemnations due to the focus on *'what'* instead of *'how'* board structures affect performance. Daily et al., (2003) argue that using board characteristics to determine corporate performance may lead to biased outcomes because the board is faced with complex processes and group dynamics. On the same vein, Pettigrew (1992) calls for studies on boards to consider "the processes and mechanisms which presumably link the input to the output" (p.171).

Similarly, Forbes and Milliken (1999) described boards as “large, elite and episodic decision-making groups that face complex tasks petering to strategic-issue processing” (p.492). The authors argue that besides facing complex tasks, board members are busy individuals with tight schedules which make the board loosely connected and this leads to difficulties in their interactions with each other. As a result, certain social-psychological processes determine their effectiveness. Such processes include board effort norms, cognitive conflict, and use of knowledge and skills.

2.5.1 Effort Norms

Effort norm is considered one of the board processes variables that helps to explain board effectiveness. Directors’ effort norms refer to the level of involvement during meeting and preparation before meetings (Minichilli *et al.*, 2009). Involvement represents the level of effort directors allocate during discussions and follow-up of the decisions made in the boardroom, while preparations refer to board members’ desire to make meaningful contributions in the meetings and the extent to which directors engage in research about the topic prior to the meeting (Minichilli *et al.*, 2009).

Board members are busy people (Mace, 1971; Lorsch and MacIver, 1989) especially those with board interlock and other tight schedules outside the firm. The maximum level of effort by a group member can be achieved with strong group levels of involvement and preparation (Wageman, 1995). Boards with a minimal levels of effort among directors that did not meet regularly, became less effective in meetings and only approved proposals of the management (Mace, 1971). However, a board with significant level of effort norms engaged in active, critical discussions, were always available when needed and utilised their knowledge and skills effectively in performing their duties (Lorsch and MacIver, 1989).

The way and manner boards operate may likely effect directors’ involvement and participation, a board with a few individuals that dominate the affairs of the board demoralise other board members inhibiting their contribution and active participation in the decision making process. An inclusive board which allows all directors to contribute equally and freely is more likely to have directors that are active and committed in performing their fiduciary duties, which in turn improves firm performance. Pugliese et al., (2015) explain that the better way to assess whether boards are capable of questioning and monitoring the executive is through inclusiveness and evenness of turn-taking, rather than relying on the proportion of non-executive directors. Moreover, the structure of the board meeting (informality and formality of meetings), is likely to influence directors' engagement and involvement. Formal meetings are normally characterised by a bureaucratic system and series of rules that must be followed which can lead to fewer contributions and reduced participation from the attendees. Conversely, informal meetings are conducted with fewer rules and instructions, which results in greater participation of directors in a free environment.

2.5.2 Cognitive Conflict

Another board process considered in this study is board cognitive conflict which refers to task-related disagreements or differences among group members. With task-related conflicts board members engaged in open debate, critical analysis and disagreement of management proposals. A board without a moderate level of conflict may be submissive to the management (e.g. Forbes and Milliken, 1999).

Board members face ambiguous tasks and for effective decision making on these tasks there is a need for board members to freely present different viewpoints and be able to critically analyse each other's views (Watson and Michaelsen, 1988); this should result in quality decision making, especially in an uncertain environment (Milliken and Vollrath, 1991).

Another factor that assists boards to perform their duties effectively is the level of cohesiveness among directors. However, it is imperative to mention that higher cohesion results in a negative influence on effective decision making. Task-related disagreements reduce or eliminate the negative effect of higher cohesiveness. Janis (1982) argues that effectiveness of a group on quality decision-making is determined by a moderate level of cohesiveness, as a higher level of cohesiveness among group members is likely to lead to a decrease in or non-existence of independent critical thinking and engagement. The result being mostly consensus opinions among group members, a phenomenon termed as 'groupthink'.

However, Forbes and Milliken (1999) argue that ‘groupthink’ is only possible if a high level of cohesiveness is accompanied by a low level of cognitive conflict among group members. In general, board cognitive conflict is assumed to be a factor that assists board members in performing their expected responsibilities, such as monitoring and service roles, which in turn enhances corporate performance.

2.5.3 Use of Knowledge and Skills

According to Bettinelli (2011), use of knowledge and skills is “the extent to which a board taps into and applies the human capital members bring to the table” (p.156). The ability of a group to utilise the knowledge, experience and skills of each group member determines the group effectiveness (Wageman, 1995). The availability of knowledge and skills in a group does not necessarily guarantee the effectiveness of that group, what matters most is the sharing and utilisation of knowledge and skills among members of the group.

Some board structures, such as the proportion of outside directors, female directors and board size, are likely to enhance the availability of diverse knowledge and experience, but that does not guarantee proper utilisation of such resources. It is the application of these resources that improves organisational performance, not its availability or abundance. Zhu et al., (2016) contend that the availability of information in the boardroom has no effect on strategic involvement. However, the authors report that utilisation of such information improves strategic involvement in for-profit organisations. Zona and Zattoni (2007) suggested that the effectiveness of the board in performing their duties may depend on the ability to actively use and integrate each board member’s knowledge, skills, experience and expertise. The availability of human capital is essential to the board, but utilising such human capital is more important as the benefits of that capital can only be achieved if it is put to use. Therefore, it is assumed that the use of knowledge has sufficient influence on board tasks which consequently improves firm performance.

In summary, board effort norms, cognitive conflict and the use of knowledge are the three main board processes variables commonly used in studies that investigate the impact of board processes on board effectiveness, (Forbes and Milliken, 1999; Wan and Ong, 2005; Zona and Zattoni, 2007; Minichilli *et al.*, 2009; Bettinelli, 2011), which consequently improves firm-level performance. In this study, board-level (board task) and firm-level (CSR) effectiveness serve as proxies for board effectiveness. Task effectiveness relates to the extent to which a board successfully performs their control, resource provision and strategic roles. The next section discusses board task.

2.6 Board Control, Resource Provision and Strategic Tasks

The board control role, also known as oversight or monitoring, refers to the protection of shareholders' wealth from expropriations (Fama and Jensen, 1983). The duties of the board, in this regard, is to provide an oversight function in which a firms' operations and executives' behaviours are conducted in the best interest of the owners (Lorsch and MacIver, 1989). Boards are expected to sufficiently investigate, evaluate, and scrutinise executives' activities and proposals. Agency theory is the main theory that focuses on the board control role. The theory's dominant aim, as discussed above, is to minimise or eliminate the agency costs problems that may arise in a principal-agent or minority-majority relationship. Boards of directors, as the representatives of the shareholders, serve as the main internal corporate governance mechanism that ensures the interest of shareholders and managers are aligned, either through managerial incentives or effective monitoring.

Whereas the resource provision role involves the provision of advice and counsel, forming links with important stakeholders and capital provision (Pfeffer and Salancik, 1978). This board role is one of the main tasks directors are expected to perform and is closely linked to resource dependency theory. According to this theory, boards are required to provide human and relational capital, which includes directors' expertise, knowledge, sources of finance, environmental linkage, reputation and other critical resources to the firm.

Another equally important board task is the strategic role. In addition to board control and resource provision tasks, directors are required to perform a strategic role, which refers to the provision of strategic advice and involvement in the strategic decision-making process, through strategic formulation and implementation (Westphal and Bednar, 2005).

2.7 Corporate Governance and Corporate Social Responsibility

Corporate governance was initially defined narrowly, but recent happenings required a broader definition of corporate governance. The broader definition of governance is more acceptable in the business world today, because corporations are expected to satisfy the interest of both shareholders and stakeholders and to operate in ethical and moral behaviours which enhance long-term benefits. Thus, good CG should improve CSR activities to give a 'sense of belonging' to the stakeholders, and lead to long-term benefits and survival.

Businesses all over the world are encouraged to engage in corporate social activities. Recently, CSR gained considerable attention among academics and in the global business environment. Different terms are frequently used, such as corporate citizenship, sustainability, stakeholder management, business ethics and corporate responsibility (Carroll and Shabana, 2010). Yet underlining all terms is the motive to do good for society and the environment, and to eliminate or at least reduce the harm generated by firms' activities.

CSR is defined by the World Business Council for Sustainable Development (WBCSD) as "continuing commitment by business to behave ethically and contribute to economic development, while improving the quality of life of the workforce and their families, as well as improving the life of the local community and society at large" (1999, p.65). However, this concept of CSR is heavily criticised as an unnecessary waste of a firm's assets.

The classical economic argument by late Milton Friedman insists that corporations' responsibility is to generate more and more profit for the shareholders (Friedman, 1962). Similarly, critics of CSR argue that it is inappropriate for managers who are trained in finance and operations to engage in CSR activities, which makes the business' main purpose weaker (Hayek, 1969; Davis, 1973). However, the perception of CSR as a detriment to shareholders' assets has changed over time.

Recent evidence shows how CSR activities benefit both society and shareholders. Satisfaction of stakeholders' interests through social responsibility enhances financial performance (Brammer *et al.*, 2006). Therefore, an effective CG practice should ensure the board of directors engage in corporate social responsibility activities which consequently enhances the overall firm performance.

Jamali *et al.* (2008), suggest that a strong connection exists between corporate governance (CG) and corporate social responsibility (CSR). Similarly, Gill (2008) suggests that CG and the board of directors specifically, should serve as a vehicle that incorporates ethical, social, and environmental responsibilities into firms' decision-making process.

Consistent with predominant agency theory, the fiduciary role of the board members is to monitor and control corporation's assets from opportunistic managers and ensure maximum returns to shareholders. Studies conducted on this view are mostly on the effectiveness of the board characteristics, for example board size, CEO duality, the proportion of outside directors and diversity of gender, in mitigating agency problems and improving the financial performance of the corporations (e.g. Grove et al., 2011; Elsayed, 2007; Zhu et al., 2016; Carter et al., 2010). However, in addition to shareholders' wealth maximization, boards nowadays are expected to consider the interests of those who are directly or indirectly affected by the actions of the firm, for instance employees, customers, creditors, suppliers, the community and society at large (Freeman, 1984).

Boards can achieve these 'multiple responsibilities' through appropriate design and involvement in long-term strategic plans, such as corporate social responsibility which accounts for the interest of stakeholders, as well as enhances the long-term survival of a firm which benefits shareholders.

Recent events of corporate failures, as a result of the unethical and immoral behaviour of some directors, indicate that the traditional view of corporate governance needs to be reviewed. Scholars have started to realise that a disproportionate emphasis on shareholders' wealth maximization, at the expense of ethical, social and environmental concerns does not yield the desired result.

Therefore, some researchers argue that the measurement of firms' performance should not be restricted to financial performance, rather benefits, such as corporate reputation, employee commitment, customer loyalty, legitimacy and access to critical resources, should also be considered (Michelon *et al.*, 2013; Setó-Pamies, 2015). These benefits improved corporate performance, especially in the long-term. Thus in addition to short-term financial performance, the board of directors should ensure the interest of various stakeholders are considered in decision-making, which includes social and environmental issues (Sánchez *et al.*, 2011; Ferrero-Ferrero *et al.*, 2015).

In developed countries, there are pressures from the governments and various non-profit organisations for companies to engage in corporate social responsibility activities. In such countries, there are fewer cases of unethical and irresponsible attitudes of companies compared to developing nations. These issues of corporate irresponsibility are more common in countries where corruption is endemic and weak legislation is in practice, like Nigeria. There are cases where some multinational companies in Nigeria were accused by their host community for doing nothing to mitigate the negative impact and hazardous environment they intentionally created (see Eweje, 2007). These acts lead to social unrest, riots, kidnappings and vandalism which also threaten the economic stability of the country and corporate existence of these firms.

Despite the importance of CSR activities on a firms' survival, little is known of the impact of the board of directors on corporate social responsibility performance (Villiers et al., 2011); rather numerous efforts have been made by previous scholars to examine the relationship between the board and financial performance (e.g. Dalton et al., 1999; Dahya and McConnell, 2005; O'Sullivan et al., 2016; Ehikioya, 2009 and Ujunwa, 2012). Moreover, the limited studies that investigate the link between board and CSR, employed the traditional input-output approach where the direct relationship between board characteristics (input) and CSR (output) is examined. It is essential to investigate the influence of board processes on the relationship between this input and the output (Pettigrew, 1992). The current study argues that the effectiveness of board characteristics depend on its impact on board processes, which leads to better board task and CSR activities that provide long-term corporate performance and survival.

2.8 Summary of the Chapter

This chapter starts by giving a brief history of the Nigerian corporate environment. The developmental process of the Nigerian corporate governance is also discussed in this chapter. To some extent, the Nigerian CG system can be traced back to 1968 few years after the country's attained independence, in which the Companies Act was introduced. Thereafter, the CAMA 1990 replaced the Companies Act, and later, the SEC established codes of CG in 2003 and revised in 2011. Moreover, a summary of the SEC code (2011) code provisions that are relevant to this study are discussed in this chapter.

This chapter discusses the three main corporate governance theories that seem appropriate to employ as theoretical lenses for this research. Considering the fact that no single theory covers all the roles boards are expected to perform, multiple theories are used in this study. The theories that are applied as the research theoretical framework are: agency theory, resource dependency theory and stakeholder theory.

Furthermore, this chapter defines and discusses the study variables and concepts. This includes board characteristics, board processes, board task and corporate social responsibility. The board characteristics (board size, composition, CEO duality and gender diversity), that are termed the 'usual suspects' by other scholars, are considered as the main explanatory variables for this study. Board processes variables (cognitive conflict, effort norms and use of knowledge), introduced in the theoretical model of Forbes and Milliken are considered in this research. Board control task, service task and strategic task are the major board roles recognised in the literature and are the board task examined in this study. The concepts of corporate governance and corporate social responsibility are discussed in this chapter. In the subsequent chapter, a discussion on the systematic (narrative) literature review of previous empirical studies conducted is presented.

CHAPTER 3: LITERATURE REVIEW

3.0 Introduction

This chapter reviewed relevant literature on board effectiveness. Three common perspectives on board effectiveness were identified which are board of directors influence on (1) financial performance, (2) CSR performance and (3) board task effectiveness. Therefore, due to the abundant and diverse literature on boards of directors, the review of literature is restricted to these three common board effectiveness perspectives. A systematic (narrative) literature review on these three main perspectives of board effectiveness is presented in this chapter.

The subsequent section (3.1) introduces the three perspectives of board effectiveness. Section 3.2 highlights process of the systematic (narrative) review conducted. Sections 3.3 discusses relevant previous empirical findings on the relationships between board characteristics and financial performance. Studies on the effect of the board on corporate social responsibility performance are discussed in section 3.4. Section 3.5 presents empirical studies on the influence of board functioning on the board task effectiveness. Section 3.6 presents the literature gaps, and the research hypotheses as well as the final conceptual framework which accommodates findings from the qualitative interviews are presented in section 3.7. A summary of the chapter is presented in section 3.8.

3.1 Perspectives on Board Effectiveness

The importance of board of directors is highly recognised globally, especially after the collapsed of some big firms. Boards are the main internal corporate governance mechanism and they play a vital role in a firm’s value maximization, through safeguarding corporation’ assets, resource provision, and giving ethical directions for firms. The board of directors’ effectiveness is crucial in the business environment and economic growth of any nation.

A number of corporate scandals, such as those discussed earlier, were attributed to the ineffectiveness of the board of directors. Thus, the board, as the apex decision-making body, has been the subject of both blame and series of reforms (Roberts et al., 2005). Therefore, it is essential to understand what board effectiveness is and what makes a board effective. The literature on board effectiveness is increasingly fragmented, as such, there is no unanimity on what board effectiveness is and the main factors responsible for board effectiveness are ill-defined. Nevertheless, three major groups of board scholars are common in the board effectiveness literature (see Figure 3.1).

One group of board scholars argue that board effectiveness is the ability of directors to improve firm-level performance, notably the financial outcome (Dalton *et al.*, 1999; Dahya and McConnell, 2005; Kajola, 2008). These scholars usually rely on board structure and archival data to investigate the direct relationship between the board and financial performance. Common board structures used are the boards' size, the proportion of non-executive directors, board gender diversity and CEO duality. These characteristics are frequently used in board literature to examine board effectiveness. However, findings on these 'common suspects' are mixed. This study reviews those articles that investigate the impacts of these heavily researched board characteristics on corporate performance.

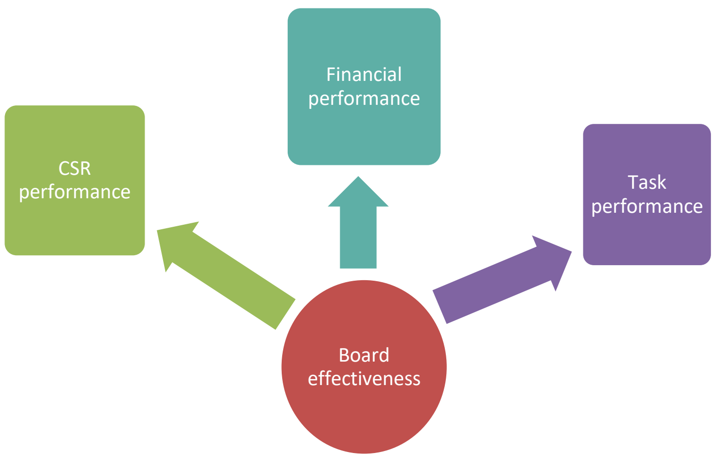

Figure 3.1: Perspectives on board effectiveness

Source: Author

Similar to the above approach, another group of scholars emerged and argue that short-term financial performance does not guarantee the long-term survival of a firm. Firms are expected to operate ethically, legally and for the best interest of all stakeholders rather than stockholders alone (Freeman, 1984). Therefore, benefits associated with customer loyalty, firm reputation and employee motivations should be considered in assessing firm performance (Setó-Pamies, 2015). These scholars refer to board effectiveness as the ability of the board structure to influence corporate social responsibility activities (Wang and Dewhirst, 1992; Ibrahim and Angelidis, 1995; Johnson and Greening, 1999; Shaukat et al., 2016).

Recently, many scholars have criticised this traditional approach of board effectiveness literature that investigates a direct link between the input (board structure) and the output (firm performance). Researchers were called to dismantle the fortresses (Daily *et al.*, 2003) and open the 'black box' to examine the intervening processes between board characteristics and corporate performance (Pettigrew, 1992; Huse *et al.*, 2011). This group of researchers argue that boards are effective, if they positively influence board task, such as monitoring, advice and counsel, strategy formulation and provision of resource, which consequently improves firm performance. Scholars on this streamline of research rely on board's internal working processes as the key determinants of board effectiveness (e.g Pettigrew, 1992; Forbes and Milliken, 1999; Zona and Zattoni, 2007; and Minichilli et al., 2012). The next section discusses previous empirical studies from a systematic (narrative) literature review conducted in regard to these three perspectives of board effectiveness.

3.2 Introduction to the Systematic Narrative Review

This section reviews previous studies on the board of directors' effectiveness, in relation to board influence on financial, corporate social responsibility and board task, so as to fully understand what is discussed and what is missing in the literature. The review clearly shows what has been written about the research topic and the areas that require further investigation. Next, the process of narrative review of the literature and the methodology employed in the review is discussed.

The study uses an appropriate systematic approach to identify relevant literature. Research questions used in this study are specific, well defined and focused. The literature review starts with sensitivity searching, then shifts to a specificity searching approach. At the former stage, the motive is to find as many relevant articles as possible, in the latter stage, one needs to make sure articles used are indeed relevant. Overall, the quality of studies included in the review is judged based on appropriateness of the studies' design for answering the research questions.

3.2.1 Methodology for Paper Selection

Quantitative and qualitative methodologies have increasingly been applied jointly in recent social science studies. Such an approach is also required in a review of the literature. Meta-analysis is a quantitative analysis of previous studies that are relevant to a review topic, while the narrative method is an approach that involves both quantitative and qualitative studies. To avoid missing out any important study in the review, a narrative method of synthesis is used in this study.

Unlike quantitative meta-analysis review, that used only quantitative articles, narrative reviews involve summaries and interpretations of evidence from both quantitative and qualitative studies relevant to the review topic, without any attempt to transform them into a common metric for the analytical purpose (Mays *et al.*, 2005). This approach has been appropriately used where it seems the experimental and quasi-experimental studies included in a systematic review are unlikely to be similar for a quantitative meta-analysis review to be suitable (Nijmeijer *et al.*, 2014). Moreover, the research questions a researcher intends to address serve as the key determinants of the review approach to be applied. Experimental or quasi-experimental studies are appropriate if the target of the questions is to address 'what', rather than 'why' or how'; if the intention of the question is to address the latter then qualitative and survey are more suitable (Petticrew and Roberts, 2008). In this review, both studies that answered 'what is the effect of the board on performance' and 'how boards work' are considered. Thus, some studies are likely to have used a quantitative and positivist approach, while others are likely to have employed an interpretivist and qualitative methodology. In this circumstance, a narrative method is more appropriate than meta-analysis approach.

The narrative review method is more comprehensive, inclusive, and less labor-intensive techniques are required (Mays *et al.*, 2005). In addition, the approach is more likely to allow for wide coverage of the topic under investigation (Collins and Fauser, 2005) than quantitative meta-analysis. However, this approach received greater criticism for being subjective and selection biased (Dixon-Woods *et al.*, 2005). To reduce the bias, an advice given by Hopkinson and Blois (2014) is followed and a systematic method in the narrative review is employed. This is necessary to ensure selection bias is minimised and the study is replicable (Collins and Fauser, 2005).

A structured search process for the relevant articles was conducted using Journal Storage (JSTOR), Scopus, Google Scholar, PsycINFO and Business Source Premier Databases. Search terms were supported by certain terms in order to ensure all related published articles are included in the review, such terms include: wildcards, Boolean operators (AND, OR, and NOT) and truncations (*).Three broad search terms (corporate governance, the board of directors and effectiveness) were used in order to ensure all relevant articles are included at the initial stage of the search process.

Studies considered for this review are from the top and highly reputable journals from the Association of Business School (ABS) journals ranking, which includes the Journal of Business Ethics, Corporate Governance: An International Review, British Journal of Management, Strategic Management Journal, Journal of Corporate Finance and Journal of Management Studies.

Additionally, the search was limited to only articles published from 2003 to 2016, in the English language and peer-reviewed. The kick-off year (2003) is chosen because at that period a major reform is taking place in the US where by a federal law (known as Sarbanes-Oxley Act 2002) is introduced and the Act issued new requirements for all boards of public firms in the US. In a similar vein, the Nigerian government through the Security and Exchange Commission issued their first corporate governance code in 2003 which was made applicable to all listed companies. Moreover, the majority of the major corporate scandals occurred within that period (such as Enron in 2001, Parmalat in 2003 and Royal Ahold in 2003). The researcher intends to start analysis in early 2017 and therefore, consider 2016 as the ending period.

The initial search resulted in 524 papers ready for further screening from databases: JSTOR (no = 43), Scopus (no = 110), Google Scholar (no = 224), PsycINFO (no = 37) and Business Source Premier (no = 118). However, papers with no direct reference to the research area, book chapters and letters from the editors were removed from the review. Similarly, also removed from the review were papers that used other performance as outcomes, such as merger and acquisition, earning management, CEO compensation and capital structure. This process led to the exclusion of 256 articles and 276 papers being retained for further analysis.

The next step is reading the titles and abstracts of all potential articles (276) to be considered for the review. An inclusion and exclusion criterion was used to identify papers that qualify for this review. The following inclusion criterion is used and any paper that answers ‘no’ to any of the questions is excluded;

1. Does the paper discuss board of directors?
2. Is the paper empirical?
3. Is the paper written in the English language?
4. (a) Does the paper include board processes, financial performance or corporate social responsibility performance?

   (b) The paper that uses financial or corporate social responsibility performance as the outcome variable, does the paper include board structure variables (Board size, the proportion of outside directors, female directors and CEO duality)?

186 articles answered ‘no’ to at least one of the above questions, so were excluded from further analysis. The final sample is 90 papers that were saved and reviewed. Figure 3.2 below describes the selection process of papers that were included in the review.

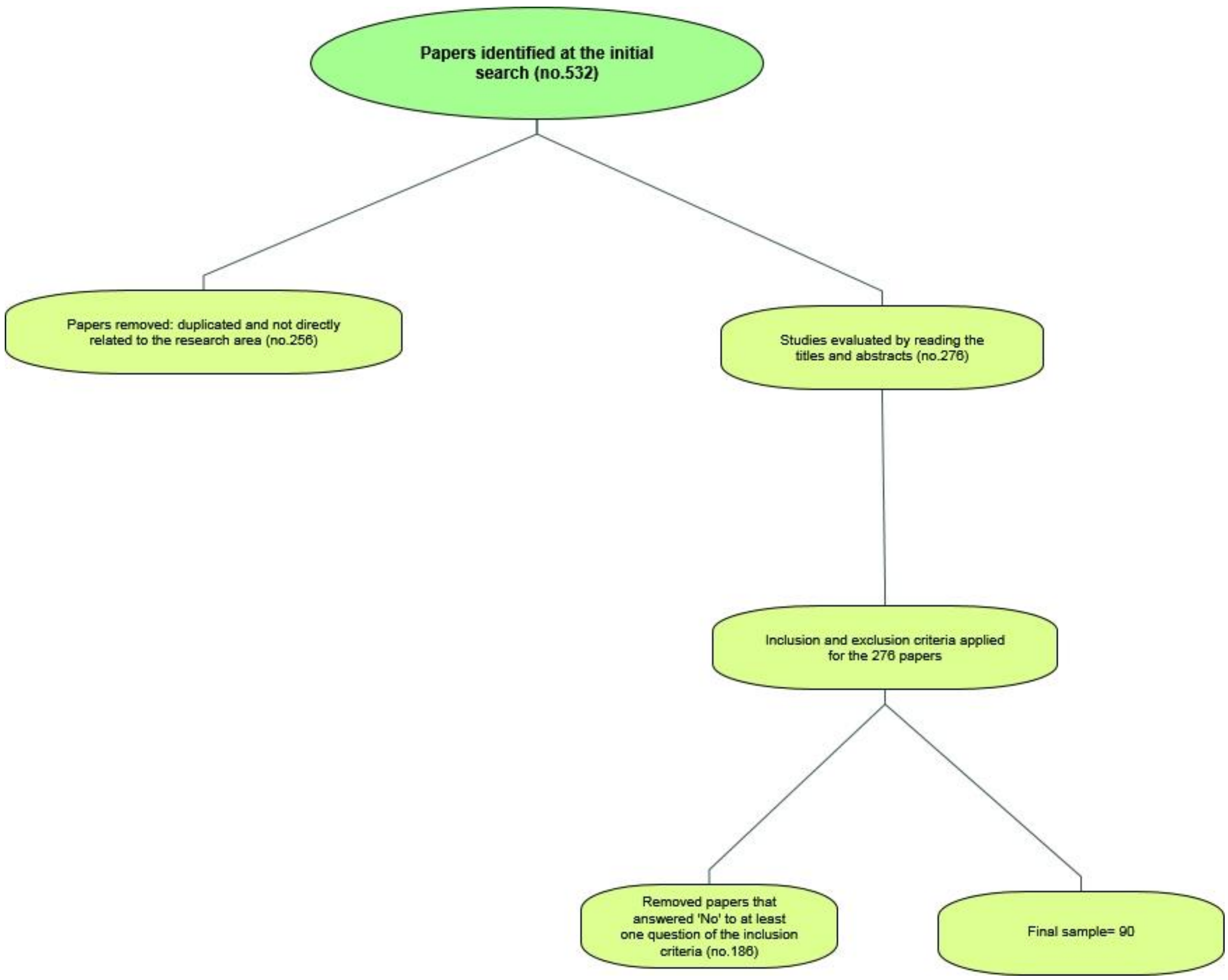

Figure 3. 2: Selection Process

Source: Author

3.3. Board Characteristics and Corporate Financial Performance

The direct relationship between the board and firm performance has been investigated for over a decade. The tradition of scholars on this streamline is to narrowly examine the impact of board characteristics on firm-level performance. Common board characteristics used in the previous studies are: board size, the proportion of non-executive directors (NEDs), gender diversity and CEO duality leadership structure, while financial performance is mostly considered as the dependent variable. However, similar to the lack of consensus from theoretical arguments, the empirical findings on the relationship between these board characteristics and corporate performance are never conclusive. In the subsequent sub-sections, articles that investigate the direct relationship between board characteristics and corporate financial performance are presented and the articles are summarised in appendix I (i).

3.3.1 Non-executive directors and financial performance

A China-based study of 2,057 firms shows that independent outside directors decrease tunneling (self-dealing) and enhance efficiency, which in turn lead to better operating performance (Liu *et al.*, 2015). This indicates that outside dominated boards are more vigilant, than the inside dominated board in China. Similarly, it was found that the higher the proportion of non-executive directors on the board, the higher the financial performance of 259 Taiwanese electronic firms (Luan and Tang, 2007). However, a study of US commercial banks by Grove et al., (2011) contradicts agency theory, as it found that firms with a higher proportion of inside directors were not worse than those with NED dominated boards. Specifically, the negative impact of executive-dominated boards, speculated in the literature on the dependent variables, was not supported.

Investigating whether or not board characteristic variables are implicated in the mutual funds trading scandals of 2003-2004, Ferris and Yan (2007) used a sample of 448 US fund families and find that funds with adequate proportion of outside directors and independent chairman do not reduce the likelihood of a fund scandal. Moreover, funds that have greater numbers of independent NEDs that receive large compensation and serve on multiple boards are more likely to be implicated in a scandal.

A study of 27 Turkish banks finds support for stewardship theory, it argues that inside directors are good stewards of corporation's assets and are positively related to bank performance, but outside directors negatively and significantly affect performance (Kaymak and Bektas, 2008). The study highlights the importance of firm and industry-specific knowledge to the overall corporate performance, (of which executive directors possess and non-executive directors have a deficiency).

However, it is essential to understand that the relationship between board characteristics and performance is not as straightforward as expected. The impacts of corporate governance mechanisms depend on the contextual and firm-specific contingencies (Essen *et al.*, 2013). The lack of a significant impact by NEDs on firm performance is likely to be due to inferior feelings of the outside directors in the boardroom. Zhu et al., (2016) argue that independent NEDs that are ranked higher, are more likely to improve firm value (measured with Tobin's Q) than those ranked lower (less empowered).

Moreover, outside directors are appointed to the board to mitigate opportunity behaviour of the agent, but their impact on corporate control is largely contingent on other environmental factors where the firm operates. Using firm's growth as an environmental factor, Hutchinson and Gul (2004) predict a negative relationship between growth opportunity and firm performance. They find that proportion of outside directors on the board reduces the negative relationship predicted. However, it was found that firms with a higher proportion of NEDs, perform worse than firms with less NEDs on their board and the finding was the same in both of the two developing countries (India and China) in which the sample of 813 firms were drawn (Singh and Gaur, 2009). Therefore, the country's context is irrelevant to the negative effect of NEDs on firm performance.

Combs et al., (2007) argue that the importance of board independence is more salient when a firm has a powerful CEO, where the monitoring role of the board is highly required. However, if a firm has a weak CEO, an executive dominated board is sufficient to serve as a control mechanism. The researchers used 73 US firms alongside event data (unexpected CEO deaths) and found that CEO power moderates the board-performance relationship. They further explained that shareholders are glad about the passing away of the powerful chief executive when the board is dominated by inside directors, and are relieved when the CEO is less powerful and the board is heavily dominated by independent outside directors. In other words, the stock price falls, when a powerful CEO death is announced for a firm that has a high proportion of independent directors or a less powerful CEO's death is announced for a firm that has executive monitoring.

It is essential to know that different governance mechanisms substitute each other. The presence of one mechanism may cancel the benefits of the other and therefore, it is unnecessary to have both mechanisms at the same time. For instance, due to the greater percentage of large shareholders of Korean firms, outside directors are found to have a weak (positive) impact on participation rate and overall profitability of the sampled firms (Cho and Kim, 2007). Large shareholders with large stock ownership are likely to serve as effective monitors of the corporate assets. Consequently, a greater proportion of NEDs is not required. The relationship between board independence, measured by the proportion of outside directors, and firm value is greatly moderated by concentrated ownership and dividend policies (Setia-Atmaja, 2009).

The corporate governance mechanisms that monitor the executives are required to minimise or eradicate the agency problems that may arise as a result of the separation of ownership and control. Setia-Atmaja (2009) showed that closely-held companies that have low dividend payouts and greater proportion of NEDs, outperformed those firms with a lower percentage of NEDs. The author concluded that the presence of independent outside directors mitigates the controlling-minority shareholder's agency problem that is likely to arise in concentration ownership structure. However, Klein et al., (2005) found a negative relationship between the proportion of NEDs on the board and Tobin’s Q of 263 Canadian family firms. They argue that the duties of outside directors are not required for family firms where the majority of the managers are also the owners.

Similarly, a recent study by Yeh et al., (2011) shows that during the crisis period independent outside directors were more likely to reduce the agency problems that might arise between manager-shareholders and controlling-minority shareholders in civil law countries, where weak shareholders and concentration ownership structure is common. Specifically, the study finds that firms with reasonable number of NEDs on audit and risk committees were more likely to improve the performance of twenty of the largest financial institutions from G8 countries during 2007-8 financial crisis and that the relationship was stronger for firms that operate in civil law countries with excessive risk-taking behaviour. However, in an effort to examine the impact of outside directors on firms’ financial performance before and after political instability, it is concluded that the proportion of the

NEDs on the board is significantly negative, irrespective of the post or pre-presidential election in Zimbabwe political instability (Mangena *et al.*, 2012).

3.3.2 Board size and firm performance

Grove et al., (2011) investigate the relationship between board structure and firm performance of 236 public US commercial banks and used future excess return (alpha), loan quality and return on assets as dependent variables. They found that board size initially has a positive effect on ROA, but when the board got too large, the effect changed to negative. On the relationship between board size and alpha, Grove et al., (2011) reported significant linear and insignificant quadratic coefficients. This implies that larger boards are more effective than the smaller board in regard to stock market performance, during the crisis period. However, the authors find that firms with small boards are more likely to improve loan quality due to the effective monitoring of lending activities of the banks. Large boards bring diverse knowledge and experience which lead to an abundance of opinions and enhance quality decision-making. Nevertheless, boards with many directors face difficulties in making decisions due to diverse opinions, poorer coordination and communication. The benefits are likely to be outweighed by the challenges of the board size which lead to a negative effect on a firm financial performance (De Andres *et al.*, 2005).

In contrast to this, Kaymak and Bektas (2008) argue that larger boards are more beneficial, than the smaller board in an industry that is heavily regulated and difficult to understand, like banks. In a complex environment, the diverse knowledge, experience and skills offered by having many directors on the board outweighs the negative issues related to a large board size. In a similar vein, Essen et al., (2013) conducted research using a large sample of over 1,197 firms drawn from 26 European countries. It was reported that the 'best governance practices' such as small board size and proportion of outside directors, were found to have a negative and significant influence on firm performance during the European financial crisis.

Similarly, Rose (2005) finds that boards that are large in size are not better than those of a small size. However, contrary to Essen et al., (2013), Rose (2005) argues that the impact of these 'good governance practice' is difficult to find under normal circumstance, but might more likely be seen when firms are facing a financial crisis, challenges and threats.

Investigating the impacts of board size and outside directors on firms' financial performance before and after political instability, Mangena et al., (2012) used a sample of 53 firms listed on the Zimbabwe Stock Exchange for the period 2000 to 2005. The findings show that firms with a large board size have better economic performance after, not before, the Zimbabwean presidential election.

3.3.3 CEO duality and firm performance

On the impact of CEO duality leadership structure, Kaymak and Bektas (2008) find that having the CEO as the Chair or empowered CEO is a detriment to the firm's performance. A recent study of 1,384 Chinese listed firms, for a period from 2001 to 2010, show that CEO duality reduces short-term performance persistence (Haß *et al.*, 2016). In a related development, CEO duality leadership structure is found to be negatively and significantly related with ROA and alpha, but not on loan quality (Grove *et al.*, 2011). Having a powerful CEO on the board destroys firm performance pre-crisis period, but after the crisis, the negative association disappears (Grove *et al.*, 2011). Notwithstanding, Jackling and Johl (2009) in their study, failed to find support for the negative impact of CEO duality on firm performance, as speculated by various previous studies.

CEO duality-performance relationship depends on the complexity, challenges and company size. Larger firms are characterised with operational complexity and numerous challenges. In such organisations separation of the two leadership positions is more appropriate, but in small firms that are less complex, CEO duality may likely benefit the company (Kiel and Nicholson, 2003).

Singh and Gaur (2009) argue that CEO duality is appropriate for some firms, while separation will be more beneficial for others. Furthermore, the authors assert that CEO duality-performance relationship is determined by industry type and firm characteristics: "the relationship is not monotonic" (Singh and Gaur 2009, p.1210) as speculated by other authors. In relation to this, Elsayed (2007) explains that the choice of leadership structure largely depends on firm size, firm age and ownership structure.

The effect of CEO duality is different across industries. Notably, Elsayed (2007) finds a negative impact on the performance of firms from the cement industry, as well as positive and neutral influence on firm performance from 18 other industries in the sample. Therefore, the insignificant effects of CEO duality on performance, found by other studies that have different types of industries in their samples, have been challenged because the positive effect from some industries may likely be set-off by the negative impact from other industries. Moreover, any study that uses a single industry should not be generalised. No single leadership structure fits all; rather, both leadership types may likely be appropriate under certain conditions (Elsayed, 2007). Evidence emerged which evinces that CEO duality is chosen by the sample firms, not purposely to improve financial performance, rather certain antecedents of duality, such as internal complexity, institution, social reciprocity, reward and powerful CEO, influence firms to choose leadership structure style (Iyengar and Zampelli, 2009).

Another factor that needs to be considered in board-performance studies is the level of past firm performance, itself. Ideally, low performing firms require unity of command, technical knowledge and problem-solving techniques, therefore, CEO duality may likely be more beneficial. However, higher-performing firms need a vigilant board to mitigate managerial entrenchment and moral hazard, which separations of duties between CEO and Chairman may likely provide (Ramdani and Witteloostuijn, 2010) Yet in contrast to this, a recent study demonstrates that a vigilant board is only beneficial to those firms with poor past performance (Haß *et al.*, 2016).

It is argued that the best leadership structure for firms operating in an unstable environment is to have a CEO who also serves as the chairman of the board (Essen *et al.*, 2013). Overall, Essen and colleagues concluded that those good governance provisions are not the best for firms operating in an environment facing a financial crisis, rather technical know-how and executive discretion are required to deal with the challenges and improve corporate performance.

Dulewicz and Herbert (2004) measured firm performance with the cash flow return on total assets (CF ROTA) and sales turnover (sales) to investigate the relationship between board composition, practices and corporate performance of some listed firms in the UK. that the total number of directors on the board has no significant impact on firm performance and surprisingly, CEO duality or non-duality does not matter in regards to both performance measures (CF ROTA and Sales growth). They concluded that for any benefits to be derived from the separation of the roles, the chairman should be an independent non-executive, in order to ensure the power is fully diffused (Dulewicz and Herbert, 2004).

As traditional accounting and market value measures continue leading to inconclusive findings, researchers should consider using other alternative measurements of financial performance. Adjaoud et al., (2007) failed to find any significant relationship between the board's quality, such as CEO non-duality, and traditional financial performance, such as return on investment (ROI), return on equity (ROE), earning per share (EPS) and market-to-book value. However, when EVA and value-added performance measures were used as dependent variables, the board's quality variables have a positive and significant impact on performance.

3.3.4 Board gender diversity and firm performance

Another board structure that is receiving greater attention in the literature currently is board gender diversity. However, like other board structure variables, findings on the effect of women on corporate performance are inconclusive. A study on the influence of gender diversity from a developing nation, Mauritius, demonstrates a positive and significant effect on firm value, which clearly shows in addition to ethical and symbolic perspectives, having women on the board has a strong business case (Mahadeo *et al.*, 2012).

However, female directors on the board are found to have conflicting effects in another recent study in Malaysia. From a sample of 841 listed firms on the main board in Bursa, Malaysia, the proportion of women directors on the board was positively and significantly related with return on assets (ROA), but negatively and significantly associated to Tobin's Q (Abdullah *et al.*, 2016). Nevertheless, it is essential to note that unlike in developed economies, the perception of having women as leaders in emerging nations is unfavourable. Thus, the negative relationship with the market-based performance is due to biased evaluation by the market, as a result of having female directors on the board (Abdullah *et al.*, 2016).

Similarly, in an attempt to shed more light on the 'business case' of having female directors on the board, Carter *et al.* (2010) investigated the relationship of women directors on two measures of firm value (Tobin's Q and ROA) using a sample of 641 unique US firms. The authors find that the proportion of women directors has no significant effect on firm performance and they argue that the influence of gender diversity on the firm's value may not be the same under different circumstances, at different times.

Conversely, Erhardt et al., (2003) investigated the effect of diversity on financial performance at 112 large US firms and found that diversity significantly improved the return on investment and return on assets of the sampled firms. The authors evince that diversity may lead to conflict and communication difficulties that are common in a diverse group, but enhance the control role of the board and mitigate any agency problem that may arise due to poor monitoring, which in turn improves a firm's financial performance. In contrast, a recent study by Ellwood and Garcia-Lacalle (2015) demonstrates that the presence of women on the board of NHS Foundation Trusts (NHS FTs) in England has an insignificant effect on ROA and also does not substantially influence service quality of NHS FTs. However, a position held by a female director, whether CEO or chairman, reduces or eliminates poor service quality (clinical negligence costs).

Veltrop et al., (2015) reported a negative impact of boards-factional demographic faultlines at board-level and on the financial performance of 318 firms in the Netherlands. This, Veltrop and colleagues asserted, was due to social categorization within groups, that is where group members prefer to work and cooperate with persons with similar, rather than dissimilar attributes, Similarly, Rose (2007) finds that the relationship between the proportion of women directors on the board and Tobin's Q is negative, but not significantly different from zero of Danish firms. Chapple and Humphrey (2014) employed a portfolio approach, rather than a firm-level approach, in measuring the impact of female directors on firms' financial performance. They reported no evidence to support that firms with women on the board are better off than those without. Chapple and Humphrey (2014) argue that larger and older firms are more likely to have women on their boards, than smaller and new firms with the aim to improve legitimacy, not economic performance.

Sufficient female representation in managerial positions is required for any contribution to be derived for having women on the board. Firms that operate in a complex and highly competitive environment (measured by high betas, market-to-book-ratio or analyst forecast standard deviation) have a significant influence on the abnormal return when the firms possess a high proportion of women in managerial positions (Francoeur *et al.*, 2008). Women on the board, itself, does not improve financial performance, but having female at both the managerial level and on the board improves stock-market returns (Francoeur *et al.*, 2008).

Ideally, the proportion of female directors on the board is expected to provide organisational benefits, but the insignificant effect found by other empirical studies may be attributed to the performance measure and type of role the female directors are offered in the boardroom. Provision of abundant human and relational resources due to the proportion of women directors on the board improves the operating revenue, which in turn leads to high employee productivity. However, the benefits women bring to the firm is likely to take time before it can have any significant effect on ROA (Ali *et al.*, 2014). Moreover, Ali et al., (2014) argue that in most cases women are offered operational, rather than strategic roles; as such, women may not have sufficient influence on the efficient use of assets (ROA). Moreover, evidence has emerged that women are more likely than their male counterpart to be appointed as directors of firms that are facing numerous challenges or had experienced poor firm performance (Ryan and Haslam, 2005). As a result, the negative effect may be due to other factors as opposed to the ratio of women on the board.

3.3.5 Multiple theories

Scholars should be aware that no single theory gives a complete picture of the governance-performance relationship, rather each theory may seem more appropriate in different circumstance (Kiel and Nicholson, 2003). Jackling and Johl (2009) examined the effect of board characteristics on the firm performance of the top Indian non-financial firms listed on the Bombay Stock Exchange from 2005 to 2006. They find support for both agency and resource dependency theory. It is purported that an adequate number of outside directors enhances board vigilance and monitoring capabilities, which in turn improves corporate performance. Similarly, a large board provides companies with greater exposure to the external environment and easy access to the critical resources needed, which leads to better operating performance.

Kiel and Nicholson (2003) employed multiple theories (agency, resource dependency and stewardship) to examine the relationship between board characteristics and corporate financial performance of 348 of Australia’s largest listed firms. The authors find that the percentage of outside directors and board size effect performance measure differently. Larger boards and proportion of inside directors positively and significantly affect market-based performance measure (Tobin’s Q), but such impact is not found when accounting measure (ROA) is used (Kiel and Nicholson, 2003). The former and latter findings indicate support for both stewardship and agency theory, respectively. Trusting and giving managers discretion to perform their duties improve Tobin’s Q, but certain agency problems may arise due to the absence of effective monitoring, which leads to a poor return on assets.

3.4 Existing work on the Relationship between Board Structure and CSR

Recently, companies are expected to consider the interest of other stakeholders rather than shareholders alone and this assist in ensuring long-term corporate survival. Basically, firms nowadays are advised to engage in corporate social responsibility programmes which take into account the wants and yearnings of other stakeholders such as employees, customers, government and society at large. Thus, a good corporate governance should be able to influence social performance. In other word, an effective board should have a positive effect on corporate social responsibility. Various authors that are on this argument, examined the link between corporate governance and corporate social responsibility. This section discusses the empirical studies on this stream line of research and appendix I (ii) summarises these studies.

3.4.1 Link between Corporate governance and corporate social responsibility

Boards are the apex decision-making bodies in public corporations; they are expected to formulate all important decisions for either current (operational) or future (strategic) benefits. Although shareholders' wealth maximisation still serves as the main goal of any serious for-profit organisation, the negative effect of the unethical and irresponsible attitude of firms have indeed made social performance a consideration along with financial performance (Jamali *et al.*, 2008). Engagements of firms to corporate social responsibility activities improve corporate legitimacy and reputations (Bear *et al.*, 2010) and overall long-term performance. Therefore, the effectiveness of governance mechanisms depends on how well the mechanisms influence CSR performance.

In fact, some scholars argued that there is a strong connection between corporate governance and corporate social responsibility. Jamali et al., (2008) explained that corporate governance (CG) serves as the foundation of CSR, CSR can be seen as a dimension of CG, and the two concepts can be termed as two sides of the same coin. CG and CSR are complementary and mutually reinforcing, as an effective CG system prevents unlawful behaviours of managers, which in turn improves shareholders' wealth, while CSR activities minimise actions which may be legal, but unethical in relation to their implications to other stakeholders (Jamali *et al.*, 2008).

Some corporate governance scholars argue that firms that engage in CSR activities have better corporate governance mechanisms, while others argue that it is CSR performance that leads to good governance practices. Jo and Harjoto (2012) offered some explanations about the causation between corporate governance and corporate social responsibility. Findings from a large sample of 2,952 US firms show that CSR variables do not cause governance variables, rather the latter positively influences the former (Jo and Harjoto, 2012). Furthermore, the authors argue that firms that engage in CSR activities are more likely to resolve any conflict that may arise between the firm (shareholders) and various stakeholder groups, which in turn strategically improves a firm's financial performance.

Similarly, a positive, but weak relationship is found between financial performance and CSR however, corporate governance has strengthened the relationship, as it possesses a significant moderating effect on the link between the two concepts (Ntim and Soobaroyen, 2013). Ntim and colleague concluded that firms with effective CG system are more likely to engage in CSR activities, which in turn influences corporate financial performance.

Some companies that have good corporate governance practices are proactive with regard to CSR activities, as some mechanisms are used to ensure directors and other managerial officers are encouraged to engage in social and environmental programmes. The proactive measures of these firms lead to better CSR performance. Hong et al., (2016) find that firms that have better corporate governance are more likely to provide compensation contracts linked to corporate social responsibility and compensation contracts tied to CSR are positively and significantly related to CSR activities in the following year, this, in turn, leads to better financial performance.

It is important to highlight that expenditures related to CSR activities are either viewed as agency costs or instruments that can be used to maximize shareholders' wealth. A recent study from the US shows that companies nowadays view CSR as a strategy that improves a firm's financial performance and shareholders' funds (Hong *et al.*, 2016). An effective corporate governance (CG) practice ensures executives run the firms in an ethical and responsible manner, and the board of directors are the main actors to ensure firms operate in the most ethical and acceptable ways required by the law. Therefore, investigating the impact of board structure on CSR is paramount.

3.4.2 Non-executive directors and CSR performance

Ibrahim et al., (2003) investigate whether there is a difference between outside and inside directors, of 307 US board members, in regard to responsiveness to stakeholders' claims. They argue that the benefit of outside directors is more skewed toward philanthropic responsibilities than economic social dimension, while executive directors are more inclined to improve economic performance. Both inside and outside directors have similar attitudes towards ethical and legal corporate social responsibility dimensions (Ibrahim *et al.*, 2003).

A longitudinal study of 1,060 US firms evinces that availability of an uncommitted resource (cash) leads firms to engage in higher community-based performance, such as CSR discretionary activities, but the proportion of NEDs on the board decreases the impact of available slack on community-based performance (Harrison and Coombs, 2012). Thus, boards dominated by outside directors may likely have an adverse effect on CSR activities. However, Ntim and Soobaroyen (2013) examined the relationship between corporate governance and Black Economic Empowerment (BEE) disclosure of 75 non-financial and utilities listed South African firms from 2003 to 2009. The authors find that the proportion of NEDs on the board influences firms to voluntarily disclose BEE information. This positive link can be expected because outside directors have their reputations to protect and are good monitors of executives' unethical activities that may lead to payments of penalties. Appointment of NEDs on the board decreases agency problems that may arise between managers and owners. In advancing the interest of shareholders, it is also likely to reduce the conflict of interest between shareholders and stakeholders, as they mitigate managers' unethical activities (Ntim and Soobaroyen, 2013). In a similar vein, after controlling the effects of firm size, age, leverage and return on assets, it is found that having a proportion of NEDs and the presence of an audit committee have a positive and significant impact on the CSR disclosure of 116 Bangladesh firms (Khan *et al.*, 2013).

It is common practices in emerging economies to appoint NEDs, not based on merit, rather based on their ties with the firm which jeopardizes their independence. Khan et al., (2013) argue that although NEDs in Bangladesh are appointed on the boards of family firms, mainly based on family and friendship ties, a large proportion of NEDs on the board offsets the family and friendship influence on CSR disclosure.

Another study from the same geographical context (Bangladesh) shows that an adequate proportion of NEDs provides sufficient board capital (experience, skills, expertise and knowledge) to the board and this improves the monitoring role of the board, ensuring transparency, whilst leading to a high level of CSR disclosure in Bangladesh (Muttakin *et al.*, 2016). Notwithstanding, for outside directors to influence CSR, they require a sufficient level of independence and knowledge about CSR programmes. It is argued that effectiveness of outside directors in regard to CSR performance largely depends on their experience, independence and the environmental context in which the firm operates (Ntim and Soobaroyen, 2013).

Further evidence emerged on the relationship between board characteristics and CSR performance. Outsider dominated boards were significantly related to the corporate reputations of 324 manufacturing and service US corporations (Musteen *et al.*, 2010). Communities viewed boards that had sufficient numbers of NEDs as better corporate leaders to consider wider stakeholders' interests because outside directors are more concerned with the company's and their own reputation, than inside directors (Musteen *et al.*, 2010).

In order to improve corporate legitimation, boards are expected to possess adequate knowledge about claims of firm's stakeholders and acquire necessary resources needed to satisfy their claims. In this regard, a board has two major roles to play, identifying salient stakeholder claims and augmenting firm resources (Zhang *et al.*, 2013). Proportions of NEDs is found to have significant effect in this regard. Outside directors are representatives of the wider community, have diverse knowledge in law, finance, engineering, for-profit and non-profit organisations, they may likely have knowledge about stakeholders' interests and provide adequate resources to engage in CSR activities which satisfy the interest of the wider community, rather than shareholders alone (Zhang *et al.*, 2013). Appointing well-connected individuals as outside directors, such as politicians, government officials and university presidents, serve as a strategy to acquire expertise and other resources (Zhang *et al.*, 2013).

However, it is argued that proportion of sufficient outside directors curtail charitable giving, but firms with greater proportions of outside directors curtail such expenditure (Brown *et al.*, 2006). This implies that boards dominated by outside directors are likely to give little or no cash contributions to charity. In a related development, an evidence emerged that outside directors have an insignificant effect on the accuracy of greenhouse gases sustainability information disclosed, especially for firms operating in industries with the higher risk of litigation (Prado-Lorenzo and Garcia-Sanchez, 2010). Similarly, Walls et al., (2012) investigated the corporate governance influence on the environmental performance of 313 firms cutting across 29 industries from Standard and Poor's (S&P) 500. They find that lower proportion of NEDs effectively improves environmental performance. Thus, the independence of the board (in regard to the percentage of NEDs) is more beneficial to the financial performance, rather than the environment and social performance.

Shaukat et al., (2016) developed and tested a model that predicted endogenous relationships between board CSR orientation, CSR strategy and the environmental and social performance of 2,028 firm-year observations of UK listed firms. Boards that have an appropriate proportion of NEDs are referred to as the CSR orientation board, and such boards may likely engage in CSR strategy, which in turn leads to better environmental and social performance (Shaukat *et al.*, 2016). Furthermore, Shaukat and colleagues argue that the relationship between CSR strategy and CSR performance is endogenously determined and self-reinforcing, as a firm with favourable environmental and social performance are more likely to encourage board-level CSR strategy.

3.4.3 Board size and CSR performance

While some boards' target is to influence the financial performance of their firms, others' main aim is to serve as a bridge between the firm and their host community and ensure the organisations operate for the best interest of all stakeholder groups. Bai (2013) reports that board size has a negative influence on the social performance of 137 for-profit Californian hospitals, but it has a positive effect on 226 non-profit hospitals. The author explains that much emphasis is given to the short-term financial performance in for-profit hospitals and incentives are offered to align the interest of the managers with that of the shareholders. In contrast, non-profit hospitals are more concerned with social responsibility activities and ensure conflicts that might arise, between the firms and its host community, are minimised or eradicated (Bai, 2013).

However, Ntim and Soobaroyen (2013) argue that a larger board improves the corporate social responsibility activities of South African listed firms, because a board with many directors from diverse stakeholder groups enhances corporate reputation and a sizeable board is unlikely to be dominated by the CEO. As such, any proposal from executives (including CSR) will be thoroughly scrutinised with a larger board. Moreover, the authors explain that larger boards are expected to effectively monitor managers, serve as an inclusion board with wider representations from various stakeholder groups and provide adequate diversity in terms of expertise, knowledge and experience. This demonstrates support for agency, stakeholder and resource dependency theories, respectively.

Similarly, based on resource dependency theory, the larger board is more likely to have sufficient knowledge about various stakeholders' claims and provide adequate resources to satisfy those claims. However, it is argued that the positive effect of large boards on CSR is triggered by agency costs, as larger boards are ineffective monitors due to communication difficulties and free-rider issues. Such boards are positively and significantly related to making cash contributions to charity (Brown *et al.*, 2006).

There is a growing emphasis to ensure corporations' maximise shareholders' value in the long-term, rather than short-term. This can lead to board characteristics designed to protect the firm's value and consideration of the benefits of all other stakeholders, if the aim is to enhance shareholders wealth in the long-term. Boards of directors are expected to satisfy the interests of stockholders and stakeholders. Jizi et al., (2014) find that board size is one of the main internal corporate governance mechanism that influence both shareholders' and stakeholders' interests of US commercial banks. Big sizeable boards represent diverse interests of stakeholders and are more likely to ensure the quality of CSR reporting and get CSR assurance (Liao *et al.*, 2016).

3.4.4 CEO duality and CSR performance

CEO duality is reported to have a positive and significant effect on CSR disclosure and this is mainly due to chief executive desires to reduce negative media coverage, protect their reputation and mitigate extreme supervision by the board and the financial market (Jizi *et al.*, 2014). In a similar direction, a positive and significant relationship is found between CEO duality and corporate reputation (Musteen *et al.*, 2010). Comparably, a study by Prado-Lorenzo and Garcia-Sanchez (2010) investigates the effectiveness of boards on disclosure of greenhouse emissions of 283 companies listed on the FTSE Global Equity Index and reports that CEO duality benefits dissemination of greenhouse information, but the firm's environmental behaviour and the sensitivity of the industry mitigate the positive impact.

However, a powerful CEO has a negative influence on CSR disclosure in Bangladesh and it mitigates the positive link found between board capital and CSR disclosure (Muttakin *et al.*, 2016). Although board capital improves CSR disclosure, a powerful CEO renders the capability of resources useless in regard to disclosure of CSR information. Similarly, Ntim and Soobaroyen (2013) discover a negative and significant relationship between CEO duality and disclosure of BEE information by South African companies.

Recently, Liao et al., (2016) examined the relationship between corporate boards and CSR assurance of Chinese listed firms. They found that firms that separate the roles of chairmen and CEOs, are more likely to improve CSR assurance. Surprisingly, the authors find that supervisory directors and CEOs with a foreign background in China are not too involved and considered as a token, therefore, have an insignificant effect on CSR assurance.

It is not the separation or combining the roles of chairman and CEO that matters, rather, the real independence of the directors. Khan et al., (2013) argue that CEO duality has an insignificant effect on CSR disclosure, however, the lack of proper separation between CEO and chairman, as both leaders are from the same family in Bangladesh, makes board leadership structure meaningless.

3.4.5 Board gender diversity and CSR performance

The majority of previous studies find a positive relationship between the proportion of women directors and CSR performance. Women directors have the interest to ensure the quality of non-financial disclosure and reliability of information in China (Liao *et al.*, 2016). Boards with a sufficient number of female directors are more likely to influence corporate social responsibility performance in both institutional and technical strength CSR measures, which in turn improves firm reputation (Bear *et al.*, 2010).

Diversity leads to communication difficulties, but having a substantial number of women minimises such difficulties. Moreover, the influence of proportion of female directors is more salient when their number increases and have a more assertive, rather than minority voice (Bear *et al.*, 2010). Similarly, female directors are found to have a positive and significant effect on CSR performance because they are kind, sympathetic, maturing, helpful and are more lenient toward others, than their male counterpart (Zhang *et al.*, 2013). However, differences in regard to directors' age, experience, education, ethnicity, nationality and occupation have a positive effect on the extent of CSR disclosure of South African companies, but surprisingly, board gender diversity is not significantly linked to BEE disclosure (Ntim and Soobaroyen, 2013).

In an effort to examine influence of boardroom diversity on social responsibility performance, Hafsi and Turgut (2013) distinguished between ' diversity of boards' and 'diversity in boards'. The latter refers to differences in boards attributes, such as size, leadership structure, the proportion of outside directors and foreign directors. 'Diversity in board' refers to the dissimilarities among directors within a particular board, such as age, gender and ethnic diversity. The authors argue that dissimilarities among board members are the key determinants of corporate social responsibility performance (CSRP) of 95 manufacturing and service firms listed in the S&P 500. They concluded that the 'diversity of boards' has no direct effect on corporate social responsibility performance, rather a moderating role on the relationship between 'diversity in boards' and CSRP.

In a study of 516 of the largest companies listed on the US stock Exchange, across 64 industries, Zhang et al., (2013) found that the proportion of NEDs and women directors are positively and significantly linked with CSR performance, measured by Fortunes America's Most Admiral (FAMA-reputational-based) within an industry, but when CSR measures are based on firms' actions, only women directors have influence on CSR performance. Moreover, women directors improve the disclosure of greenhouse emission information, even in polluting companies that operate in high chances of a lawsuit (Prado-Lorenzo and Garcia-Sanchez, 2010).

Additionally, it is argued that women directors are more likely to have a greater influence on CSR performance than firm value. Isidro and Sobral (2015) investigated the impact of female directors on firm value, corporate financial performance and the ethical and social performance of boards of larger European firms. No direct relationship was found between female directors on the board and firm value (measured with Tobin's Q), however an indirect impact was discovered through a greater influences on financial performance (ROA and RO Sales) and ethical and social compliance (Isidro and Sobral, 2015). The authors concluded that the proportion of women directors have both financial and non-financial benefits for corporations. In a similar vein, using a large sample of 1,489 US firms and stakeholder theory lenses, evidence emerged that board gender diversity improves a firm's ability to acquire the resource needed and satisfy the yearning of various stakeholder groups, which in turn influences corporate social responsibility performance (Harjoto *et al.*, 2015).

However, it is essential to highlight that the impact of gender diversity on corporate reputation varies with the environment in which the firm operates. The effect of board gender is more salient on those firms that operate in industries that require a greater need for effective stakeholder management, such as firms in highly competitive markets and consumer product markets (Harjoto *et al.*, 2015). Similarly, Brown et al., (2006) find differences of making contributions to charity across industries; firms that operate in transportation, retail, mining, and construction industries give meager contributions to charity compared to those in the manufacturing industry.

Brammer et al., (2009) find that female directors have a negative and positive effect on the corporate reputation of firms in producer services and consumer services (such as hotels, restaurants, and retailers) respectively. The authors concluded that the positive effect of women directors on the corporate reputation is more pronounced in firms that operate close to final consumers and have sufficient gender composition in their workforce. However, a recent study by Shaukat et al., (2016) find no evidence that shows women have different effects on CSR performance across industries. This means there are no variations across industries, against the speculations of many authors.

In a further argument on the effect of the critical mass of women directors on firm social performance, Jia and Zhang (2013) investigate whether multiple identities of women directors influence the relationship between the critical mass of women directors and the corporate philanthropic disaster response (CPDR) of 492 Chinese listed firms. The authors report that age diversity among female directors moderated the relationship between critical mass and response to the Wenchuan and Yushu earthquakes. The authors explained that diversity within a minority group is likely to lead to in-group categorization, but it may also create similarities with the majority, which minimises out-group bias, and this enhances the minority impact on firm decision making. Therefore, multiple women, rather than a single woman, are more beneficial to quality decision making, which in turn improves decisions on CSR activities.

3.4.6 Contingency and Multiple theories

The relationship between governance mechanisms and CSR is not as straightforward as assumed. Arora and Dharwadkar (2011) explained that effective corporate governance mechanisms negatively influences positive CSR (proactive stakeholder relationship management) and negative CSR (violation of regulations and standards). In addition, the relationships are contingent on the satisfaction of firm performance indicated by the levels of slack (availability of resources) and the differences between actual and expected performance (Arora and Dharwadkar, 2011). Specifically, non-executive directors reduce the expenditure of positive CSR and curtail violation of environmental regulations and standards in order to avoid paying penalties and fines. In summary, effective governance mitigates negative CSR in high-performing companies with slack and reduces positive CSR in low-performing firms with negative slack.

These findings are consistent with agency theory views which require the board to be vigilant and mitigate any expenditure that may not serve the interest of shareholders. The theory emphasises the control governance mechanism which ideally protects the owners' wealth against unjustifiable spending. Such mechanisms would likely improve short-term financial performance, but not long-term social performance. It was found that board structure design, based on conventional agency theory, such as the proportion of NEDs and female directors, has insignificant relations with the corporate social responsibility performance of 471 Chinese firms (Lau *et al.*, 2016).

Evidence emerged that certain factors, other than board characteristics, determine firm CSR engagement: Non-manufacturing firms have greater CSR performance scores than manufacturing firms, past-performance is positively related to CSR performance scores and larger firms engage more in CSR activities, than smaller firms (Jo and Harjoto, 2011; Lau et al., 2016). Therefore, these factors need to be controlled for any study that investigates the direct influence of board characteristics on CSR performance.

Taking a different approach and breaking down corporate sustainability into the triple bottom line performance, which comprises of economic, environmental and social sustainability performance, Hussain et al., (2016) find that board characteristics affected each dimension of performance differently. The proportion of outside directors, women directors, CEO duality and board meetings have an insignificant effect on the economic bottom of sustainability performance, but the proportion of outside directors has a significant influence on environmental and social sustainability performance (Hussain *et al.*, 2016). Furthermore, the authors find that board diversity significantly influences social dimension, but not environmental sustainability performance. Similarly, environmental performance is not influenced by board size, women directors and board meetings. Additional evidence emerged that outside directors, women directors and board meetings are all positively related to social sustainability performance. However, board size and CEO duality have no significant effect on social performance, and duality is a detriment to environmental sustainability performance (Hussain *et al.*, 2016).

Corporate governance theories have different implications on the influence of board structure on performance. Scholars should avoid using a single theory, as using multiple theories give a clearer picture of the effectiveness of these board characteristics. A single theory only gives a limited explanation of the board effectiveness. Integration of stakeholder-agency theories indicates that board duties are to control and monitor executive activities and ensure firms are run ethically, legally and morally for the benefit of the wider community, rather than shareholders alone (Prado-Lorenzo and Garcia-Sanchez, 2010). Meanwhile, agency and stewardship theories are among the main corporate governance theories used in the board literature and the theories represent two main contradicting roles that boards are expected to perform.

Galbreath (2016) advises that these two main roles to be viewed as complementary and interdependent, rather than mutually exclusive. In a study of 295 Australian listed firms, the author finds that proportions of NEDs and female directors jointly have a strong effect on corporate social responsibility performance, than each individual effect. Galbreath further explains that outside directors provide sufficient monitoring, questioning and scrutinizing of managerial CSR proposals, but that does not bring new ideas or effective strategies related to CSR. Sufficient support on CSR strategies and various CSR activities may likely be available with an adequate proportion of female directors on the board due to certain psychological attributes they possess (Galbreath, 2016).

3.5 Previous Studies on Board Processes

Other scholars have argued that boards are effective, if they positively influence board task, such as monitoring, advice and counsel, strategy formulation and provision of resource, which consequently improves firm performance. Scholars on this streamline of research rely on board's internal working processes as the key determinants of board effectiveness. These sub-sections below discuss previous empirical studies on board processes and a summary of these studies is presented in appendix I (iii).

3.5.1 Boards' expected roles

Studies that investigate board functioning consider board effectiveness as the abilities of directors to perform certain board tasks. Boards are expected to sufficiently monitor the activities of executives, provide resources and effectively guide, advice, and formulate strategies. In summary, boards are required to provide control and service tasks. Although scholars use different types of board tasks in their studies, a large number of these studies have reached consensus on the two common board tasks: service and control. Control and service tasks are the main board roles, but there are other duties that overlap within these roles (Kula, 2005). For example, Melkumov *et al.* (2015) explain that the resource provision role involves being internally focused on the provision of advice and counsel to managers, and external provision of networking and legitimacy. Based on this, the resource provision role can be merged into a service task.

Service task involve resource provision, initiating and formulating strategies, advising and guiding the CEO and other executive directors on administrative and other managerial issues. The control role refers to the monitoring and controlling of executives, to mitigate their likely opportunity behaviours; it involves hiring and firing of CEOs and other executive directors and setting reasonable compensation for managers (Kula, 2005). These two roles are supported by different contradicting theories such as agency and resource dependency. Notwithstanding, it is essential to understand that one single theory is not adequate to sufficiently account for board roles as well as reflect the directors' behaviours and experience, therefore, board scholars have been encouraged to use multiple theories in their studies (Roberts et al., 2005).

In order to have a complete understanding of the roles of directors, both agency (control) and stewardship (collaboration) theories are required; that is to support managers in their managerial activities and monitor their activities to ensure non-divergence of interest. To achieve this, Roberts et al., (2005) highlighted certain conducts, such as 'engage, but non-executive', 'challenge, but supporting', and 'independent, but involved,' which help directors to ensure both control and collaboration roles are performed effectively.

It is essential to note that the role directors actively perform depends on the actors they want to serve. Melkumov et al., (2015) argue that directors that have a greater desire to satisfy the interest of the shareholders are more likely to engage in roles that improve short-term performance (such as monitoring of managers and financial outcome) in order to quickly satisfy the interest of their principals. However, such directors may have an adverse effect on strategic participation. Furthermore, the authors explain that directors' identification with the focal organisations improves external legitimacy, networking, advice and counsel, and strategic participation roles. Such directors influence monitoring of the management role only to a certain level, then the positive impact changes to a negative effect (Melkumov *et al.*, 2015).

Boards that perform activities that benefit the overall focal organisation or move away from extreme shareholder wealth maximisation are more likely to engage in strategies that guarantee the long-term survival of a firm and satisfy the interest of both shareholders and stakeholders. Directors that limit their activities to managerial control are likely to have a narrow focus on the short-term financial outcome. Strategic control is long-term and qualitative in nature and refers to boards' ex-ante control of strategy proposals submitted by the managers. Whereas an operational control role is short-term and quantitative-oriented, these are the activities relating to the supervision of executives routine operations regarding investments decisions and the financial status of the firm (Nielsen and Huse, 2010).

Recently, directors have started to realise the importance of other roles, such as service task, rather than the control role emphasised by the agency theory. A survey from New Zealand by Ingley and Van Der Walt (2005) evinces that respondents indicate that the fundamental strategic directions (38.7%) of the firms are the key corporate activities that directors influenced. Moreover, the data from the survey shows that the board's main role is defining the strategy framework (34.6%) and these strategies are formulated and developed jointly by the managers and the board (65.8%), rather than by managers alone-who developed the strategies and then sought approval from the board (Ingley and Van Der Walt, 2005).

In fact, some directors nowadays are more concerned with providing advice and guidance on strategies to the firm, rather than providing external resources. Using the top-100 listed firms in the Netherlands between 1997 and 2005, Bezemer et al., (2007) show that non-executive directors' service role in the Netherlands is more focused on internal service activities, such as the provision of advice and counsel to the CEOs, than external service roles, such as serving as boundary spanner between the firm and the environment.

In a related development, a qualitative longitudinal complete member researcher participant-observer methodology, employed by Parker (2008), identifies three main controls that the boards pay more attention to: control reporting, control orientation and budgetary control. The author finds that strategic orientation of directors is driving the focus on operational and financial controls. Parker (2008) observed that both boards show greater attention to the financial implication of strategic proposals because board strategic involvement is found to have a positive and significant influence on the organisational performance of both for-profit and non-profit firms (Zhu et al., 2016).

3.5.2 Board structure, board processes and board tasks

As there is no unanimity on the direct effect of board structure on firm performance from previous studies, board researchers have recently shifted their focus on opening the 'black box' to investigate the influence of board processes on board tasks effectiveness. Andrés-Alonso *et al.* (2010) found the traditional board structure (board size and proportion of NEDs) had a dubious impact on the organisational efficiency of 119 Spanish foundations, but the availability of diverse knowledge, experience in the boardroom and the active engagement attitudes of directors to utilise the knowledge improved the foundations' efficiency (effective resource allocations).

It is essential to ensure knowledge and skills available in the boardroom are fully utilised for any benefit to be derived. Availability of information has no effect on strategic involvement, but utilisation of such Information improves strategic involvement in for-profit organisations (Zhu et al., 2016). Both proportions of independent directors and board size may likely bring diverse and abundant knowledge to the board, but it is the active involvement of directors that guarantee effective utilisation of the knowledge, which consequently improves corporate performance. Non-executive directors are unpaid directors, they are likely to be less committed than inside directors who receive wages and totally depend on the survival of the organisations for their daily expenditure (Andrés-Alonso *et al.*, 2010). Furthermore, it is argued that large boards are characterised by communication difficulties, less cohesive, sub-divisions within the board and social loafing, which is likely to have an adverse effect on the directors' active engagement (Andrés-Alonso *et al.*, 2010).

Having a mere proportion of NEDs on the board does not guarantee board effectiveness, what is important is the level of their engagement in firm' activities. With a large sample of 12,131 Chinese firm-year observations, Liu et al., (2016) find that firms that have independent directors that attend board meetings are more likely to protect minority shareholders interest by reducing the problem of tunneling, especially in non-state-owned companies and when external supervision is weak. The authors argue that the effectiveness of independent directors in protecting shareholders' wealth is only possible if they are attending board meetings.

Taking a different approach, Rutherford and Buchholtz (2007) argue that the trade-off between independence/control and collaboration/access to information benefits is not as straightforward as expected. In a study of 149 usable responses from a questionnaire sent to chairpersons of US public firms in Chemicals, Printing and Publishing, and Industrial Machinery and Equipment, Rutherford and Buchholtz (2007) find some support for agency theory asserting a vigilant board is more likely to reduce information asymmetry between managers and the board. The authors argue that boards with a sufficient proportion of outside directors are more likely to engage in proactive information seeking, collect new information and obtain a greater quality of information than inside director dominated boards. Outside directors engage in behaviours that assist to receive specific information, in addition to the generic information they possess (Rutherford and Buchholtz, 2007).

However, inside directors are more likely to have firm-specific information than outside directors; the latter improves board independence, but at the expense of firm specific information which is valuable in enhancing firm performance. Payne et al., (2009) testify that a higher proportion of internal directors increases firm-specific information, but it decreases board independence. This may likely have an adverse effect on board level of commitment, cognitive conflict and use of knowledge available in the boardroom.

In an attempt to shift from easily measurable demographics for investigating the impact of diversity on board effectiveness, Huse et al., (2009) consider backgrounds, experience and esteem of women directors in examining the contribution of female directors in the boardroom. They find that creative discussions improve board control task, but while the proportion of women directors, *per se,* has an insignificant effect on creative discussions, the combined effect of different backgrounds and esteem of women directors have a strong influence on creative discussions.

It is argued that women directors may provide diverse knowledge and opinions in the boardroom, which leads to in-depth analysis and debate, and they are likely to raise questions if not clear about anything. Therefore, women directors on the board may likely improve open discussions. However, a study from Norway indicates that the proportion of women has no significant effect on open discussions in the boardroom, but open debate enhances boards' strategic and operational controls (Nielsen and Huse, 2010).

Furthermore, Nielsen and Huse (2010) indicate that the proportion of female directors on boards positively relate to strategic controls and board processes variables (board development and decrease conflict) mediate the relationship between the female ratio and strategic controls. The authors posit that boards with an adequate proportion of women directors are likely to have lower levels of conflict. It is also noted that board conflict is negatively related with strategic control tasks, but has no significant impact on operational control. Similarly, it is found that boards with a sufficient number of female directors are more likely to contribute on strategic and CSR controls than budget and behavioural controls, thus have less influence on board roles that are qualitative, rather than quantitative in nature (Huse *et al.*, 2009). This may likely be due to psychological attributes of women such as helping, leniency and caring about others.

Both ‘all men’ boards and boards with adequate representation of female directors have merits and demerits. On one hand, homogenous (all men) boards are expected to have unified direction, an effective interpersonal relationship among directors, greater trust and a level of consensus. However, this type of board may continue with the current unfavourable strategies and unlikely to be open to new information and ideas. Such boards harm innovative ideas and discussions on entrepreneurial issues (Tuggle et al., 2010). On the other hand, heterogeneous boards may provide different perspectives, knowledge, skills and experience that can be used to make quality decisions for the benefit of the firm. However, such boards may lack good communication between directors, face negative interpersonal relationships and difficulties in working together as a team. Such challenges may lead to poorer decision-making and discussion of entrepreneurial issues (Tuggle et al., 2010).

Tuggle and colleagues argue that only boards with moderate or weak, not strong, diversity will be able to discuss entrepreneurial issues. This is due to the fact that weak faultlines may not result in sub-groups within the board, which can damage the communication and directors’ ability to discuss entrepreneurial issues (Tuggle et al., 2010). Nonetheless, extreme separation patterns among directors negatively influence discussions on entrepreneurial issues in the boardroom (Tuggle et al., 2010). Thus, a board with moderate gender diversity are more likely to be effective in performing board tasks.

It was argued that the proportion of women directors *per se* does not matter, if all the female directors have the same experience and skills as their male counterpart. Women with different backgrounds and experience are more likely to improve creative discussions in the boardroom, than women directors that have similar backgrounds with their male counterparts (Huse *et al.*, 2009). However, Minichilli *et al.* (2009) argue that directors with different backgrounds may lack the capability to give constructive and technical advice on executives issues. The authors find that background diversity is negatively related to output and behavioural controls. Thus, in regard to advice and control roles, the homogenous board are more effective than heterogeneous board. Furthermore, Minichilli et al., (2009) find that critical debate has no influence on output control and strategic control.

3.5.3 The importance of board processes

Kula (2005) investigates the impact of board roles, structure and processes on the firm performance of 386 small and non-listed Turkish firms. The author finds that board processes variables (board effectiveness and access to information) have greater influences on board effectiveness. Moreover, Wan and Ong (2005) argue that the ability of directors to perform their duties effectively depends on certain social-psychological processes variables, such as board level of commitment, cognitive conflict and use of knowledge and skills.

Directors' commitment refers to the level of involvement during meetings and preparation before meetings (Minichilli *et al.*, 2009). Involvement represents the level of effort directors allocate during discussions and follow-up of the decisions made in the boardroom; while preparations refer to board members' desires to make meaningful contributions in the meetings and the extent to which directors conduct further research into the topic prior to the meeting (Minichilli *et al.*, 2009). Using a sample of 301 responses received from CEOs of the largest Italian industrial firms, Minichilli *et al.* (2009) find that critical debate and directors' commitments are prerequisites for board advice and networking roles. Similarly, the authors find that commitment has a positive and significant effect on output control, strategic control and strategic participation roles.

While an insignificant relationship is found between women (board structure) and open debate (board process), the latter has a positive and significant influence on board effectiveness. This implies that the process variable has greater explanatory power independent of the board structure (Nielsen and Huse, 2010). Therefore, it is essential for board scholars to pay more attention to the processes variables, rather than board structure alone. Wan and Ong (2005) argue that board processes are more important than board structure variables. Specifically, the authors find that board structure variables have an insignificant relationship with board processes and board effectiveness, but effort norms, as well as the presence and use of knowledge and skills, are positively and significantly related to board monitoring, service and strategic roles in Singapore. However, the authors find that cognitive conflict has a significant effect on the strategic role, but not service and monitoring roles of the board. Extending the model of Wan and Ong (2005), Kula (2005) finds that board roles have different effects on firm-level performance. Specifically, among the control, service and resource acquisition roles, only the latter has a positive and significant effect on firm performance.

In a related research, Zona and Zattoni (2007) argue that although in their study, positive relationships are found between board size, outside directors and monitoring and networking roles respectively, board processes variables impacts are stronger than that of board demographic variables. The authors find that effort norms and the use of knowledge and skills improves the monitoring capability of the board, whereas cognitive conflict does not. Cognitive conflict and the use of knowledge and skills have a positive and significant impact on the board networking role, but effort norms have a weak effect on the networking role (Zona and Zattoni, 2007). The authors called for more studies that fully investigate how board structure and processes variables jointly affect the board task performance.

In their efforts to examine the influence of CEO duality on board task through board processes, Machold et al., (2011) find that board members' knowledge utilisation, board development programmes and chairperson leadership efficacy improves boards' strategic involvement and this is possible if the CEO also serves as the chairperson of the firm (Machold *et al.*, 2011).

Another study that investigates the influence of board processes on board effectiveness by Payne et al., (2009) find that sufficient levels of knowledge in the boardroom, availability of external information, power, the commitment of directors and maximum time spent on activities have a positive and significant effect on the board control and service tasks. However, the authors report that incentives, attributes and internal information failed to have a significant influence on board effectiveness. Thus, inside director dominated boards significantly harm board functioning. Furthermore, boards that are effective in performing their duties are more likely to improve the financial performance of their firms (Payne *et al.*, 2009). In other words, abilities of directors to perform their roles effectively improve corporate financial performance.

An observational approach is employed to discover how boards function by Brundin and Nordqvist (2008). The study shows that directors with high emotional energy tend to become order givers, controller of board affairs, have feelings of superiority, feel included and are active in performing their duties; such boards are expected to be effective in performing their duties. On the other hand, directors with low emotional energy are normally order takers, have inferior feelings, are isolated, less involved and less committed on the board activities; such behaviours may impair the board effectiveness (Brundin and Nordqvist, 2008). The authors found that a CEO could start a meeting with high emotional energy, but due to the excessive control role of the board, the CEO's emotional energy would become low and he would then start to receive orders from the board. The CEO would eventually become demotivated and a passive, rather than an active, board member. This, Brundin and Nordqvist (2008) argue may have an adverse consequence on the firm considering the sensitive position the chief executive holds in that organisation. However, if the CEO continues with the same high emotional energy as he started with, then he is likely to become a dictator and make the board ineffective in challenging any unfavourable strategy.

Some of the explanation given for directors' inability to challenge the CEOs opinions about the viability of the existing strategy is a lack of independence, as directors rely on executives for their appointments (Westphal and Bednar, 2005). It is general believed that independent outside directors are expected to be more objective and able to challenge unfavourable strategies than employee directors. However, it is possible for outside directors to be ineffective in challenging current strategy due to pluralistic ignorance, which is a psychological bias whereby each director is reluctant to raise concerns due to fear that the points raised may not be accepted by other members (Westphal and Bednar, 2005).

Different types of boards exist; some boards passively rubber-stamp strategies proposals submitted by CEOs, while other boards are actively involved in strategy formulation. A study of 140 US non-profit organisations (NPOs) shows that boards that are more strategic, active and cohesive are more likely to manage their resources effectively through innovation, risk-taking and proactive behaviours than operational, passive and fractional boards (Coombes *et al.*, 2011). These behaviours have a positive and significant impact on social, but not the financial performance of these NPOs (Coombes *et al.*, 2011).

Zhang (2010) investigates the effects of board information on strategic task performance of Norwegian companies. The author finds that using diverse information had more influence on current, but not future, strategic task performance, than possessing diverse information. However, possessing that information enhanced current and future strategic task performance. Specifically, three behaviours of using diverse information (open discussions, effective leadership and active search) have positive and significant impacts on current strategic task performance. Using diverse information creates a competitive advantage for a short period, while possessing diverse information gives a sustainable competitive advantage in the long-term (Zhang, 2010).

Taking a different approach to fully understand the actual board working style, Pugliese *et al.* (2015) employed a direct observation methodology to study the impact of board dynamics and directors' participation on perceived board effectiveness. The authors attended three meetings of two boards in Australia and noticed that there were differences between the two boards in regard to board climate. Pugliese et al., (2015) explained that in the first meeting, the members were fully controlled by the chairperson, few individuals dominated the meetings and directors were less active and made limited contributions. In the other board's meeting, participants made contributions freely without seeking approval from the chair, there was sufficient opportunities for all participants to make contributions, and discussions in the meetings were more open and inclusive (Pugliese *et al.*, 2015). The authors concluded that the better way to assess whether boards are capable of questioning and monitoring the executive is through inclusiveness and evenness of turn-taking, rather than relying on the proportion of non-executive directors. The researchers' observations exemplify informal and formal board meeting structures. In the former, meetings are conducted with fewer rules and instructions, while the formal meeting is usually characterised by a bureaucratic system, a series of rules and instructions as well as controlled and codified with fewer contributions from the attendees.

Informal meetings generates open discussions and innovative dialogue due to trust and freedom in the boardroom with fewer rules and instructions, which eliminates or reduces the relational conflict that may arise among dissimilar individuals (Tuggle et al., 2010). Informal meetings decrease the negative effect of strong dissimilarities among directors on discussions of entrepreneurial issues (Tuggle et al., 2010). An informal meeting reduces the confrontations, stress and mistrust among board members. It can lead to the transparency of exchanges and maintain cohesion in the boardroom, even when there are intense disagreements (Parker, 2007). In a similar vein, Tuggle et al., (2010) argue that frequency of board meetings, venue and structure of the meeting, which can be used to neutralised the demerits of formal meetings, influence the amount of time used to discuss entrepreneurial issues. Moreover, the frequency of general board and strategic meetings influence strategic involvement in for-profit organisations (Zhu et al., 2016).

3.6 Findings and Literature Gap

Recently, research on board effectiveness received greater attention from scholars around the world. Ninety empirical articles about the board of directors' effectiveness were reviewed above. Based on this review, board effectiveness is referred to as (1) the influence of directors on corporate financial performance (2) impacts of boards on corporate social responsibility performance and (3) effects of board internal processes on board-level performance. Using a narrative and systematic search approach, ninety relevant articles were reviewed in order to find 'what is written' and 'what is not' about board effectiveness.

The review has shown that the findings from the studies that investigate the relationship between common board characteristics, known as the 'usual suspects', and corporate financial and social performance are of the majority and clearly contradictory. Out of the 90 articles reviewed, the predominant approach in the board literature examines the impact of boards on financial performance (no = 37), followed by the board-CSR relationship (no = 29) and then board processes (no = 24). 65 per cent of studies that investigated the board-financial performance employed accounting measures as a proxy for financial performance, either alone or in conjunction with the market measures. The largest contributions from these studies are from the USA (no = 6) and Australia (no = 5). Few articles (no = 4) from this streamline considered using multi-countries as the research contexts. The highest numbers of articles that used corporate social responsibility performance as the outcome variable are from USA (no = 16) and KLD is used to measure the dependent variable in ten articles.

The literature on what makes boards effective is increasingly getting attention. The figures 3.3 and 3.4 below indicate the evolution of board of directors' studies over the years. The maximum papers published in each year are 11 and the minimum is one. 2006 and 2016 are the years that the majority of the contributions are published. The publications in recent years show a paradigm shift from much attention on financial performance to an increased focus on CSR performance. However, the area that requires more research is the examination of the influence of board processes variables.

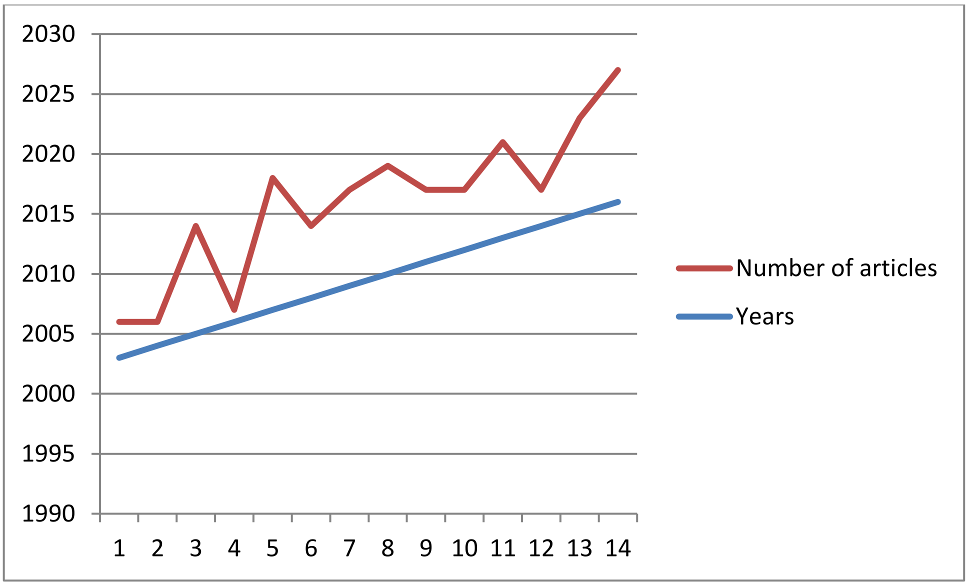

Figure 3.3: Number of Articles Published Each Year From 2003-2016

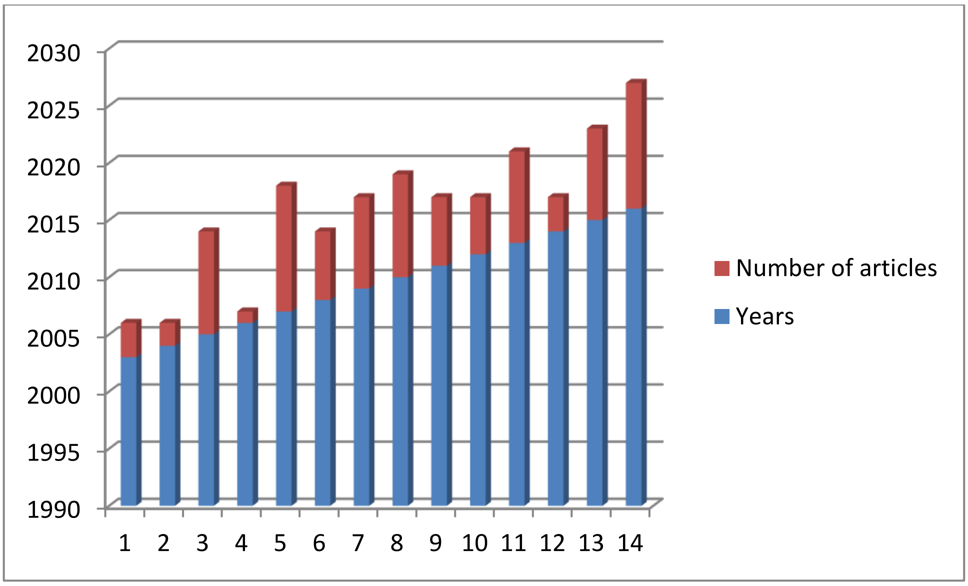

Figure 3.4: Number of Articles Published Each Year From 2003-2016

Various authors make contributions on ‘what is’ and ‘what makes’ boards effective, however, this paper finds that the literature is skewed towards developed markets, a similar pattern of approach and specific methodology. The review shows clearly that studies on board effectiveness are more salient in the developed countries than in emerging market. The majority of the contributions are from USA and Australia with 27 and nine respectively. The data evinces that the USA has five papers on board processes, six on board-financial performance and 16 on board-CSR relationships. Similarly, six papers reviewed are from the UK. The majority of articles reviewed above are from developed countries. Notwithstanding, few studies are from developing countries with the majority from China (no = 7) cutting across the three perspectives of board effectiveness. None of the studies is from Nigeria. Generally, empirical studies published in higher ranking journals about corporate governance and specifically on boards of directors are scares in developing countries.

The input-output approach, where scholars seek to investigate the direct relationship between board and performance, dominated the board effectiveness literature in both developed and developing economies. This direct approach has been applied in studies that examine board-financial (no = 37) and board-CSR (no = 29) performance relationships. Overall, out of the 90 articles reviewed, 73 per cent are relying on board structure to directly influence firm-level performance.

This is similar to what Gabrielsson and Huse (2004) reported, that 99 out of 102 articles reviewed examined the impact of some subset of board characteristics on performance. Figure 3.5 below shows that only 24 papers in the review try to understand the influence of conduct and behaviours of directors. For these scholars, board effectiveness refers to the influence of boards on task performance, which in turn improves firm-level performance.

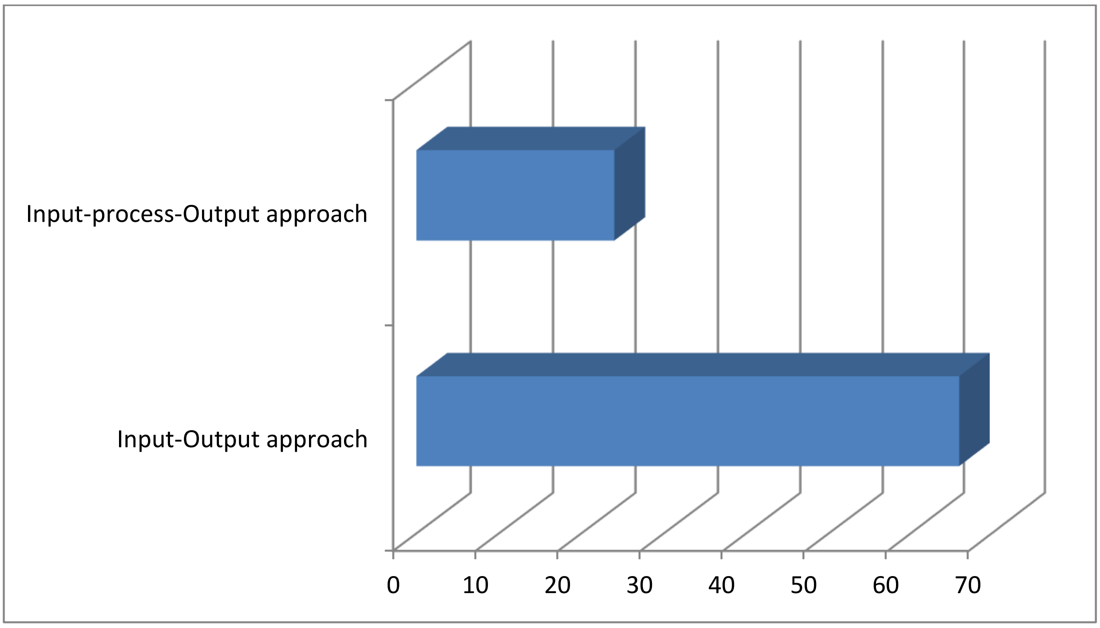

Figure 3.5: Approaches to Board Effectiveness Literature

This input-output approach led researchers to rely on archival data and employ quantitative methodology with the similar analytical tool. Figure 3.6 below shows that a quantitative approach is the common methodology employed for board-financial performance (no = 37), board-CSR (no = 28) and board processes (no = 19) studies. However, the quantitative approach is more common for studies that directly investigate the board-firm level performance, than board processes studies. Five papers that seek to understand board functioning used qualitative methodology out of which Pugliese et al., (2015), Brundin and Nordqvist (2008), Parker (2007), and Parker (2008) employed direct observation methodology.

Archival data is collected and analysed by the majority of those studies (no = 84) that used a positivist, deductive and quantitative methodology. However, 16 out of the 19 board processes papers use the questionnaire as the main instrument for data collection. This is necessary as the aim is to understand the exact working styles of directors, which are mostly latent variables.

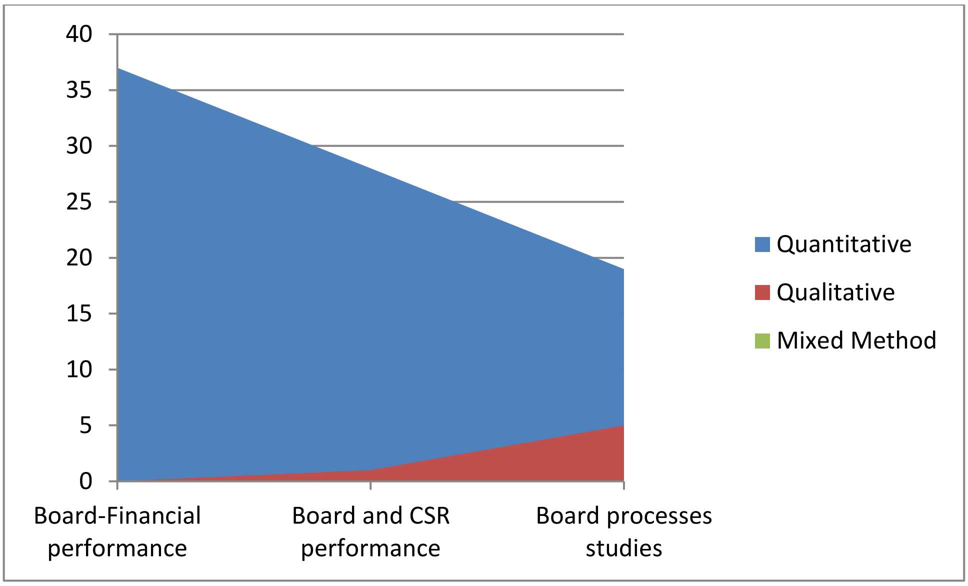

Figure 3.6: Methodological Approach of the Previous Studies

Based on the above review, literature gaps were identified as follows: Firstly, the majority of previous studies on board effectiveness treat boards as a 'black box' employing the input-output approach (Figure 3.5). Many scholars are calling for a new perspective on board literature and ask researchers to open the 'black box' and include the intervening processes that link the input with the output (Pettigrew, 1992; Forbes and Milliken, 1999; Daily *et al.*, 2003; Huse *et al.*, 2009). Secondly, although some studies make contributions on the board processes literature, findings are not unequivocal. Therefore, more studies are needed to understand the actual board functioning (Zona and Zattoni, 2007). Thirdly, most board processes studies used models that investigate the relationships between board characteristics, processes and tasks effectiveness (Wan and Ong, 2005; Zona and Zattoni, 2007). However, none of these consider the influence of board task on the firm-level effectiveness especially CSR performance. Similarly, the mediating effect of board processes and board task are missing in the literature. Lastly, the majority of the board effectiveness literature reviewed above is relevant to developed economies. A literature gap exists for developing markets and particularly for Nigeria.

Following the above literature gap identified, this study adopted a theoretical model developed by Forbes and Milliken in 1999 (see Figure 3.7 below) and has been tested in a small number of developed nations. The framework is modified, extended and empirically tested in Nigeria. The board characteristics (board size, board composition, CEO duality and gender diversity), board processes (effort norms, cognitive conflict, and use of knowledge) and board tasks discussed in the previous chapter are all included in the model. Forbes and colleague argue that instead of the direct input-output approach, researchers should consider investigating the relationships between board characteristics and board task effectiveness through board processes, which in turn improves firms' financial performance.

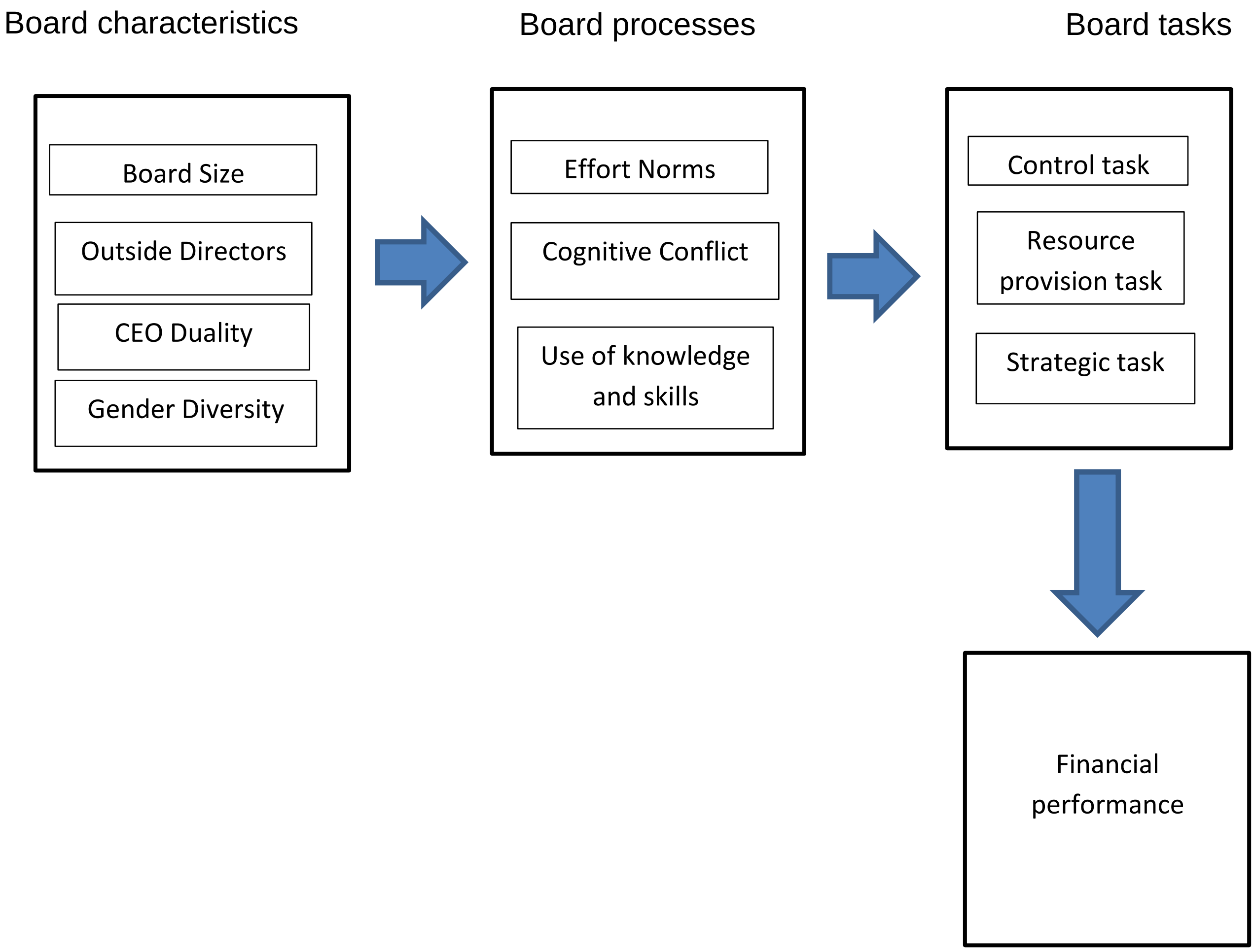

Figure 3.7: Theoretical Model Adopted From Forbes and Milliken (1999)

Sources: Forbes and Milliken, (1999)

3.7 Hypotheses Development

This section introduces the hypotheses that will be tested in order to answer the research questions and achieve the research aim. The hypotheses were developed using previous literature on board characteristics, board processes, board task and corporate social responsibility. Board characteristics considered are: board size, board composition, CEO duality and proportion of women directors. Effort norms (commitment), cognitive conflict (challenge) and knowledge utilisation serve as board process variables in this research. Two major board tasks (control and service) are considered for board task, while corporate social responsibility legal and ethical activities are considered as the overall firm-level effectiveness.

3.7.1 Board Size and Board Processes

According to resource dependency theory, a larger board is more beneficial than small board, as it provides multiple sources to the firm which enhances the availability of both human capital and relational capital in the boardroom (Salancik and Pfeffer, 1978). This availability of resources equip boards with different perspectives, ideas and experience which may trigger critical discussions, open debate and job-related disagreements and this consequently, improves quality decision-making (Forbes and Milliken, 1999).

However, too many members on the board may lead to difficulties in building interpersonal relationships within the board and this results in lower levels of commitment among directors, as some directors are likely to contribute less effort than their capabilities, thinking that ‘they are not alone’. This is consistent with the social loafing found in the large group literature (Latane *et al.*, 1979) and it supports the general belief of agency theory that a large board creates dysfunction and sub-groups within the board. A study in Nigeria shows that large boards are ineffective monitors of managers and such, boards failed to minimise firms’ negative environmental impact on the society due to social loafing (Uwuigbe and Uadiale, 2011).

Furthermore, it is argued that large boards enhance abundant human capital, but it creates coordination difficulties because of the various perspectives, ideas and knowledge possessed by many directors. This may hinder the utilisation of knowledge and skills available in the boardroom (Forbes and Milliken, 1999). However, abundant knowledge, ideas, opinions and perspectives in the boardroom lead to higher levels of disagreement and challenge among board members, as directors are likely to challenge any single opinion, idea or decision presented at the meetings. Thus, the following hypotheses are developed:

H1a *- Large board size is positively related to the board level of challenge*

H1b *- Large board size is negatively related to the board commitment*

H1c *- Large board size is negatively related to the board knowledge utilisation*

3.7.2 Board Composition and Board Processes

Board composition refers to the inclusion of non-executive directors on the board. The presence of outsiders on the board would be perceived by inside directors as a challenge. Therefore, the latter will ensure that things are done correctly and demonstrate that they are 'equal to the task', while outside directors want to protect their reputations by performing their duties as expected and show their positive impact on the board (Bettinelli, 2011). Each group of directors is avoiding interpersonal embarrassment (Feldman, 1984). This attitude from both NEDs and executive directors, due to heterogeneity, as a result of the inclusion of NEDs on the board, enhances the directors' commitment (Forbes and Milliken, 1999). In fact, it is argued that boards composed of adequate proportions of NEDs are more likely to improve a board's level of involvement and effort norms (Judge and Zeithaml, 1992; Bettinelli, 2011).

Ideally, outside directors that are independent of the executives are expected to provide an oversight function that ensures agency problems are minimised and the corporation operates transparently. It is claimed that non-executive directors are good monitors of the activities of management and as such, intellectual capital is properly disclosed (Li *et al.*, 2012). However, only committed outside directors perform this oversight function effectively. A study in China shows that only those NEDs that attend board meetings regularly are able to decrease tunneling and protect the interest of minority shareholders (Liu *et al.*, 2016).

Agency theory postulates for a heterogeneity board because such corporate leaders might have a higher level of disagreements on job-related issues and opinions than a homogeneous board. More importantly, the presence of NEDs on the board would trigger open debate as they possess different experience from their counterparts (managers), as well as scrutinize available alternatives more freely than managers (Forbes and Milliken, 1999). NEDs are expected to be capable of asking more proven questions and engage in critical discussion during meetings. Outside director dominated boards are likely to collect new information and engage in proactive firm-specific information seeking

(Rutherford and Buchholtz, 2007), this may require asking probing questions and making in-depth inquiries which may lead to open debate and disagreements. Thus, the following hypotheses are developed:

H2a *- Board composition is positively related to board level of commitment*

H2b *- Board composition is positively linked to challenge in the boardroom*

H2c *- Board composition is positively related to board knowledge utilisation*

3.7.3 CEO Duality and Board Processes

According to agency theory, combining the roles of chairman and CEO to a single individual is a detriment to board independence and results in a powerful CEO who controls all activities of the firm. For the board to perform its oversight function effectively, the roles of the top positions should be separated between the chairman who leads the board and the CEO who leads the day-to-day activities of the firm (Wan and Ong, 2005). The concentration of powers to an individual could impair the monitoring capability of board members (Li *et al.*, 2008).

Although, it is argued that CEO duality enhances unity of command and direction (Muth and Donaldson, 1998), but is likely to decrease the level of open debate and critical discussion. Nevertheless, chief executive officer role duality may improve the use of knowledge and skills in the boardroom, as there is less monitoring of the management activities. In such situations, managers are willing to cooperate sincerely with directors. Moreover, duality leadership motivates the management to share firm-specific knowledge with the board members.

Adegbite (2015) contends that in the Nigerian context, separation of the two roles does not guarantee board independence and effectiveness, as most of the chairmen are former CEOs of the same firm. In this case, the chairmen may have strong ties with the management and act more as chief executives, rather than independent chairmen. The succession of former CEOs to chairmen positions show how powerful CEOs are in the Nigerian corporate environment. In Nigeria, chief executives make the final approval on the appointments of both chairmen, inside directors and outside directors. Therefore, this study suggests that board leadership structure (either to separate or dual leadership) does not matter in influencing board processes variables in Nigeria. Overall, the following hypotheses are developed:

H3a *- CEO duality has no significant effect on board level of commitment*

H3b *- CEO duality has no significant influence on level of challenge in the boardroom*

H3c *- CEO duality has an insignificant effect on board knowledge utilisation*

3.7.4 Board Gender Diversity and Board Processes

Expectations of the directors' task performance are higher on women directors than their male colleagues (Fondas, 2000). This indicates that the level of commitment to perform board duties would be higher with women directors on the board. Broadbridge et al., (2006) suggest that because of their inexperience in the board work, women directors prepare more for board meetings, seek knowledge about the nature of the board work and identify areas of improvements. These efforts by women directors enhance their level of commitment in the boardroom.

It is purported that the inclusion of women directors on the board improves open-debate, critical discussion and fruitful disagreements. This is because female directors present different opinions and perspectives from male directors (Nielsen and Huse, 2010). and because of their nature of asking questions and disagreeing on anything they are not clear with (Broadbridge *et al.*, 2006). However, the abundance of different perspectives, experience and knowledge can lead to a coordination problem and failure to effectively utilise the human capital available in the boardroom. Similarly, gender diversity reduces the board's levels of interpersonal relations and effective communication, which may lead to difficulties in knowledge utilisation as individuals tend to work with those they perceive share similarities and reject those with dissimilarities (Wegge *et al.*, 2008). Therefore, the following hypotheses are developed:

H4a *- A proportion of women directors on the board is positively related to the board level of commitment*

H4b *- A proportion of women directors on the board is positively related to challenging among directors*

H4c *- A proportion of women directors on the board is negatively related to board knowledge utilisation*

3.7.5 Board processes and Board Task

Board internal processes, such as board levels of commitment, challenge and knowledge utilisation are expected to help the board to perform their main roles, such as monitoring of the management and provision of services that will benefit an organisation. Board members are busy individuals (Mace, 1971; Lorsch and MacIver, 1989), especially those with board interlocks and other commitments outside the firm. The maximum level of effort by a group member can be achieved with strong group levels of commitment (Wageman, 1995).

Boards with a minimal level of commitment among directors did not meet regularly, became less effective in meetings and only approved proposals of management (Mace, 1971). Agency theory evinces that this sort of board is not effective in monitoring the activities of self-serving executives. Previous studies, such as Lorsch and MacIver (1989) show that board members with a higher level of commitment toward their responsibilities are more able to improve board-level and firm-level effectiveness during stability and crisis periods. Similarly, regular board meetings, due to a higher level of commitment by directors, improve board strategic involvement in for-profit organisations (Zhu et al., 2016).

Board members face ambiguous tasks, so there is a need for directors to freely present different viewpoints and be able to critically analyse each other’s views for an effective decision to be made regarding these tasks (Watson and Michaelsen, 1988). This is likely to result in a higher number of disagreements among directors which can enhance quality decision making, especially in an uncertain environment (Milliken and Vollrath, 1991) and subsequently improve board monitoring and service roles.

The ability of a group to the utilize knowledge, experience and skills of each group member determines the group effectiveness (Wageman, 1995). Zona and Zattoni (2007) suggested that effectiveness of the board in performing their duties may depend on the ability to actively use and integrate each board member's knowledge, skills, experience and expertise. The availability of human capital is important to the board, but utilising such human capital is more crucial as benefits of that capital can only be achieved if it is put to use. According to Bettinelli (2011), use of knowledge and skills is referred to as "the extent to which the board taps into and applies the human capital members bring to the table" (p.156). Knowledge utilisation was found to be positively related to board strategic involvement (Zhu et al., 2016); thus the following hypotheses are developed:

H5a *- Board level of commitment is positively related to board control role*

H5b *- Board commitment is positively linked to board service role*

H5c *- Challenge has a positive influence on board control role*

H5d *- Challenge is positively related to board service role*

H5e *- Knowledge utilisation in the boardroom is positively associated to board control role*

H5f *- Knowledge utilisation has a positive effect on board service role*

3.7.6 Board Task and Corporate Social Responsibility

According to agency theory, the fiduciary duty of the board is to monitor, compensate and discipline the executives (Bawhede, 2010). Raelin and Bondy (2013) explained that agency theory does not only explain the principal-agent (shareholder-manager) relationship, rather it also explains the shareholder-society relationship. They termed the former as the first layer and the latter as the second layer of agency theory. The authors emphasised that the board should satisfy the interests of shareholders without compromising the interests of society.

Directors are encouraged to consider the interests of other stakeholders and environmental issues in their decisions and this improves corporate social responsibility performance (Carroll, 1979;

Freeman, 1984). The satisfaction of stakeholders means maximisation of shareholders' wealth, especially in the long term (Brammer *et al.*, 2006). Integrating agency and stakeholder theories, the role of board members is to provide effective monitoring of managers which ensure adherence to strategic decisions that enhance corporate social responsibility activities. Stakeholder theory's emphasis is on the firm to operate in the best interest of various stakeholder groups, here the role of the board is to make sure managers are fully controlled to ensure firms operate according to the laws of the land and are ethically responsible. Therefore, it is expected that:

H6a - *Board control role influences corporate social responsibility (legal) activities*

H6b - *Board control role is positively related to corporate social responsibility (ethical) activities*

According to resource dependency theory, the main duty of any board is to provide resources to the firm. The ability of the board to provide resources to the firm reduces uncertainty (Pfeffer, 1972) and dependency on the external contingencies, while lowering transaction costs (Salancik and Pfeffer, 1978). These provisions of adequate resources by the board enhance firms' competitive advantage and at the same time guarantees adequate support from the various stakeholders, as their wants and yearnings are satisfied through CSR activities. This can be possible with the availability of resources in the firm.

Similarly, board members are expected to have societal and professional backgrounds, so that resource and timely information from the external environment can easily be received and made available to the firm (Zahra and Pearce, 1989). Furthermore, consistent with stakeholder theory, boards should provide the firm with information about the wants of various stakeholders. In this capacity, the board serves as boundary spanner between the firm and external environment (Pfeffer and Salancik, 1978). This improves social performance, as the wants and needs of various stakeholder groups are considered because of knowledge about stakeholders' claims and the availability of resources in the firm. In view of this, the following hypotheses are developed:

H7a - *Board service role has a positive effect on corporate social responsibility (legal) activities*

H7b *- Board service role is positively connected to* corporate social responsibility (ethical) activities.

3.7.7 The mediating effect of board processes

The direct relationship between board characteristics and performance has been investigated for over a decade. However, the empirical findings are inconclusive and this has led some board scholars (e.g. Daily et al., 2003; Pettigrew, 1992; Forbes and Milliken, 1999) to conclude that for any meaningful result researchers should consider the influence of board processes on the relationship between board characteristics and performance. Roberts et al., (2005) argue that it is not board structure *per se* that guarantees board performance, rather the internal workings among directors.

Some of the board characteristics, such as proportion of non-executive directors and board size may provide diverse knowledge and experience in the boardroom, and that gives their firm a competitive advantage, as argued by resource dependency theory. However, only those directors that are committed will be able to utilise such resources, which consequently improves monitoring and provides external and internal resources to the board.

The availability of knowledge, skills and experience in the boardroom serves as the foundation for an effective board, but this does not guarantee that the board will have sufficient influence on its monitoring and service tasks. Rather, it is the ability of directors to utilise the human capital available in the boardroom that assist the board in performing their expected roles of monitoring the executives and servicing the board with strategies, finances and other resources. Zhu et al., (2016) found that availability of information in the boardroom has no serious effect on strategic involvement, but utilisation of such information does.

According to agency theory, boards with adequate proportions of non-executive (outside) directors are expected to protect shareholder funds from opportunistic agents. However, it is argued that this is only possible if the NEDs are committed to doing their job. A board dominated by outside directors that are not attending board meetings will not be able to reduce problems of tunnelling through the monitoring role (Liu et al., 2016). Notwithstanding, efforts to attend board meetings without desire to critically access, challenge, scrutinize the proposals of the executive will not yield to any meaningful influence on board control and service tasks.

Evidence has emerged that while open discussions, where opinions and ideas are frequently challenged, improve a board’s strategic and operational controls, the proportion of women directors has no significant influence on open discussions (Huse et al., 2009). The ratio of women to men has no significant effects on board controls, but board processes variables mediate the relationship between board gender diversity and strategic controls (Nielson and Huse, 2010).

Although, CEO duality may not have a significant influence on the boards’ roles, Machold et al., (2011) find CEO duality, through board processes variables, such as knowledge utilisation and board development programmes, improves a boards’ strategic involvement. Thus, the following hypothesis is developed:

H8 - *Board processes mediate the relationship between board characteristics and board tasks*

3.7.8 The mediating effect of board tasks

Boards of directors that are committed, in that they utilise knowledge that is available in the boardroom and critically analyse information provided by the executives, are more likely to improve board control and service tasks, which consequently influence the corporate social responsibility activities of their firm. Evidence has emerged that strategic boards that are active and cohesive are more likely to manage their resources effectively through innovation, risk-taking and proactive behaviours than operational, passive and fractional boards, and this improves CSR activities (Coombes et al., 2011).

Directors that are more concerned with satisfying the interests of their shareholders are more likely to be committed to activities such as questioning, challenging and scrutinising the activities of management, which can lead to effective monitoring. Moreover, knowledge available in the boardroom will be used in order to effectively control the opportunistic agents. Melkumov et al., (2015) argue that such boards improve the financial performance of their firms, which is short-term in nature, but neglect strategies such as corporate social responsibility programmes which ensure long-term performance for the benefits of all stakeholders, including the shareholders.

Taking the traditional agency theory perspective, an effective board control role may have an adverse effect on CSR activities. However, linking the stakeholder and agency theories, the board's main task is to monitor the activities of the opportunistic executive in order to ensure the firms operate ethically and legally for the benefits of those that can affect or can be affected by the firms' activities (Freeman, 1984). Consistent with Raelin and Bondy (2013), this study argues that the agency theory does not only explain the principal-agent (shareholder-manager) relationship, but also the shareholder-society relationship. Therefore, a board control task is expected to have a substantial effect on CSR activities and also mediate the relationship between board processes and social responsibility (ethical and legal) activities.

Those boards that are committed and challenge opinions of other directors in order to satisfy the interest of all stakeholders rather than shareholders alone, are more likely to improve strategic participation roles, such as CSR initiatives which improve external legitimacy and reputation (Melkumov et al., 2015). Similarly, directors that intend to satisfy shareholders' interests, especially in the long-term, are more committed in the provision of strategic advice and other external resources that can be used to satisfy the stakeholders' claims. They also challenge any strategy proposal that did not consider the interest of other stakeholders and effectively utilise the knowledge available in the boardroom for the best interest of all stakeholders.

Challenging and questioning the proposals of the management may not have a direct effect on CSR (Galbreath, 2016). As mentioned earlier, board commitment, use of knowledge and board challenge may not have a significant and direct effect on social responsibility (legal and ethical) activities, especially if the intention is to maximise shareholders' wealth in the short-term. Conversely, the board monitoring role can improve CSR strategies, if scrutinising and challenging the management proposal is to ensure firms operate ethically and legally for the overall benefits of all stakeholders, including stockholders in the long-term. Unethical and illegal attitudes of firms may harm shareholders’ wealth, especially over time, for example through negative press attention, paying penalties, product boycotts and reputational loss (Arora and Dharwadkar, 2011). Therefore, the following hypotheses are developed:

H9a - The *board control role mediates the relationship between board processes and CSR (legal and ethical) activities.*

H9b - *Board service task has an indirect influence on the relationship between board processes and CSR (legal and ethical) activities*.

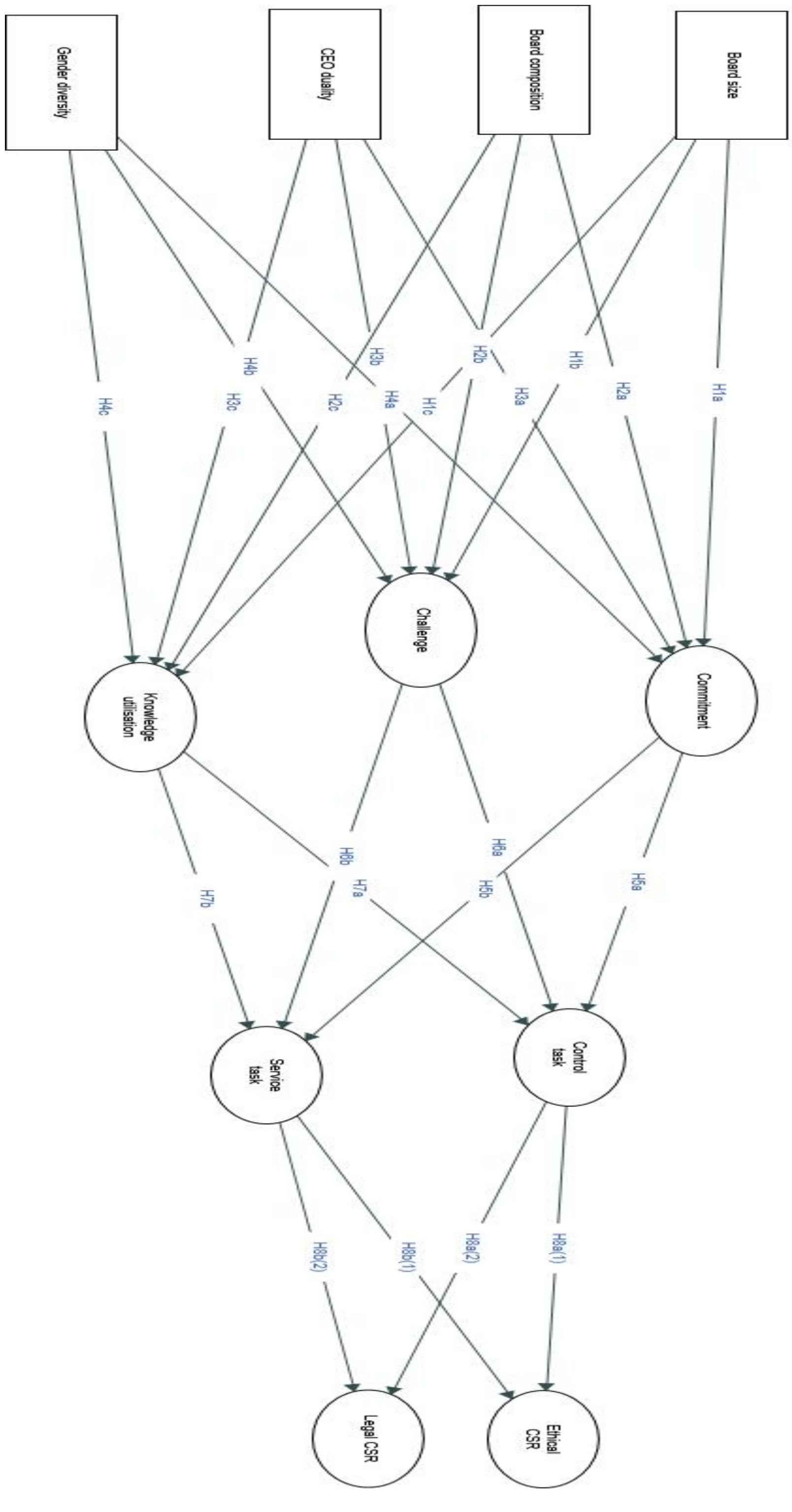

Figure 3.8: New Research Conceptual Framework and Hypotheses

3.8 Summary of the Chapter

The three common perspectives available in the literature were highlighted in this chapter. The systematic (narrative) literature review presented in this chapter shows what is written and what needs to be written in the literature about board effectiveness. The review evinces that the majority of the previous studies investigate the influence of board characteristics on firms' financial performance, followed by those that examine the relationships between board structure and corporate social responsibility performance. Minimal studies investigate the importance of board functioning. Moreover, this chapter highlights that the majority of these studies are from developed countries and employed the same methodological approach. Overall, the chapter identifies and presents the literature gaps. In the end, the research hypotheses with the new conceptual framework that accommodates the few necessary amendments are presented (Figure 3.8). The next chapter discusses the research methodology employed which involves the research paradigm and overall research design.

CHAPTER 4: RESEARCH METHODOLOGY

4.0 Introduction

The systematic (narrative) literature in chapter four identifies the literature gaps that the current study intends to fill. This chapter presents the research methodology employed to collect and analyse data, so that the research questions raised in chapter one are addressed and the main aim of the research is achieved.

In the subsequent section (4.1) the various methodologies adopted by previous and relevant studies were discussed. Section 4.2 presents the research design which comprises the study's philosophical assumptions, methodological approach, population and sample, and process and development of survey design. Moreover, variables and operationalisation used in this study are discussed in section 4.3, followed by a discussion of common method bias in section 4.4. Research ethical considerations are briefly presented in section 4.5.

The approach employed for data analysis was discussed in section 4.6. This section highlights the process and results of data screening techniques used in this study. Furthermore, section 4.7 discusses partial least squares structural equation modeling (PLS-SEM) in detail which is the research analysis tool. Approaches in assessing and reporting PLS results were presented in section 4.8. Lastly, section 4.9 summarises the chapter.

4.1 Methodologies Adopted From Previous Studies

Generally, access to the board of directors is difficult and this leads many scholars to rely on archival data in their board research (Daily *et al.*, 2003; Gabrielsson and Huse, 2004). Notwithstanding, few researchers have employed various methods, such as direct participation or observation, qualitative interviews and survey questionnaires in order to study these corporate leaders.

Brannen (1987) followed board members on their daily activities both within and outside the boardroom to understand their functioning. Hammer et al., (1997) participated in the board activities as a union elected director and collected board processes data for five years. Huse (1998) applied ‘one of the lads’ approach serving as board chairperson of three small firms for 18 months, in order to study the dynamics of board-stakeholder relations. Similarly, Huse et al., (2005) employed the ‘fly on the wall’ approach as a direct observation methodology to study the board of a major Scandinavian firm (TINE Group). The authors attended board meetings for a year, but with an agreement to provide board evaluation reports to the firm. In addition, they also conducted interviews with all the board members and the management team.

Pugliese et al., (2015) applied direct observation facilitated by videotaping three board meetings of two Australian organisations. In the same vein, Parker (2007) employed a longitudinal Complete Member Researcher (CMR) participant observation methodology to study two Australian boards of non-profit associations. Parker participated and conducted observations in almost eighty per cent of all the board and sub-committee meetings of these organisations for two years (one year for each organisation). In addition, the author collected documents, such as meeting minutes, supplementary presentations and agenda papers.

Boardroom direct participation and observation are the most appropriate methods to gather primary data in order to study boards of directors (Huse, 2008). However, Samra-Fredericks (2000) describes this approach as an ‘impossible method’ because of a lack of accessibility, legality and confidentiality issues.

Other authors successfully conducted qualitative interviews focussing on the direct experience of board members. Finkelstein and Mooney (2003) conducted 32 structured interviews with members of corporate boards in their study of board structure and processes. McNulty and Pettigrew (1999) interviewed 108 directors to explore how part-time board members influence strategy in UK corporations. Roberts et al., (2005) used 40 in-depth interviews with directors in the UK, in order to make contributions on the real factors that make outside directors effective, rather than relying on their mere presence on the board.

Survey questionnaires were also used in previous board processes literature. Huse (1994) in a cross-cultural study, sent mail questionnaires to a sample of CEOs and chairmen of small firms in

Sweden and Norway, in order to examine the impact of board-management relations on board task performance. Many board processes' scholars fall under this category (see for example, Wan and Ong, 2005; Zona and Zattoni, 2007; Bettinelli, 2011; Minichilli et al., 2012; Zona, 2015).

The current study employs this approach because it is the most appropriate considering the time frame, accessibility and resources available. Samra-Fredericks (2000) asserts that negotiating access to conduct direct boardroom observations can take many years and in the end access still might not be allowed. Furthermore, the above studies based on qualitative methods do not cover a large sample because of the nature of the studies or difficulty in getting access to other boards. These limitations could be addressed through a quantitative questionnaire approach by covering a large sample within the limited time frame. This study employs positivist philosophical assumptions and a quantitative approach. However, qualitative interviews are conducted in order to fully understand board processes and tasks variables that are appropriate to use for the context under study. Moreover, themes discovered from the qualitative interviews have been used in the development of the quantitative questionnaire. The current study uses survey questionnaires as the main instrument for data collection, the next sections discuss, in detail, the research design adopted.

4.2 Research Design

Saunders et al., (2012) describe research design as "the general plan of how you will go about answering your research question(s)" and is the crucial part of every research project. It involves approaches to methodology, methods, analysis and ethical considerations used in conducting a research (p.159). The methods used in collecting data and type of analysis employed depend largely upon the methodological approach employed. Furthermore, the methodology applied in a study depends on the research paradigm, which is the philosophical assumption of the study. Therefore, it is essential for the researcher to select appropriate research paradigm and ensure coherence with the philosophical beliefs, methodology and methods of that paradigm.

4.2.1 Philosophy (paradigm)

At the initial stage of any study, it is essential for a scholar to identify the research paradigm on which to build the study on and ensure coherence with the chosen paradigm. This is essential as different paradigms require different ways to conduct a research. Collis and Hussey (2014) define paradigm as "a philosophical framework that guides how scientific research should be conducted" (p.43). It is a way of thinking about the world and can be used in different stages of a research.

Morgan (1979) classified three stages where paradigm can be used: firstly, from the philosophical perspective; secondly, at the social level and lastly, at the technical level. In other words, research paradigm involves ontological, epistemological and methodological assumptions. These assumptions are based on the philosophical beliefs of a researcher. Burrell and Morgan (1979) developed a sociological paradigms framework with four categories that are commonly accepted and debated by scholars. These four paradigms are constructivism (interpretive), functionalist (positivism), radical structuralist (post-positivism) and radical humanist (critical theory).

4.2.1.1 Interpretive (Constructivism) and Functionalist (Positivism)

Constructivism scholars focus on exploring ambiguous meanings of social phenomena with the aim of achieving interpretive understanding. Conversely, positivism researchers rely on theories to explain or predict relationships between variables and make "logical reasoning, so that precision, objectivity and rigour underpin their approach, rather than subjectivity and intuitive interpretation" (Collis and Hussey 2014, p.44). Positivism and constructivism are the most common paradigms used in natural and social science, each with different ontological, epistemological and methodological assumptions.

Ontology is concerned with the nature of the world or reality. Here a researcher makes an assumption about beliefs on how the world operates and makes a commitment on a particular view on the nature of reality (Saunders *et al.*, 2012). In this regard, two schools of thought are common which are objectivism (realism) and subjectivism (relativism, idealism). The former holds the ontological assumption based on the positivism position which believes that objective reality exists and is independent of the researcher. On the other hand, relativism believes that there are multiple realities and are constructed through social interactions.

Epistemology refers to what should be considered as acceptable knowledge in a discipline. Interpretivism believes that knowledge comes from subjective evidence through interactions with participants, while positivism considers knowledge to come from objective evidence that is measurable, observable and where the researcher does not relate with the phenomena under study (Bryman, 2012).

Positivism believes that the phenomena can be observed or measured therefore quantitative methodological approaches are the most appropriate. Here, the approach used in such a paradigm is deductive in nature, where specific data is deduced from the theories in order to identify cause and effect (Gray, 2013). However, using an inductive approach is more appropriate in interpretivist studies (Corbin and Strauss, 2014), since the aim is not to investigate cause and effect using a static design or general law, rather understand multiple and subjective realities from the participants. Positivism and interpretivism are the two extremities on the research continuum of paradigm (Morgan and Smircich, 1980), nevertheless, other paradigms exist between them, such as post-positivism (radical structuralist) and critical theory (radical humanist).

4.2.1.2 Radical Humanist and Radical Structuralist

The radical humanist paradigm has an ontological belief of historical realism; what is considered as truth is shaped by political, social, economic, ethnic and gender values (Guba and Lincoln, 1994). Researchers on this paradigm aim to emancipate society from unequal power and overthrow the flaws of existing social arrangements, to release society from the dominant way of thinking which is influenced by a few powerful players (Burrell and Morgan, 1979). Radical humanists are more aligned to subjectivist epistemology, where knowledge is achieved through interaction between the investigator and the investigated object (Crotty, 1998). This paradigm uses both quantitative and qualitative techniques and the approach is abductive in nature.

Similar to radical humanists, radical structuralist believes that the status quo needs to be changed to free society from thinking that is influenced by dominant and powerful players. However, the latter differs with radical humanist as it assumes that the unequal arrangement is due to flaws from the objective reality and that it can be solved by having a proper objective structure, such as changing the laws, political, economic and social institutions policies (Burrell and Morgan, 1979). Scholars on post-positivism (radical structuralist) believe that reality exists, but cannot be perfectly detected due to the nature of phenomena under study and the researchers' inadequacy of finding the reality (Saunders *et al.*, 2012). The epistemology paradigm is 'objectivity,' but which does not believe the researcher should be distant from the researched. Critical methodologies, such as discourse analysis and ethnography, are commonly used in this paradigm.

Based on the above philosophical literature, positivism assumption and quantitative approach will be more appropriate to conduct this study because the hypotheses will be relied upon to establish systematic relationships between board characteristics, processes, board task and corporate social responsibility activities in the Nigerian corporate environment. Data is collected from directors of listed companies on the Nigerian Stock Exchange and deduced the data from the hypotheses, in order to confirm or refute the hypothesised relationships. Thus, the positivist, deductive approach and quantitative methodology are more appropriate for this study. This study believes that relationships between variables of interest exist and are independent of the researcher. Therefore, the study intends to find, explain or predict those relationships. Thus, the research ontological and epistemological beliefs are consistent with the positivist ideologies and the main methodological approach is a quantitative approach. However, as mentioned earlier, qualitative interviews were conducted in order to understand the perspectives of the Nigerian boards of directors with regards to the phenomenon under study. The findings from the interviews are used to develop the final versions of the research conceptual framework and quantitative questionnaire.

4.2.2 Quantitative Approach

Research methodology is a way of obtaining or discovering evidence in a systematic manner. Quantitative methodology is used mostly by positivist scholars and is an approach where theories/hypotheses are tested in order to investigate the relationship between two or more variables (Creswell, 2013). The quantitative methodology involves the collection of numerical data and has ontological and epistemological beliefs that there is one single social reality which is context-free and objective. This approach is theory-driven where specific data is collected and deduced from the general theories in order to confirm or refute it.

Selecting research methodology depends on the problem the researcher intends to address. For example, if the aim is to identify the relationship between variables of interest, then a quantitative approach is more appropriate; while the qualitative approach is to explore certain phenomenon because little or no research has been conducted (Creswell, 2013).

In order to determine board effectiveness, the current study intends to find the dynamic relationships between board characteristics, board processes, board task and corporate social responsibility activities. Hypotheses have been developed and tested empirically to establish the relationships. Data is collected from directors of all listed firms on the NSE and the data is deduced from the hypotheses in order to confirm or refute it. Thus, the quantitative approach will be more suitable. This approach is common in board literature (Bhagat and Black, 2001; Bettinelli, 2011; Akpan and Amran, 2014).

Positivism assumptions and quantitative approach are more appropriate for this study as it relies on the hypothesis to predict relationships between board characteristics, board processes, board task and CSR. However, quantitative methodology is criticised for having ‘static views’ of a social world without considering the meanings of individuals (Bryman, 2012). Nevertheless, findings from this approach can be generalised to the entire population, as it allows the use of a large sample size. Using a quantitative approach would allow this study to cover the entire population frame (directors of companies listed on the NSE), which means, findings from the research are not by chance and can be generalised to the Nigerian corporate environment.

As mentioned above, the most appropriate way to study board processes would be to sit in the board's meetings as an observer. However, this method may not be feasible because of the fact that in Nigeria board meetings are highly confidential and firms rarely allowing outsiders to sit in their boardroom meetings. Moreover, access to boardroom' meetings requires a lot of negotiation and time. The duration allowed for this study is not suitable for this approach. Similarly, qualitative methods, such as interviews and observations, have serious problems with transparency, validity (reactive affects), reliability (intra-observer consistency over-time), generalization, difficulty to replicate and tendency to generate lots of fragment data (especially in observation) which will be difficult to assemble together to have an overall picture (Bryman, 2012).

Due to the short-comings of the qualitative methods mentioned above and difficulties in accessing boardroom qualitative data, this research follows the existing literature (e.g. Forbes and Milliken, 1999; Wan and Ong, 2005; Zona and Zattoni, 2007; Bettinelli, 2011; Minichilli et al., 2012; Zattoni et al., 2015; Zona, 2015) and uses a quantitative approach. Survey questionnaires are used as an instrument to collect data and the Partial Least Squares Structural equation modeling (PLS-SEM) technique is used to analyse the data.

However, prior to employing the quantitative approach to answer the research questions, qualitative interviews are conducted in order fully understand the board processes and tasks variables that are more suitable to use in the research context. The findings from the interviews were used in developing the final versions of the research conceptual framework and quantitative questionnaire. Thus the study involves two stages of data collection.

4.2.3 Process of data collection

Two stages of data collection are followed in this study in order to achieve the research aim and answer the research questions sufficiently. Although the quantitative approach is the main methodology for this study, qualitative interviews are initially conducted for the purpose of understanding the board processes and tasks that are applicable in the context (Nigeria) under study. Thus, the final version of the research conceptual framework will be developed after the interviews. Additionally, the interview is expected to help in designing the final version of the quantitative questionnaire. The second stage of data collection, which is quantitative, begins after confirming the board processes and tasks variables that are appropriate to use in this study and for the finalisation of the quantitative questionnaire.

4.2.3.1 Qualitative Interviews

A semi-structured interview was conducted in February to March 2016 with four non-executive directors, one independent non-executive director and two executive directors that serve as representatives from different industries listed on the Nigerian Stock Exchange. The researcher believes that these participants have adequate knowledge and experience needed to take part in this study.

The interview questions were drawn from the research questions, themes from the adopted research conceptual framework and relevant literature. These interviews were conducted with the aim of understanding the board processes and board task relevant in the Nigerian context. The qualitative interview used in this study is based on an objective approach, rather than subjective, as the purpose is to receive responses to questions that are assumed to be factual (Saunders *et al.*, 2016). The aim here is to understand perspectives of the Nigerian corporate directors on the phenomenon under study. Findings from these interviews have been used to developed final versions of the research conceptual framework and quantitative questionnaire. Data received was tape-recorded, transcribed and analysed using a thematic analysis approach.

The current study employs a theoretical (deductive, top-down) thematic analysis approach and coding is done based on the findings of previous literature. The interview data was approached with certain themes in mind to see if they appeared in the context under study. The questions asked were driven based on the researcher theoretical interest in the topic. Similarly, a semantic approach (phenomenology) was followed in identifying theme level. Here, themes are identified within the surface meanings of the data, rather than beyond what the participants have said, as required by latent themes approach (Braun and Clarke, 2006). After transcription, with the help of computer-assisted software (Nvivo), interview data were coded and recorded to be able to bring out initial, developed and final thematic map (see Appendix J). This help in developing the final versions of the research conceptual framework (see Figure 3.8).

Data from the interview shows that (see Appendix J), firstly, directors of the Nigerian companies misunderstood the concept of 'cognitive conflict' and 'effort norms'. Instead, what appears to be easily understood by the participants is 'challenge' among directors in the boardroom and 'commitment' of board members which are the same as cognitive conflict and effort norms respectively. Secondly, according to the interview findings, control and service tasks are the two common board roles that Nigerian boards are expected to perform. The data shows no identical differences between board strategic task and resource provision roles. Lastly, various activities cutting across the four dimensions of corporate social responsibility, developed by Carroll (1991), were found.

4.2.3.2 Quantitative Survey Design

Unlike natural scientists that use the experimental method as a research instrument, non-experimental instruments, such as surveys are the common research method employed in social science studies (Bryman and Bell, 2007). The survey is the main data collection method employed in this study. Surveys are commonly used in similar studies that investigate board effectiveness beyond the demographic variables (see for example, Zattoni et al., 2015; Zona and Zattoni, 2007; and Wan and Ong, 2005).

With an appropriate sample size, a survey presents a numeric description of opinions or attitudes of a given population under study. Balnaves and Caputi (2001) explain that the survey instrument gives an account of peoples' identity, thinking and behaviour, and is appropriate to use when a researcher cannot or finds it difficult to directly observe the phenomena under investigation, such as board processes and board tasks.

A survey can be in a form of a questionnaire, structured observation, face-to-face interview or telephone interview. Several methods can be employed to collect data using survey questionnaires, such as ‘delivery and collect’, postal and email (electronic) questionnaires. This study uses online and ‘delivery and collect’ questionnaires to collect data from the participants. Cross-sectional and close-ended questions are used in this study. Respondents were provided with alternative answers to choose at a point in time. This generates a rapid response on a large scale as it is easier to answer (Saunders *et al.*, 2012).

Though the survey questionnaire is more popular in Social Science, it is widely criticised as having limited, wide-ranging alternatives (Saunders *et al.*, 2012). Researchers have to limit their inquiries because too many questions make the questionnaire unattractive and may lead to low response rates. Similarly, a survey is not suitable for recording complex information from the sample (Balnaves and Caputi, 2001). Notwithstanding, this study decides to use the survey because of difficulties in accessing boardroom primary data and is more appropriate to generate large data size, at a low cost, within a limited time frame compared to direct observations and other qualitative methods. Similarly, the majority of previous board studies relied mainly on archival data and the research lacked empirical evidence from primary data sources, especially surveys (Huse *et al.*, 2011).

4.2.3.3 Population and Sampling Frame

The population of this study are all directors of companies listed on the Nigerian Stock Exchange. The aim is to have a large-scale sample of respondents in order to generalise any findings from the research. This eliminates sample error and minimises response bias. Furthermore, the population size is not too large and it is appropriate to use the entire population. As at the time of data collection, there are 170 firms listed on the NSE, cutting across 11 industries (see Table 4.1) and the total numbers of directors sitting on the boards of these firms are 1,430.

Due to difficulties in getting access to all board members (Daily *et al.*, 2003), board studies using surveys rely mostly on a single respondent, such as CEOs (Zahra *et al.*, 2000; Minichilli *et al.*, 2012). However, this approach is criticised for an inability to address common method bias (Zona, 2015). Similarly, Wan and Ong (2005) argue that not all CEOs attend board meetings. To reduce common method bias in this study, multiple respondents will be contacted (Podsakoff and Organ, 1986) and this provides large and reliable data to work with. Moreover, relying on responses from each CEO of the companies listed will result in a research population of 170 and to have 100 per cent response rate is very unlikely.

The questionnaire was sent to all directors (1,430) of companies listed on the Nigerian Stock Exchange (170 firms). This also seems to be a small population frame and likely to lead to small sample size. This is due to a limited number of listed firms on the NSE. A large sample is always desirable in a quantitative approach, however, a small sample size is acceptable in group processes research (Zona, 2015). Bettinelli (2011) examined board processes in family firms with a sample of 90 firms, Eddleston et al., (2008) investigated group processes in a sample of 37 firms and Zona (2015) examined the influence of board ownership on board processes with 108 responses.

Table 4.1: Industries and Number of Firms Listed on the NSE

Industry	Number of firms
Oil and Gas	12
Industrial Goods	14
Consumer Goods	21
Conglomerates	6
Financial Services	57
Healthcare	10

Natural Resources	4
Services	25
Construction/Real Estate	9
ICT	7
Agriculture	5
Total	170

Source: Author extracted from the NSE website

The study should have collected data from directors of both public and private companies operating in Nigeria, in order to improve external validity and enhance robust findings. However, getting data from private firms will be difficult or even impossible, as such companies are not obliged to disclose their information to the public. Similarly, private firms may not comply with the corporate governance guidelines and as a result, may have different board structures. Listed companies are expected to comply with CG codes and disclose information to the general public. To some extent, these firms have met national and international standards before they are listed on the NSE.

4.2.3.4 Administration of the Questionnaire

Through Qualtrics software, a survey questionnaire was designed and a collector (web link) was created. Additionally, the software allows the designed questionnaire to be printed and distributed to the participants in a hard copy form. Qualtrics survey software provides a 'collect responses section' where a survey collector can be open and/or closed to participants. Data collection starts in March 2016 (pilot study) and a cut-off date and time were set for this study which is 24 April 2018 and 11.59pm respectively. After this date, new participants cannot have access to the survey link. The duration of the data collection is approximately two years (pilot study plus the main study) and average completion period of the questionnaire is approximately seven minutes. However, the actual data collection for the main study starts in June 2017. A long data collection period is allowed in this study due to difficulties in getting access to the research respondents, but the completion time of the questionnaire is made shorter.

Prior to distribution, the questionnaire was shown to a director of the Nigeria Stock Exchange who is responsible for corporate governance issues in the organisation. Similarly, some directors of three different companies listed on the NSE also perused the questions. This served as a guide to remove any ambiguous questions, correct poor wording and add any relevant question that may arise (Wan and Ong, 2005). The feedback received from these directors was encouraging and the necessary amendments have been made. Overall, there was no serious error found.

Getting access to directors of companies in Nigeria is extremely difficult, as they are not too open to individuals with whom they are not familiar. This may be due to rampant cases of kidnapping and other security challenges that the country is currently facing. Moreover, Nigerian boards of directors are skeptical about sharing their companies' information with third parties due to mistrust and fear of the unknown. Additionally, at the period the researcher starts data collection, NSE in conjunction with the Convention on Business Integrity in Nigeria (CBI) is undertaking another study that rates all listed companies on their corporate governance and integrity practices through a system called the Nigerian Corporate Governance Rating System (CGRS). This contributes to resistance and reluctance from some directors to take part in the current study.

Nevertheless, the researcher used different strategies in order to ensure difficulties of getting access to these corporate leaders are minimised. Based on the meeting held with the officials of the NSE, the researcher was advised to liaise with secretaries of the listed firms so that the difficulties of getting access to board members might be reduced. Similarly, the researcher has the opportunity to be registered (see appendix K) as a member of a reputable corporate governance organisation, known as the Society for Corporate Governance Nigeria (SCGN), in which membership is mostly drawn from directors of Nigerian companies. The organisation prepares a series of workshops for their members (directors) to attend. As such, the researcher planned to familiarise himself with some key directors and the management of the SCGN which helps to reduce the anticipated low response rate. Moreover, some of the interview participants help the researcher to get access to other directors and companies' secretaries.

It is essential to mention that multiple methods were used to deliver the questionnaire to the target respondents. Firstly, a survey link (Appendix E) that contains a self-completion questionnaire had been sent through the emails accounts of each listed company secretary and solicits their help to send the questionnaire to their respective board members. Email questionnaires are commonly used in board processes' research (Pearce, 1991; Wan and Ong, 2005). Sudman and Bradburn (1983) assert that professionals and white-collar workers are generally willing to respond to emails questionnaires.

All the companies' secretaries have valid email accounts and were accessed through the Nigerian regulatory agencies. In addition to their email addresses, phone (mobile) numbers of all the secretaries were received and were used to contact them for reminders. The researcher also contacted the majority of the secretaries face-to-face and sought their support.

Secondly, the survey link and hard copy of the questionnaire has also been sent directly (either through email or 'delivery and collection') to the majority of the target participants, either by the researcher or via officials of the Nigerian Stock Exchange (NSE), Corporate Affairs Commission (CAC) or Security and Exchange Commission (SEC). Similarly, some members of the Society for Corporate Governance of Nigeria (SCGN) and Institute of Chartered Accountants of Nigeria (ICAN) voluntarily and personally volunteered to assist and delivered the research instrument to the target respondents.

Sufficient literature has suggested that internet, internet-mediated and 'delivery and collection' questionnaires have more control to ensure the questionnaires are filled by the target respondents (Saunders *et al.*, 2012). Evidence also suggests that online surveys have a higher response rate than mail questionnaire (Michaelidou and Dibb, 2006). In Nigeria, online and 'delivery and collection' approaches are much better than postal questionnaire because of the nature of the country's postal service. However, in the Nigerian context, where the level of computer education is low, online questionnaires may lead to low response rates, especially in board studies. Moreover, 'delivery and collection' questionnaires will be difficult, as the respondents are geographically dispersed

(Saunders *et al.*, 2012), with companies listed on the NSE situated in the North, South, West and Eastern part of the country. Nevertheless, the method can be applied by attending a series of seminars and conferences where the target respondents (directors of listed firms) are the audience.

To address the shortcomings of the two approaches highlighted above, ‘delivery and collection’ and online questionnaire methods have been employed jointly. There is no known literature to support this approach, but it is more appropriate if the target participants lack computer literacy and are difficult to reach. In such situations, the mixed approach to survey delivery is necessary in order to maximize the response rate.

4.2.3.5 Response Rate

Various approaches to increase the research response rate were applied. A letter has been sent to the targeted respondents two weeks before sending the main questionnaires, which serves as a consent letter and introduces the research topic, aims and objectives (see Appendix B). Through that letter, directors were aware of the research and some were convinced and encouraged to take part in the study. Previous studies indicate that a covering letter improves response rates (Dillman *et al.*, 2014). A brief covering letter which explains the reason for the study accompanies the questionnaire. Additionally, two weeks after questionnaires were sent, several reminders followed through emails, phone calls and personal contacts. Moreover, to facilitate higher response rates, participants were informed that they will receive an executive summary of the findings, if they so wish.

Questions were prepared using simple and clear English, mindful of avoiding ambiguity. Similarly, as mentioned earlier, the interview initially orchestrated suggests that too many questions may discourage target respondents from taking part in the research. Therefore, minimal items were used to measure each construct. These are all measures taken by the researcher to ensure a high response rate is attained.

Thereafter, a survey questionnaire generated through Qualtrics software was sent using multiple methods to all directors (1,430) of firms listed on the Nigerian Stock Exchange. At the initial stage, not many responses were received (21 responses), first and second reminders attracted responses of 36 and 42 respectively, which are little higher than the first attempt. After wide consultations with relevant organisations and individuals, family, friends and relatives, recommendable responses of 115 are achieved. Therefore, it is essential for any study of such kind in Nigeria to have personal contacts that can assist the researcher to reach the target respondents.

As mentioned earlier, multiple methods of sending the survey to the target respondents have been applied, this includes an online survey and ‘delivery and collection’ approaches. Similarly, instead of one or two reminders, many reminders have been sent. There is no known literature to support these approaches, however, because of the characteristics of the respondents and the study context the researcher was compelled to employ these techniques.

Overall, a response rate of 214, representing fifteen per cent of the total sample was received. However, some of the participants were eliminated from the study due to the straight line pattern of their responses, but 189 responses are valid and used for the analysis. This relatively seems small sample size. A large sample is always desirable in a quantitative approach, however, a small sample size is acceptable in group processes research (Zona, 2015). Eddleston et al., (2008) investigated group processes in a sample of 37 firms. Moreover, board scholars using surveys face low response rates because directors are busy individuals with difficult schedules on daily basis (Pettigrew, 1992). Minichilli et al., (2009) in their study of Italian corporate boards, received a response rate of 15 per cent, Brav et al., (2005) sent a survey to 384 financial executives of 256 public firms and received a response rate of 8 per cent. However, a study of Swiss boards and their involvement in strategic decision collected a response rate of 25 per cent (Ruigrok *et al.*, 2006).

4.2.3.7 Level of Measurement, Reliability, and Validity of the Questionnaire

Stevens (1951) classified four levels of measurement: nominal, ordinal, interval and ratio. Nominal data is a categorical and non-rank ordered level of measurement; ordinal is rank-ordered categorical data; interval data can be measured on an interval scale and the differences between scales are the same; ratio has properties of both interval and ordinal, in addition to the zero point that exists on the scale (Balnaves and Caputi, 2001). Following the tradition of other board researchers, such as Wan and Ong (2005), Zona (2015) and Huse et al., (2009), this thesis assesses most data on Likert scales (summative scale) and treats it as interval scale levels of measurement.

The research questionnaire contains eleven constructs and has thirty-eight items used to measure the variables in the model (see Appendix E). The researcher minimised the number of items per variable and this is based on the advice given by other directors, during the interview and pre-testing of the instrument. With the exception of CSR legal activities, all other latent variables are measured with five items. Boards are made up of busy individuals and it is difficult to get their attention; too many questions will make the questionnaire unattractive and lead to fewer responses. The indicators were measured on a 5-point Likert scale ranging from 'strongly agree' to 'strongly disagree' with 'neither agree nor disagree' as a mid-point. The validity and reliability of items were assessed.

Balnaves and Caputi (2001) explain that reliability is concerned with the ability of the study to be replicable, while validity "is the extent to which your measures do, in fact, measure the constructs of interest to the research" (p.89). It is essential to ensure the questionnaire possesses a maximum level of reliability and validity. Reliability for the questionnaire is concerned about the consistency of the measures (Bryman, 2012; Saunders *et al.*, 2012). The validity of the questionnaire refers to the ability of the measurement concept to actually measure the construct it intends to measure (Saunders *et al.*, 2012). Researchers should redouble efforts to improve validity at each level of their studies. However, such efforts should not be at the expense of reliability, as Bryman (2012) suggests that it is impossible for a research that lacks reliability to be valid.

This thesis addresses the issues of reliability and validity with caution in order to ensure robustness of the research findings. An intensive relevant literature was conducted and questions were adapted from reputable scholars of corporate governance, board characteristics, board processes, board task performance and corporate social responsibility. However, some minor modifications have been made and some new items were developed, in order to ensure questions suit the Nigerian context and effectively serve the purpose of the study. A qualitative, semi-structured interview with seven board members from different companies listed on the NSE had been conducted and through this interview, the final conceptual framework (see Figure 3.8) and quantitative questionnaire was designed. Thereafter, a quantitative pilot test was conducted with directors of 20 companies from the targeted sampling frame in order to test the instrument and check validity and reliability of the variables under study.

4.3 Variables and Operationalisation

The current study intends to find the factors responsible for board effectiveness beyond the traditional input-output approach. Specifically, the relationships between board characteristics (independent), board processes, board task and corporate social responsibility (dependent variables) are investigated. A framework is developed and it consists of eleven variables with thirty-eight indicators.

Board processes, board task and CSR (legal and ethical) activities are treated as latent variables and data for these latent constructs are received through survey questionnaires using 5-point Likert-type scales, ranging from 1=strongly agree to 5=strongly disagree with 'neither agree nor disagree' as a midpoint. The 5-point Likert scale is employed, rather than other point scales because of the assumptions that it may lead to a higher response rate, as it is less complex and easier for participants to complete. Besides, there is no significant difference in terms of mean scores of 5 point scale and 7 point scale (Dawes, 2008).

The entire indicators used in this study are reflective and were mostly adapted from relevant literature. However, as a result of the qualitative interview conducted, the questions were modified in order to suit the context under study, similarly, some new (3) items were developed.

4.3.1 Board Characteristics Variables and Measurements

Board characteristics that serve as predictor variables include: *board size*, the, *CEO duality* and *gender diversity*. Data for these variables are collected from the survey questionnaires. Table 4.2 below shows the measurements of board size, board composition with proportion of NEDs as proxy, CEO duality and gender diversity with proportion of female directors as proxy.

Board size is measured as the total number of directors on the board (Judge and Zeithaml, 1992). The *proportion of NEDs* is operationalized as the number of outside directors divided by the total number of board members (Johnson and Greening, 1999*). CEO duality* is measured as a dummy variable, with 1 if the roles of CEO and Chairman are combined and 0 otherwise (Donaldson and Davis, 1991; Zhang, 2012). Gender diversity is assessed as the number of women directors divided by the total number of directors on the board (Bear *et al.*, 2010; Nielsen and Huse, 2010).

Table 4. 2: Variables and Operationalisation for Board Characteristics

Independent Variables (Board Characteristics)	**Operationalization/Measurement**	**References**
Board size	Total number of directors on the board	Judge and Zeithaml (1992)
Proportion of NEDs	Number of directors that have no ties with the firm divided by the total number of board members	Johnson and Greening (1999)
CEO Duality	Dummy variable, with 1 if the roles of CEO and Chairman are combined and 0 otherwise.	Donaldson and Davis (1991); Zhang (2012)
Board diversity (Gender as a proxy of board diversity)	The number of women directors divided by the total number of directors on the board.	Nielsen and Huse (2010); Bear et al., (2010)

4.3.2 Board Processes Variables and Measurements

The current study considers board members' *commitment*, ability to *challenge* and *knowledge utilisation* as processes that mediate the relationship between board characteristics and task performance (control and service roles). Full measurements of these processes variables can be found in table 4.3 below. This research considers board *commitment* as the level of directors' involvement during board meetings and preparation before meeting (Minichilli *et al.*, 2009). This latent variable was measured using five indicators measuring the level of engagement and seriousness of board members. The items were adapted from the examples given by Wageman

(1995) on effort norms and developed in a theoretical paper by Forbes and Milliken (1999). Examples of the questions used to measure board *commitment,* includes (a) board members acquire knowledge on issues that are relevant to the firm before attending board meetings (b) board members take notes during meetings.

Challenge refers to asking proven questions, debates, disagreement or differences among board members on task-related decisions (Forbes and Milliken, 1999)*. Board challenge* is operationalized with five items based on some questions used in the work of Jehn (1995) for group task conflict and empirical studies on board cognitive conflict by Wan and Ong (2005), and Zona and Zattoni (2007). However, as mentioned earlier, the interview results suggest that these questions need to be modified. For examples of items used to measure *challenge*, participants were asked to gauge the extent to which: (a) there are frequent debates before the board agrees on a particular decision and (b) there are different views in the boardroom on how to pursue the firm's objectives.

Knowledge utilisation is the ability of a group to utilize the knowledge, experience and skills of each group member (Wageman, 1995). This was measured using five indicators, adapted from the advice given by Forbes and Milliken (1999) and tested empirically by Zona (2015), and Bettinelli (2011). For example, respondents were asked to rate the extent to which they agree or otherwise that (a) board members are aware of each other's knowledge and area of expertise, and (b) there is quick information flow among board members.

Table 4.3: Variables and Operationalisation of Board Processes Variables

Variables and Definition	Indicators code	Operationalization	Sources
Commitment The level of involvement during board meetings and preparation before meeting.			
	Comt 1	Board members critically analyse any information provided by the managers prior to board meetings	Wageman (1995); Zona (2015)
	Comt 2	Board members take notes during meetings	Wan and Ong (2005)
	Comt 3	Board members participate actively in discussion during meetings	Forbes and Milliken (1999)
	Comt 4	Board members are available when needed for emergency meetings at both committee and board levels	Zona and Zattoni (2007)
	Comt 5	Board members acquire knowledge on issues that are relevant to the firm before attending board meetings	Forbes and Milliken (1999)
Challenge Asking proven questions, debates, disagreement or differences among board members on task-related decisions.			
	Chlg 1	There are frequent disagreements about ideas and opinions in the boardroom	Jehn (1995)
	Chlg 2	There are frequent debates before the board agrees on a particular decision	Minichilli et al., (2009)

	Chlg 3	There are different views in the boardroom on how to pursue the firm's objectives	Zona and Zattoni (2007)
	Chlg 4	The best alternatives for the firm are critically discussed	Minichilli et al., (2012)
	Chlg 5	There are frequent debates on the interests of shareholders and stakeholders	Minichilli et al., (2012)
Knowledge Utilisation The ability of a group to utilize the knowledge, experience and skills of each group member.			
	Knowld 1	Board members are aware of each other's knowledge and area of expertise	McGrath *et al.* (1995); Minichilli et al., (2012)
	Knowlg 2	There is quick information flow among board members	Forbes and Milliken (1999); Zona and Zattoni (2007)
	Knowlg 3	There is a clear division of labour among board members	Forbes and Milliken (1999); Zona (2015); Bettinelli (2011)
	Knowlg 4	Knowledge and skills available in the boardroom are coordinated to achieve more constructive discussions	Bettinelli (2011)
	Knowlg 5	When discussing issues in the boardroom, the most knowledgeable directors have the most influence	Minichilli et al., (2012)

4.3.3 Board Task Variables and Measurements

Using the views of Fama and Jensen (1983) and the results from the interview conducted in this study, suggests that *control* and *service* roles are the main tasks expected of the board of directors to perform in Nigeria. In this study, each task is assessed with five indicators (see Table 4.4). For *control task*, items were adapted from the previous study of Zona and Zattoni (2007) and Zattoni et al., (2015). One question to measure control task was developed by the researcher. Participants were asked to rate the extent to which the board (a) sufficiently monitors the activities of CEO/MD and other managers (b) your board ensures substantial expenditures are justifiable (newly developed item). *Service task* is operationalized using five questions drawn from Gabrielsson and Winlund (2000) and Zattoni et al., (2015). Example of items used include: (a) your board provides useful advice on management and (b) this board positively links the firm with society (newly developed item).

Table 4.4: Variables and Operationalisation for Board Task Variables

Variables and Definition	**Indicators Code**	**Operationalization**	**Sources**
Control Task The protection of shareholders' wealth from expropriations.			
	Cntrl 1	Your board decides remuneration of CEO and other internal directors	Zattoni et al., (2015)
	Cntrl 2	Your board is fully informed about the financial position of the firm	Zona and Zattoni (2007)
	Cntrl 3	Your board ensures substantial expenditures are justifiable	Newly developed item.
	Cntrl 4	Your board establishes plans and budget for the firm's operations	Minichilli et al., (2012); Zattoni *et al.* (2015)
	Cntrl 5	The board sufficiently monitors the activities of CEO/MD and other managers	Wan and Ong (2005); Zona and Zattoni (2007)
Service Task The provision of advice and counsel, forming links with important stakeholders			

and capital provision.			
	Srvc 1	Your board provides useful advice on management	Zattoni et al., (2015); Minichilli et al., (2009)
	Srvc 2	This board positively links the firm with society	Newly developed item.
	Srvc 3	This board provides useful advice on financial issues	Zattoni et al., (2015)
	Srvc 4	Your board makes initiatives on strategy proposal	Forbes and Milliken (1999); Zona and Zattoni (2007)
	Srvc 5	This board makes long-term strategy plans	Zahra and Pearce (1989); Zona and Zattoni (2007)

4.3.4 Corporate Social Responsibility and Measurements

In this study, corporate social responsibility activities serve as dependent variables and attention is given to ethical and legal CSR dimensions. Arora and Dharwadkar (2011) classified CSR into positive and negative CSR. The former refers to effective decision-making for proactive sustainability practice such as philanthropic CSR dimension, while negative CSR is poor corporate social responsibility decisions that are associated with costs, such as payments of penalties and fines. This can be classified under ethical and legal CSR activities. The current study considered the two dimensions of negative CSR (legal and ethical) activities.

Data about CSR activities was collected from the survey questionnaires and questions are adapted from Maignan and Ferrell (2001), however, a question that measure CSR ethical has emerged from the interview conducted by the researcher. Nine items on a 5-point Likert scales were used to measure CSR legal and ethical activities (Table 4.5). For *legal CSR* activities, four questions were used and respondents were asked to answer questions on the extent to which they agree or disagree on items, such as: (a) Our firm seeks to comply with all laws regarding hiring and benefits of employees (b) Our firm pays taxes and other tax-related as and when due. Five items were used to measure CSR ethical activities. Examples of indicators used to measure CSR ethical activities include: (a) Managers monitor the potential negative impact of our activities on society, and (b) We do not give donations to political and other unethical activities (newly developed item).

Table 4. 5: Variables and Operationalisation for CSR Legal and Ethical Dimensions

Variables	**Items code**	**Operationalization**	**sources**
CSR (legal)			
	CsrLg 1	Directors of this firm try to comply with the environmental laws	Maignan and Ferrell (2001)
	CsrLg 2	Our firm seeks to comply with all laws regarding hiring and benefits of employees	Maignan and Ferrell (2001)
	CsrLg 3	We always comply with the norms defined in the law when carrying out our activities	Turker (2009)
	CsrLg 4	Our firm pays taxes and other tax-related as and when due	Turker (2009)
CSR (ethical)			
	CsrEth 1	Managers monitor the potential negative impact of our activities on society	Maignan and Ferrell (2001)
	CsrEth 2	We follow professional and ethical standards	Maignan and Ferrell (2001)
	CsrEth 3	Our firm has a confidentiality procedure in place for employees to report any misconduct at work	Maignan and Ferrell (2001)
	CsrEth 4	Our company has an effective code of conduct in place	Maignan and Ferrell (2001)
	CsrEth 5	We don’t give donations to political parties and other unethical activities	Newly developed item

4.4 Common Method Bias (CMB)

Common method bias (CMB) occurs when the research instrument used for data collection causes the variations, rather than the true scores received from the participants that the instrument intends to find (Saiyidi, 2014). CMB leads to spurious effects as the variation occurs due to the instrument, rather than the variable being measured (Schaller *et al.*, 2015). Specifically, common method bias, if not properly controlled, can lead to bias estimates of the measurement model with fake reliability and validity scores (Bagozzi, 1984) and bias parameter estimates of the relationship between exogenous and endogenous variables (Cote and Buckley, 1988).

Data collected through multiple sources, as opposed to a single method at one point in time, is likely to have minimised the common method bias that may manifest as a result of variables are measured from different sources (Podsakoff *et al.*, 2003). Additionally, measuring all variables with a single instrument means that the items measuring constructs are put together, which can influence respondents to give similar responses to these questions. To address this bias, Podsakoff et al., (2012) advised researchers to introduce a temporal, proximal or psychological separation between the measures of independent and dependent variables. The authors noted that these separations reduce the ability of participants to use previous responses to answer the subsequent question. The current study uses randomisation to reduce the motivation/ability of respondents to recall and use previous answers to fill in the next questions.

Moreover, as this study collects data of all variables from a survey questionnaire, method bias is likely to occur. Certain procedural remedies offered by Podsakoff et al., (2012) are used to minimise the effect of common method bias. The researcher ensures unambiguous items are used because ambiguous questions are difficult to understand and as such, respondents create their own meanings of the item and give answers based on their understanding. In addition, the wordings of the items are improved and potential bad words that may prompt social desirability are identified through the pilot study and are corrected. Bad wordings may likely lead to bias findings, Harris and Bladen (1994) reported an increase of 238% in the average correlation among variables when item word bias was not controlled.

4.5 Ethical Issues

Ethical considerations are crucial in conducting research, particularly that which deals with the human subject. Respondents of this study were fully informed that participation is voluntary and that their identities and that of their companies are secured. For the qualitative interview conducted, a Participants Information Sheet (PIS) and a consent form were sent to respondents before qualitative data collection began (Appendices C and D).

To mitigate unethical research conduct, the University of Bedfordshire, established the Research Ethics Committees (REC). The committees review research methodology of each researcher and issue approval if satisfied that the researcher adhered to good ethical practices. Prior to starting the qualitative interview and sending the questionnaire to participants for data collection, an appropriate research ethical committee screening form has been submitted to the Director of Business Management Research Institute (BMRI) for consideration by the Research Institute Ethics Committee. The form outlines the research outline, methodology, the strategy taken to store the data received and proposals for confidentiality and anonymity. Satisfied with the ethical practices of this study, approval was granted by the Faculty Research Ethics Committee (see Appendix A).

4.6. Data Screening

At the first instance, it is essential to ensure the data collected is the true representation of the responses received. The researcher should ensure that the data entered for analysis is the actual data received and patterns of the missing values are identified, so that suitable missing data technique can be applied. Similarly, suspicious response patterns and outliers need to be considered and the statistical assumptions appropriate for the methodology adopted are met (Hair Jr *et al.*, 2016).

Data received from the Qualtrics questionnaire software (from both online and hard copy) are directly transferred into SPSS, which was later saved on *csv file* and transferred to Smartpls 3 software for analysis. As such, the data would be freed from coding errors. Nevertheless, a careful and detailed check against the survey instrument is made to ensure the accuracy of the transferred data.

4.6.1 Missing Data

Another important issue to deal with is missing data. The software used in this study to design and collect data has an advantage of minimising missing data by ensuring respondents do not skip a question, however, such an advantage can also make respondents abandon the questionnaire which may drastically reduce the response rate. As such, the researcher allows participants to continue with the survey even when they skip a question and the approach helps, as a reasonable response rate is achieved and only a few respondents have a meagre amount of missing data.

Firstly, the pattern of the missing data points should be investigated and the concern is to find whether the missing data points are systematically at random or otherwise. As mentioned earlier, only a meagre amount of data are missing and by checking the patterns of the missing values manually it shows that missing data points are randomly distributed. Moreover, a Missing Completely At Random (MCAR) test was conducted. MCAR tests a null hypothesis that data values are missing in a completely random pattern and a researcher should not reject the null hypothesis, if the test is statistically not significant, otherwise, the hypothesis should be rejected (Little and Rubin, 2014). Missing data not completely at random leads to bias outcomes, if not carefully handled. The test shows evidence that data missing is completely in a random pattern.

After the pattern of missing data points is identified, next is to employ appropriate techniques to deal with the missing values. Such methods include: casewise deletion, pairwise deletion, mean replacement and various imputation methods. Hair Jr et al., (2016) cast doubt on the suitability of the statistical procedures that are used in regression approaches or the Expectation Maximisation (EM) algorithm for imputation to deal with missing data in PLS-SEM. Instead, the authors advise researchers using PLS-SEM to employ case wise deletion or mean replacement for low missing data. In this study, mean replacement is used to deal with missing data points because the missing data is negligible. Moreover, few participants were eliminated from the study due to straight line pattern of their responses or sending back empty questionnaire without a single answer to any question.

4.6.2 Outliers

It is essential to investigate if outliers are present in a data before embarking on any meaningful analysis. An extreme response, which is far above or below the rest of responses to a particular question or all questions, is called an outlier (Huck, 2013). Initially, all data points that are greater than Q_3+*1.5*Inner Quarter Range (IQR)* or are less than Q_1-*1.5*IQR* are regarded as outliers (Simola *et al.*, 2009).

Preliminary findings indicate that few items scores are outliers, but Pallant (2007) advice is followed and an analysis conducted to assess the extent of a problem the outlier values may cause and determine whether the outliers are really affecting the results. Trimmed mean (cancels the highest and lowest scores, then the sum of other scores is divided by the total scores) is used to test whether there is a significant difference between initial and trimmed means. Findings revealed no statistical differences between the two means, as such no significant problem caused by outliers were found in the data set for the current study. Notwithstanding, some few extreme outliers are deleted from the data set in order to minimise the skewness.

4.6.3 Data Distribution

Data that resemble bell-shaped curves are normally distributed; the scores are clustered close to the mean and gradually decrease in frequency in both directions away from the centre (Huck, 2013). Skewness and kurtosis are the two main measures of distribution that a researcher using PLS-SEM may consider to examine (Hair Jr *et al.*, 2016).

Skewed data is not symmetrical, the distribution of responses bundle toward one side of the distribution tail (Huck, 2013). Left-skewed or negative-skewed is when the distribution has a long tail to the left, while positive-skewed or right-skewed occurs when the data distribution has a long tail to the right. Kurtosis measures ‘peakedness’ of the distribution whether the majority of responses are at the centre or both tails are thicker than the bell-shaped curve (Huck, 2013).

Researchers are advised to use Kolmogorov-Smirnov and Shapiro-Wilks to test a null hypothesis that predicts data is normally distributed. When the test shows a significant level ($p < 0.05$) it means the data is normally distributed, hence, the null hypothesis should be accepted. Conversely, an insignificant result ($p > 0.05$) shows that the data is not normally distributed and therefore, the null hypothesis should be rejected in this instance.

The normality test conducted shows that some of the variables had skewness and kurtosis, but within the acceptable threshold of -2.58 and +2.58 (Hair *et al.*, 2006). The skewness and kurtosis values of all latent variables are divided by their standard errors and the majority of the results are not within the range of -1.96 to +1.96. Similarly, the Kolmogorov-Smirnov and Shapiro-Wilks tests show that the null hypothesis for normality is rejected for most of the variables, as the significant level is greater than 0.05. This is not unexpected as non-normal data distribution is common in survey studies (Hair *et al.*, 2006). The importance of normal data distribution is less essential in this study, as the analysis tool employed requires less restriction on data normality. PLS-SEM, which is the main data analysis tool employed for this study uses the bootstrapping procedure, allows data to be non-normal and uses a nonparametric test to assess the significance level of the results (Hair Jr *et al.*, 2016). Nevertheless, it is essential to ensure data is not extremely non-normal, as this may likely lead to difficulties in assessing parameters' significance (Hair Jr *et al.*, 2016). Data for this research are not extremely non-normal, as the skewness and kurtosis are within the acceptable range of -2.58 and +2.58 (Coakes *et al.*, 2003; Hair *et al.*, 2006).

4.6.4 Non-Response Bias

Non-response bias is another important potential bias that may discredit the generalisation of a study's findings. Although an appropriate sampling approach allows the researcher to make inference with the population, non-response bias needs to be recognised and dealt with in order to make an accurate justification on generalisation. Dillman (2011), categorised sources of possible errors into sampling error, coverage error, measurement error, and non-response error. The first two biases are not issues to deal with in this study since the whole population serves as the research sampling frame. Similarly, measurement error is minimised by using items that possess maximum reliability and validity. However, this research needs to address the last category of error (non-response error).

Lindner et al., (2001) explain that non-response bias occurs when “people included in the sample fail to provide usable responses and are different than those who do on the characteristics of interest in the study” (p.44). Researchers are encouraged to assess whether those that responded are significantly different from those that did not. If the difference does exist, then the findings of the study cannot be generalised to the whole sample or population, rather the findings are only valid to those that participated.

Scholars employ different methods to address non-respondents bias. Some researchers used telephone follow-up survey of a certain percentage or number of non-respondents and conducted t-test analysis to find whether significant differences exist between the respondents and non-respondents (Allen *et al.*, 1995; Dollisso and Martin, 1999). Researchers also compared the characteristics of the sample with the population (Miller, 1999), while others compared the means of earlier and late respondents (Matteson *et al.*, 1984; Connors and Elliot, 1994), taking late respondents as proxy for non-respondents.

Consistent with the last approach, the independent *t-test*, which is available from SPSS software, is used to test whether the means of the early and late respondents are the same or different. Early respondents are those that returned their survey during the first two weeks, whereas late respondents are those that submitted their questionnaire during the last two weeks and are considered as a proxy for non-respondents (Connors and Elliot, 1994). Variance homogenous assumption predicts that there is no difference in regard to variances of the two groups. A t-test result with the significant level of $p < 0.05$ indicates that there is a significant biased response, while insignificant results ($p > 0.05$) means that the responses did not significantly differ (Lindner *et al.*, 2001), therefore, the null hypothesis of equal variance should not be rejected.

Similar to the work of Armstrong and Overton (1977), 25 percent of each group of respondents were computed and used to test non-response error for each variable. In total, 189 usable responses were received, therefore, 47 samples for both early and late responses were used to test non-response bias. An independent t-test for non-response bias indicates that there are no significant differences between answers from early and late respondents. Specifically, for each variable under study, a *t-test* comparison was performed between groups' mean and standard deviations. The test shows that the majority of the variables have insignificant test scores at values greater than the recognised threshold of $p > 0.05$. Nevertheless, five out of the thirty-four items demonstrated unequal variance between the early and late respondents with significant values of $p < 0.05$, but this does not mean the null hypothesis of homogeneous variance to be rejected because of these few cases (Hirst and Goeltz, 1984).

4.7 Structural Equation Modelling

This study sheds light on board effectiveness, beyond the traditional board characteristic (observable) variables. Many latent (unobservable) variables are included in the study's model and indicators will be used to measure all the latent variables. Structure equation modelling technique, which was developed by Joreskog in the 1970s (Chin, 1998) is used as the main analysis tool.

Structure equation modeling (SEM) is a second generation and multivariate analysis technique used to establish the relationship among variables of interest. It can (a) test relationships between multiple independent and dependent variable (b) account for measurement errors of manifest variables and (c) simultaneously test measurement and structural models through path analysis (Barroso *et al.*, 2010). This technique is used to test the hypothesised relationships between board characteristics, board processes, board task and corporate social responsibility activities. Zattoni et al., (2015) applied SEM to analyse data collected in order to investigate the mediating effects of board processes and task performance on the relationship between family involvement and firm financial performance.

4.7.1 Two Stages of Structural Equation Modelling

Basically, SEM has two stages: measurement model and structural model. The former is concerned with the relationships between latent constructs and their respective indicators. Latent (unobserved) variables cannot be measured directly instead, indicators are used to measure the variables indirectly. Good indicators (manifest variables) should be able to provide sufficient component scores of the respective latent constructs they intend to measure and the scores can be used to predict the relationship between latent constructs in the model (Chin, 1998). Validity and reliability are the major tests conducted at the measurement model stage. At this level, the manifest (observed) variables are assessed to ensure appropriate measurement of the latent constructs.

Rather assessing the relationships between indicators and their latent constructs, the structural model is concerned with the relationships between latent constructs in the model. As SEM is a non-parametric analysis tool, parametric analyses are not appropriate for researchers using the technique. Non-parametric, prediction-oriented measures should be used by researchers using PLS-SEM (Hair *et al.*, 2011). Such measures in the structural model include: estimates of the R-squares, the stability of estimates through bootstrapping procedure, effect size (f^2) and the Stone-Geisser (Q^2) technique for the predictive relevance of the model.

4.7.2 Reflective and Formative Indicators

The direction of the relationships between manifest variables (indicators) and their respective constructs can be either reflective or formative and a model can be formed of reflective constructs, formative constructs or even both. Studies that use a model that consists only of reflective indicators or formative indicators are termed as Mode A or Mode B respectively, but a model with both reflective and formative manifest variables is referred to as Mode C (Chin, 1998). Figure 4.1 below demonstrates the relationship between latent constructs and its manifest indicators in Mode A and Mode B.

In Mode A, reflective indicators (outward arrows) for a latent variable are assumed to be different ways of measuring that particular construct and any change in the latent construct leads to changes in the indicators, in the same direction. Chin (1998) explains that the loadings of each item determines the level of changes, as a result of changes in the latent construct it intends to measure. Therefore, outer loading of a reflective indicator is the key determinant of the suitability of an item to be included or otherwise for Mode A.

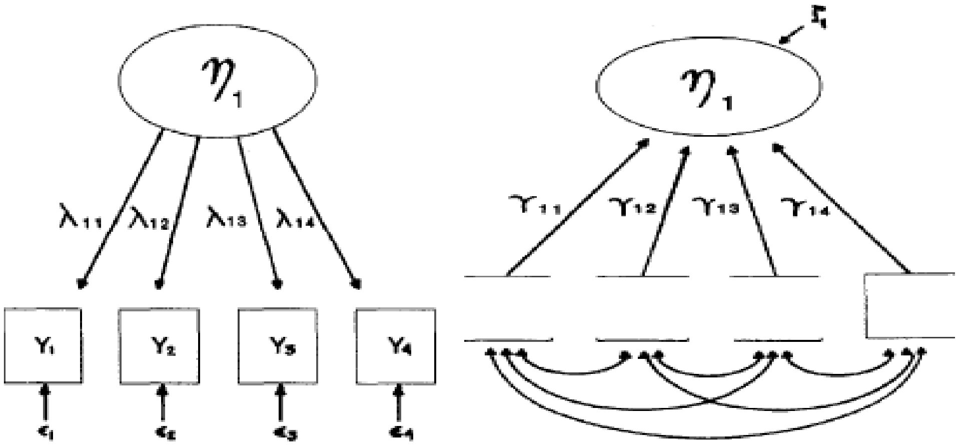

Figure 4.1: Mode A (Reflective Construct) and Mode B (Formative Construct)

Source: Bollen and Lennox (1991)

In contrast to reflective indicators, formative items (inner arrows) are not expected to correlate with each other or serve as a different approach to measure a particular latent construct instead they are viewed as items that caused the latent variable. Thus, correlations among manifest variables and internal consistency are inappropriate measures in the Mode B model (Bollen, 1984).

Chin (1998) summarises three major considerations on whether the indicators are to be considered as reflective or formative: theory knowledge, research objectives and empirical considerations (see Table 4.6). Reflective indicators are more appropriate to use, if the causation is from the construct to the indicator and if the objective of the study is to predict or explain the observed measure, as it minimises the error variance for the measurement model. Similarly, reflection items are more suitable, if there are concerns about the sample size and multicollinearity among each set of indicators.

Table 4.6: Reflective or Formative

	Reflective	Formative
Theory knowledge	Causation is from the construct to the indicators	Causation is from the indicators to the construct
Research objectives	Predict the observed measures	Account for unobserved variance
Empirical considerations	If there are concerns about small sample size and multicollinearity	Large sample size and lack of multicollinearity among items

Source: Chin (1998)

4.7.3 Covariance SEM and Partial Least Squares SEM

There are two common statistical techniques of structural equation modeling (SEM): covariance-based (CB-SEM) and partial least squares structural equation modeling (PLS-SEM). The covariance-based SEM has been in existence since the 1970s and was developed by Jöreskog (1970), Wiley et al., (1973) and Keesling (1972). CB-SEM is an approach used to confirm or reject theories; it serves as a tool to estimate the covariance matrix for sample data (Hair Jr *et al.*, 2016). CB-SEM technique is the most popular method compared to PLS-SEM. However, the latter serves as an alternative method to the former. CB-SEM has many restriction assumptions to be met (such as large sample size and data normality) before a researcher can use it. Similarly, the method is more useful, if the theories in the field under study are well developed.

Henseler et al., (2012) explain that PLS-SEM is a “non-parametric, regression-based, estimation method whose focus is on prediction by means of a specific set of hypothesized relationships, maximizing explained variance in more or less the way that OLS regression does” (p.261). This approach is more appropriate, if the aim is to predict relationships and minimize the residual variance (error terms) of constructs. In other words, the PLS-SEM algorithm estimates path coefficients that maximize the coefficient of determination values of the dependent (endogenous) variable (Hair Jr *et al.*, 2016).

Unlike CB-SEM, the PLS-SEM approach has less or no restrictions based on traditional multivariate techniques' strict assumptions (Wold, 1980) and can be used where theories are less developed (Chin, 1998). Although the technique has rigorous and robust mathematical and statistical procedures, it is also referred to as the 'soft model' (Chin, 2010) because it has fewer requirements for normality and large sample assumptions. Moreover, unlike CB-SEM that focuses on theory testing, PLS-SEM can be used for both confirmatory (testing theory) and exploratory (building theory) analysis (Barroso *et al.*, 2010).

While in CB-SEM only reflective indicators are suitable, in order to avoid problems associated with the identification, in PLS-SEM both reflective and formative indicators can be used in a model (Hair *et al.*, 2011). Partial least squares technique modelled constructs as determinate, that is construct scores are the composite of its items, while in CB-SEM variables are modelled as indeterminate, that is the construct score is the composite of indicators plus measurement error (Fornel, 1982).

Researchers using CB-SEM might face difficulties in dealing with a complex model that has multiple relationships. PLS-SEM handles a complex model (Hair Jr *et al.*, 2016) with multiple indicators, many variables and relationships. Moreover, a model with both a unidirectional (recursive) and bidirectional (non-recursive) relationship is more suitable in covariance SEM technique, but variance based SEM works with only recursive relationships (Barroso *et al.*, 2010).

Wold (1980) warns that the two SEM techniques should not be considered as competitive, but rather complementary to each other. Using either covariance-based or variance-based structural equation modelling depends on the research objectives, sample size, type of model, and the normality of data and direction of the relationship investigated. Table 4.7 below summarises the differences between CB-SEM and PLS-SEM.

Table 4.7: Differences between CB-SEM and PLS-SEM

	CB-SEM	PLS-SEM
Aim	Theory testing and theories comparison. Minimise the differences between the sample covariance and those predicted by the theoretical model (Hair *et al.*, 2011)	Predict relationships between the variables of interest. Minimise the residual variance of constructs and is used for both confirmatory and explorative analysis (Barroso *et al.*, 2010)
Model	Less complex models are more suitable (Hair Jr *et al.*, 2016)	Complex models with many indicators, constructs and relationships can be handled (Ferris and Yan, 2007).
Epistemic	Suitable with reflective indicators, so that problems associated with identification can be avoided (Hair Jr *et al.*, 2016).	Allows both reflective and formative indicators (Fornell and Bookstein, 1982).
Assumptions	Strong restrictions on normality and sample size apply (Hair Jr *et al.*, 2016)	No restriction on normality and small sample size can be used, and the technique is referred as the 'soft model' (Chin, 2010)
Direction of relationship	Structural model can be recursive or non-recursive relationships (Barroso *et al.*, 2010)	Only model with recursive relationships are allowed (Barroso *et al.*, 2010)
Variables scores	Latent variables are modelled as indeterminate (Fornel, 1982)	Constructs are modelled as determinate (Fornel, 1982)

4.7.4 Justifications for using SEM (PLS)

SEM is more appropriate for this study since the model includes many latent (unobserved) variables, mediating variables, multiple dependent variables and multiple relationships. Alternatively, hierarchical regression (HR) method could be used as it accounts for mediation effects, however, not simultaneously. HR does not perfectly account for measurement error as it assumes perfect measurement of constructs, unaccounted measurement errors would attenuate this study's findings (Brown, 2015).

SEM, on the other hand, permits simultaneous estimation of more than one single relationship between constructs that involve mediation variables and account for measurement error (Zattoni *et al.*, 2015). It also allows variables to correlate with one another, whereas in regression other independent variables must be controlled in order to assess the effect of a particular independent variable on the dependent variable (Dwyer *et al.*, 2012). Similarly, as this study has multiple dependent variables, an ordinary regression analysis would not be appropriate; although multiple regressions can be used, but not at once. However, with SEM (PLS) the entire model can be tested at once (Gefen *et al.*, 2000). Moreover, most of the data collected are not normally distributed and so a non-parametric analysis tool, such as SEM, is more suitable to employ.

Within the two common SEM approaches (CB-SEM and PLS-SEM), the PLS-SEM algorithm is chosen as the most appropriate for this study because the aim of the current study is to predict relationships between variables of interest. Specifically, the research intends to estimate path coefficient on the links between board characteristics, board processes, board task and CSR. The aim here is to maximize the R squares values of all endogenous variables in the model. Additionally, the model for the research is too complex with many latent variables and relationships; therefore, PLS-SEM is the best method to use. PLS-SEM allows a complex model because PLS algorithm involves OLS regressions for separate parts of the model (Henseler *et al.*, 2012) and this does not necessitate using a large sample size.

The strict assumptions of large sample size and data distribution are other factors that limit this study to using CB-SEM. In this study, a survey questionnaire was sent to all directors (1,430) sitting on the boards of listed firms in Nigeria and usable responses of 189 were received. This seems a relatively small sample size to use CB-SEM, thus PLS-SEM serves as the best analysis tool to use in this study. PLS works perfectly with small sample sizes, as some studies have recently shown (see Reinartz et al., 2009).

The model for this study is complex as various latent variables, indicators and path relationships are considered in the model. Similarly, all the directions of relationships between constructs in the model are recursive (one-way). These reasons also make partial least squares structural equation modeling the most appropriate analysis tool to employ for this research.

4.8 Assessing and Reporting PLS Analysis

All structural equation modeling techniques consist of two parts: measurement model and structural model. For PLS-SEM, these are referred to as the outer model and inner model respectively (Hair *et al.*, 2011). The former is concerned with the relationship between construct and its indicators, while the latter relates to the relationship between the latent constructs in the model. As mentioned earlier, latent variables can be measured reflectively or formatively. The reflective measurement means the causality is from the latent variable to its indicators, but if the assumption is that indicators caused the construct, then the measurement is formative (Mateos-Aparicio, 2011). In PLS-SEM, a non-parametric method known as ‘bootstrapping’ is used to investigate the significance of the relationships (Chin, 1998).

4.8.1 Measurement Model

The quality of indicators used to measure reflective latent contracts is assessed through the measurement model and this assessment is done through reliability and validity tests. Validity tests are performed to ensure the manifest indicators are really good measures of the unobserved variables, while reliability tests are concerned with the consistency of the measure.

In PLS-SEM, internal consistency reliability is achieved using composite reliability, instead of traditional criterion for internal consistency, known as Cronbach's Alpha (Hair Jr *et al.*, 2016). In contrast to Cronbach's Alpha, that assumed equal indicator's outer loadings on the construct,

composite reliability considers the different outer loading of each indicator, as PLS prioritizes the indicators based on their individual reliability (Hair Jr *et al.*, 2016).

Values of 0.70 to 0.90 are satisfactory, however, the composite reliability of 0.95 and above is not desirable, as such indicates the researcher used redundant indicators (Hair *et al.*, 2011). Nevertheless, an item with loading below the threshold can be retained if such indicator is important to the variable under investigation (Chin, 1998), especially if deleting the item may have an adverse effect on validity (Hair Jr et al., 2016). Reliability of construct can be established through composite reliability (P_c) measure, introduced by Werts *et al.* (1974) and mathematically presented as:

$$p_c = \frac{\left(\sum_i li\right)^2}{\left(\sum_i li\right)^2 + \sum_i var\ (e_i)}$$

Where li stands for outer loadings of the item, variable i of a particular construct, e_i is the measurement error, and $var\ (e_i)$ is the variance of the measurement error (Hair Jr *et al.*, 2016).

Discriminant validity and convergent validity are the two common methods used to assess validity in PLS-SEM. Convergent validity for reflective measures is the extent to which each indicator is truly a different approach to measure the same latent variable. This is the extent to which items measuring a particular construct correlate positively with each other. Two approaches are used to assess convergent validity of reflective measures in PLS-SEM. These are indicators' outer loadings and average variance extraction (AVE). A broad principle is that an outer loading should be at a critical threshold value of 0.708 (approximately 0.70) or above and AVE value should be 0.50 or higher, which means that on average the variance shared between indicators and construct is higher than measurement error variance (Hair *et al.*, 2011).

Discriminant validity is achieved if empirically constructs differ with each other, this means that a variable is unique and represents phenomena not captured by other constructs in the model (Hair Jr *et al.*, 2016). Two common approaches are used in assessing discriminant validity: cross-loadings and Fornell-Larcker criterions. In the former, the outer loading of an indicator to another construct should be less than loading to its main construct (Farrell, 2010). For the Fornell-Larcker criterions, the square root of each variable's AVE should be larger than the highest correlation with any other construct in the model (Fornell and Larcker, 1981).

4.8.2 Structural Model

When the measurement model is properly assessed and validity and reliability of the constructs are confirmed, the subsequent step is to assess the structural model, also known as an inner model. This consists of estimations of the coefficient of determination (R^2), effect size (f^2), the path coefficient (relationships between variables), significant level (bootstrapping procedure) and predictive capabilities of the model (Q^2).

Values and interpretations of R^2 in PLS is the same as in other statistical techniques, the value is the amount of variance found in the endogenous variables that can be explained by exogenous variables and can be from zero to one (Hair Jr *et al.*, 2016). It is worth mentioning that no standard threshold of R^2 is set for all studies, as the level of accepted R^2 varies with the individual research area and model complexity (Hair Jr *et al.*, 2016).

The second stage in the structural model is to assess the importance of each explanatory variable on dependent variable through effect size (f^2). The f^2 shows the changes that occur in the dependent variable total variance explained as a result of including or excluding a particular exogenous variable (Chin, 1998). It can be calculated as:

$$f^2 = \frac{R^2 \text{ included} - R^2 \text{ exculuded}}{1 - R^2 \text{ included}}$$

Where 'R^2 included' is the total variance explained of the dependent variable, when the R^2 of the independent variable is included and 'R^2 excluded' is the R^2 of the dependent variable when the variance explained of the independent variable is excluded from the model (Chin, 1998). It can also be calculated by simply deducting the R squares of a particular independent variable from the total R squares. Chin (1998) explains that an effect size can be small (0.02), medium (0.15) or large (0.35).

The next stage is to evaluate the relationships between exogenous and endogenous constructs in the model through path coefficients. The estimates of structural model relationships obtained from PLS-SEM algorithms are interpreted the way standardised regression coefficients are interpreted (Gefen *et al.*, 2000). A significance level of the path coefficients needs to be ascertained.

Parametric tests to assess the significance level of relationships are not suitable for PLS, since the technique is non-parametric. Instead, a non-parametric test, known as bootstrapping, is used. The technique creates *n* sample sets and obtained *n* estimates for each parameter in the model; each sample is created by sampling with replacements from the original data set until the number of cases is identical to the original sample set (Hair Jr *et al.*, 2016). Literature has supported the use of 500, 1000 and 5000 iterations in order to obtain estimates for the bootstrapping confidence interval.

The last stage of structural model evaluation is assessing the Stone-Geisser's (Q^2) value which investigates the model's predictive capability through a cross-validation redundancy measure. Model predictive validity is gauged using a technique developed by Stone (1974), and Geisser (1975). The technique is a measure that explains how sufficient the model possesses predictive relevance and is applicable to only reflective (not suitable for formative) endogenous constructs. The predictive relevancy is illustrated as:

$$Q^2 = 1 - \frac{\sum d\ Ed}{\sum d\ Od}$$

Where E is the sum of squares of prediction error, O is the sum of squares using the mean for prediction and d is the distance point (Chin, 1998). A general guideline is that for any predictive relevancy to be guaranteed, the Q^2 measures must be greater than 0, but if the Q^2 is less than 0, then the model lacks predictive relevancy (Chin, 2010). In smartPLS, the model's relevancy is assessed using a procedure called blindfolding, it omits every data point (d_{th}) in the dependent variable's indicators and evaluate the quality of the parameters with the remaining data points (Chin, 1998). The procedure is repeated until every data point has been omitted and estimated.

4.9 Summary of the Chapter

This chapter provides explanations of the research methodology employed in this study. It begins with brief discussions on the methodologies used by previous relevant studies and at the end, the current study is aligned with the most appropriate approach. This chapter also discusses research paradigms, and this study adopts positivism philosophical assumptions to investigate the relationships between board characteristics, processes, tasks and CSR legal and ethical dimensions. Moreover, this chapter explains the research ethical consideration, population and sample, main data collection instrument (survey) and measurements of the variables under study. Analytical techniques, explanations and justification for the chosen analysis tool (partial least squares structural equation modeling) were also presented in this chapter. The next chapter presents the quantitative results that test the relationships between the variables of interest with a means to answer the research questions and achieve the research aim.

CHAPTER 5: DESCRIPTIVE ANALYSIS & RESULTS FROM MEASUREMENT AND STRUCTURAL MODELS

5.0 Introduction

Firstly, this chapter discusses the results of the descriptive analysis conducted using Statistical Package for the Social Sciences (SPSS). The background and profile of respondents are presented in section 5.1. This includes directorship type, industry classification, number of employees and director interlocks. Additionally, the descriptive analysis of board characteristics, which involve board size, board composition, board gender diversity and separation of duties between the CEO and the chairman, are discussed in section 5.2. The frequencies, means and standard deviations of board processes, board task and corporate social responsibility activities were presented in sections 5.3, 5.4 and 5.5 respectively.

Secondly, the chapter presents results from the research analysis tool (partial least squares structural equation modeling). Specifically, the chapter discusses results in relation to reliability, validity, R squares, path coefficient and predictive relevancy tests. Section 5.6 discusses the results obtained from the measurement (outer) model. The section examines the relationships between latent constructs and their manifest variables. Section 5.7 presents findings from the structural (inner) model, which investigates the relationships between the latent variables. Finally, the chapter was summarised in section 5.8.

5.1 Background and Profile of Respondents

The survey was sent to all directors of companies listed on the Nigerian Stock Exchange (NSE) which include both inside, outside, and senior independent non-executive directors. The descriptive analysis indicates that approximately 122 (64.6%) participants of the research are outside directors; including senior independent NEDs (Figure 5.1). However, only sixty-seven (35.4%) of participants are executive directors.

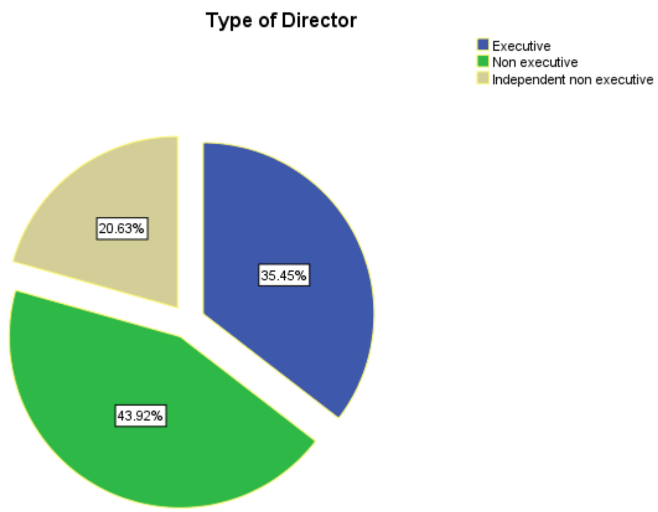

Figure 5.1: Directorship Type

Nigerian listed companies are categorised into eleven different sectors and the current study sent survey questionnaires to all directors of listed companies cutting across all of the eleven different industries. The results in table 5.1 show that the majority of the respondents (33.3 per cent) are from the financial sector, followed by consumer goods (18 per cent), then industrial goods (12.2 per cent) and oil and gas (8.5 per cent). The large responses received from the financial sector replicate the size of the industry, as more than 35 per cent of the total numbers of quoted companies are from this sector (see Table 2.1). Furthermore, the companies were classified into manufacturing and non-manufacturing firms, the analysis shows that at least seventy-eight, which represents 41.27 per cent of the responses, are from manufacturing firms while 111 (58.73%) responses are from non-manufacturing firms (Figure 5.2).

Table 5.1: Classification of Industries

Type of industry	Frequency (N=189)	Percent	Cumulative percent
Oil and Gas	16	8.5	8.5
Industrial goods	23	12.2	20.6
Consumer goods	34	18.0	38.6
Conglomerates	7	3.7	42.3
Financial services	63	33.3	78.3
Healthcare	5	2.6	78.3
Natural Science	6	3.2	81.5
Service	12	6.3	87.8
Construction	12	6.3	94.2
ICT	7	3.7	97.9
Agriculture	4	2.1	100.0

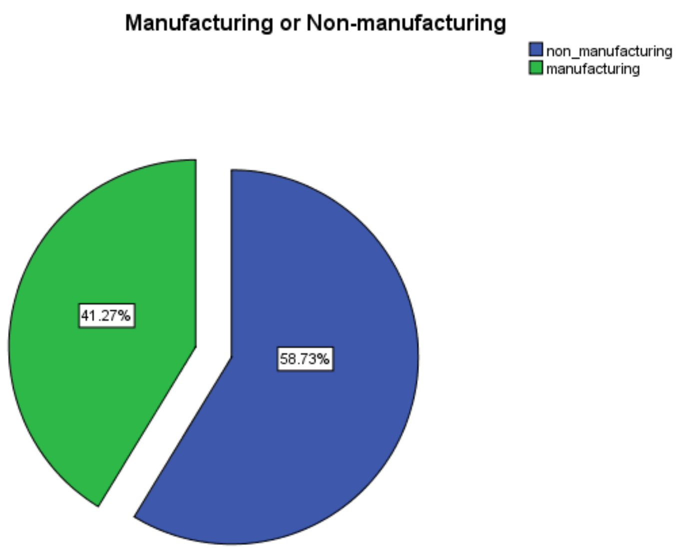

Figure 5.2: Type of Firm

In regard to the number of full-time employees, for directors of companies that participate in this study, substantial numbers (38.1 per cent) of respondents indicate that their firms have numbers of employees ranging from 100 to 500. Companies with employees between 1001 to 2000 and 2001 to 3000 represent 11.6 per cent and 13.2 per cent respectively. Moreover, 19 per cent of the responses came from board members of companies with less than 100 employees (Table 5.2). It is essential to mention that the majority of the large multinational companies operating in the country are not listed on the Nigerian Stock Exchange.

Table 5.2: Number of Full-Time Employees

Number of full time employees	Frequency (N=189)	Percent	Cumulative percent
Less than 100	36	19.0	19.0
100-500	72	38.1	57.1
501-1000	27	14.3	71.4
1001-2000	22	11.6	83.1
2001-3000	25	13.2	96.3
Over 3000	7	3.7	100.0

Director interlocks is a situation whereby a particular director serves on more than one board. Figure 5.3 below indicates that out of the total number of directors that took the survey, only eight directors serve on multiple boards of listed firms. This corresponds to the total number of directors of listed firms with board interlocks. A document from NSE shows that only 48 out of 1,430 total directors have multiple directorships in which thirty-two directors serve on two boards, eight directors serve on three boards, two board members serve on four boards, and a single director serves on five boards of listed firms (ngx.onmicrosoft.com).

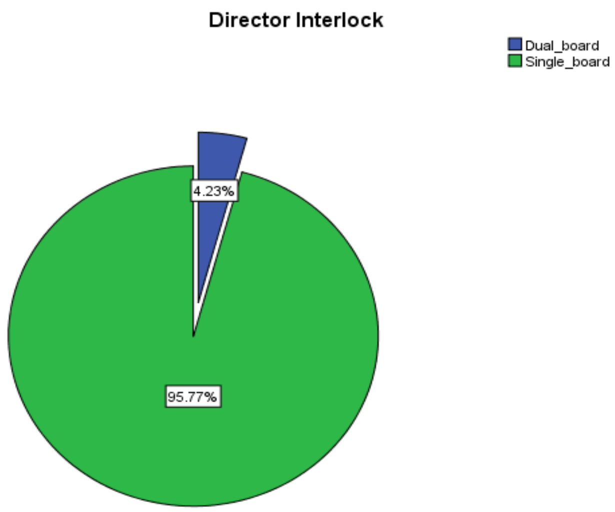

Figure 5.3: Director Interlock

5.2 Board Characteristics

Board characteristics serve as the main exogenous variables in this study and are limited to those board structures that have been frequently used in previous corporate governance literature: board size, board composition, CEO duality and gender diversity. Below is the descriptive analysis of these ‘usual suspects’ in relation to the Nigerian listed companies.

5.2.1 Board Size

Board size is the total number of both executive and non-executive directors of a firm. The Security and Exchange Commission Code (2011) stresses that board size should not be less than five, but more importantly that companies have a board of a sufficient size appropriate to deal with the complexity of the company’s operation.

Data from the responses indicate that the mean of the board size is 9.36 with the median of 9 (see Table 5.3). The results indicate that the smallest board size of the listed firms in Nigeria is 4 and the maximum board size is 19. Table 5.4 shows that the frequent size of boards is 7 (19.6%), 9 (17.5%), 8 (12.7%) and 11 (12.2%). The majority of the respondents are from directors of firms in the financial sector and the Code of Corporate Governance (2006) issued for banks by the Central Bank of Nigeria permits the board to be as large as 20.

Table 5. 3: Means, Median and Mode of Board size and Non-executive Directors

	Mean	Median	Mode	Maximum	Minimum
Board Size	9.36	9.00	7	19	4
NEDs	6.69	6.00	6	15	2

Table 5.4: Frequency of Board Size

Board size (Number of directors)	**Frequency (N=189)**	**Percent**	**Cumulative percent**
4	3	1.6	1.6
5	6	3.2	4.8
6	11	5.8	10.6
7	37	19.6	30.2
8	24	12.7	42.9
9	33	17.5	60.3
10	15	7.9	68.3
11	23	12.2	80.4
12	12	6.3	86.8
13	6	3.2	89.9
14	12	6.3	96.3
15	1	0.5	96.8
16	2	1.1	97.9
17	1	0.5	98.4
18	1	0.5	98.9
19	2	1.1	100.0

5.2.2 Board Composition

The presence and importance of non-executive directors in the affairs of Nigerian corporations are prevailing as almost all the firms have a number of outside directors greater than inside directors. Table 5.5 shows that 18.0 per cent of the respondents indicate that six out of the total number of directors of their firms are outside directors. Seven (17.5 per cent) and five (16.9 per cent) are the number of outside directors that also have a higher frequency in the data. The average number of non-executive directors of Nigerian listed firms is 6.69 and the median is six (Table 5.3). Moreover, the analysis evinces that the highest frequencies of the proportion of NEDs are 67 per cent and 86 per cent (see Appendix G). The results indicate that the average mean of the proportion of non-executive directors on the board of listed companies in Nigeria is 71.47 per cent.

This shows that listed firms in Nigeria are complying with the provision of the governance code in regard to the proportion of outside directors on the board. The Nigerian Security and Exchange Commission Code (2011) proposes firms have a board with an appropriate mixture of executive and non-executive directors, with majority board members to be NEDs and at least one to be an independent non-executive director.

Table 5.5: Frequency of Non-Executive Directors

NED (Number of NEDs)	Frequency (N=189)	Percent	Cumulative percent
2	5	2.6	2.6
3	6	3.2	5.8
4	18	9.5	15.3
5	32	16.9	32.3
6	34	18.0	50.3
7	33	17.5	67.7
8	19	10.1	77.8
9	23	12.2	89.9
10	7	3.7	93.7
11	7	3.7	97.4
12	4	2.1	99.5
15	1	0.5	100.0

5.2.3 Board Leadership

Generally, there are two common board leadership styles: CEO duality and non-duality. The former is a situation where both the duties of chairperson and that of CEO are merged and assumed by a single individual, while the latter is concerned with the separation of duties between the chief executive officer and the chairperson of the board; the aim is to ensure diffusion of power and enhance board independence.

Section 5.1b of the Nigerian Corporate Governance Code puts emphasis on boards to be independent of the management and recommends that the positions of chairman and CEO be separate. To some extent, Nigerian firms comply with section 5.1b of the SEC (2011) code as 97.35 per cent of the respondents show that their board separates the duties between these two important positions (Figure 5.4).

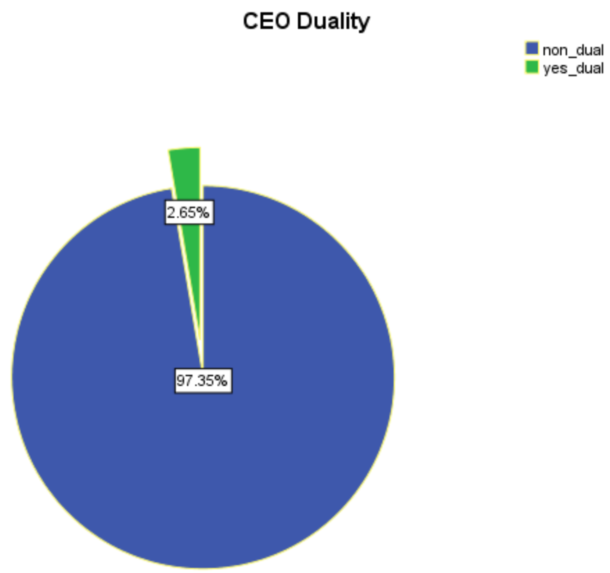

Figure 5.4: Board Leadership

5.2.4 Board Gender Diversity

Gender diversity of boards is an area that has recently received greater attention from strategic management and corporate governance scholars. However, the inclusion of women for decisions at the higher level of organisations is an area that needs improvement, especially in developing nations. The descriptive analysis shows that about 80.42 per cent (152) of respondents of the survey are male directors with only 37 (19.58%) responses from female directors (Figure 5.5). Generally, women are underrepresented on Nigerian boards and other governmental and non-governmental agencies in the country. Female inclusion on the boards of Nigerian's listed firms requires improvement as the survey data indicates that more than half of the participants either have one female director (20.6 per cent) or not a single female director (31.7 per cent) sitting on their boards (see Table 5.6).

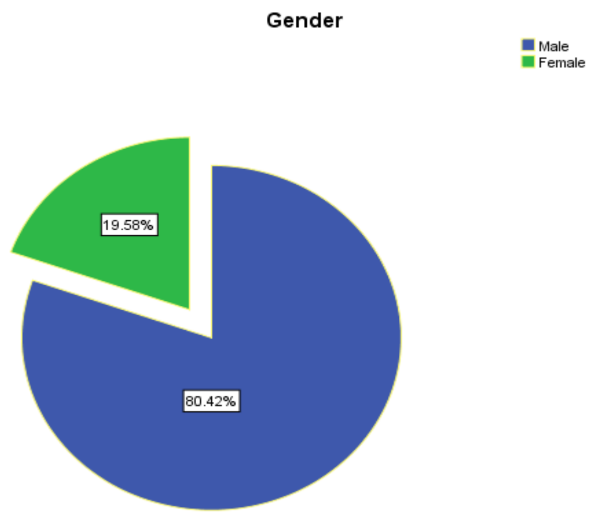

Figure 5.5: Percentage of Female Participants

Table 5.6: Number of Women Directors

Number of female directors	Frequency (N=189)	Percent	Cumulative percent
0	60	31.7	31.7
1	39	20.6	52.4
2	49	25.9	78.3
3	27	14.3	92.6
4	13	6.9	99.5
5	1	0.5	100.0

5.3 Board Processes

Three board processes variables are included in this study: board commitment, challenge, and knowledge utilisation. These board processes variables are treated as latent constructs and indicators were used to indirectly measure each of the constructs. Frequency, mean, and standard deviation scores were estimated for each latent board process variable and corresponding items that measured the constructs. In this section, results of these descriptive analyses are presented.

5.3.1 Commitment

Board commitment refers to efforts made by directors inside and outside the boardroom. It involves active participation before and during board meetings. The construct was measured with five manifest variables on a five-point Likert scale; it demonstrates how committed Nigerian directors are toward their board activities.

Board members taking notes during board meetings (mean score of 2.58), and active participation in the board meetings (mean score of 2.47) received the highest ratings by the participants. The next important item is the board members availability when needed for emergency meetings both at committee and board levels (mean score of 2.46). However, the item with the lowest rating by directors is the critical analysis of information presented by managers (mean score of 2.37). These results indicate inadequate oversight function of directors, as they are less committed to scrutinise management proposals. The descriptive results show that the level of directors' active involvement in discussions and their presence when needed are the key elements influencing board commitment. Table 5.7 below summarises the descriptive results of board commitment variable.

Table 5.7: Frequencies, Means and Standard Deviations of Board Commitment

Commitment Items	**Strongly agree**	**Some what agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Strongly disagree**	**Mean**	**Standard deviation**
Board members critically analyse any information provided by the managers prior to board meetings	52	71	25	27	14	**2.37**	**1.23**
	27.5%	37.6%	13.2%	14.3%	7.4%		
Board members participate actively in discussion during meetings	34	74	50	20	11	**2.47**	**1.08**
	18.0%	39.2%	26.5%	10.6%	5.8%		
Board members take notes during meetings	34	82	25	26	22	**2.58**	**1.26**
	18.0%	43.4%	13.2%	13.8%	11.6%		

Board members are available when needed for emergency meetings at both committee and board levels	47	68	33	23	18	**2.46**	**1.25**
	24.9%	36.0%	17.5%	12.2%	9.5%		
Board members acquire knowledge on issues that are relevant to the firm before attending board meetings	51	62	37	21	18	**2.43**	**1.26**
	27.0%	32.8%	19.6%	11.1%	9.5%		

5.3.2 Challenge

Board level of challenge, also known as cognitive conflict, entails the directors' level of disagreements or differences on opinions and ideas. Task-related disagreements provide an avenue where directors can engage in open discussion, critical analysis of ideas and opinions presented in the boardroom on matters is of great importance to the board and the firm in general.

Like board commitment, challenge was measured with five items on a 5-point Likert scale. The results from the descriptive analysis (Table 5.8) indicate that critical discussion of alternatives presented in the boardroom received the highest ratings among participants with mean score of 2.74 and standard deviation of 1.07, followed by the frequent disagreements about ideas and opinions in the boardroom with an average mean score of 2.44. The item with the lowest rating is having different views in the board meetings on how to pursue firm objectives (mean score of 2.34). This means that having a board with directors that disagree with each other's ideas and opinions are more likely to influence board level of challenge.

Table 5.8: Frequencies, Means and Standard Deviations of Challenge

Challenge Items		Strongly agree	Some what agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Mean	Standard deviation
There are frequent disagreements about ideas and opinions in the boardroom		42	84	20	24	19	**2.44**	**1.25**
		22.2%	44.4%	10.6%	12.7%	10.1%		
There are frequent debates before board agrees on a particular decision		50	76	25	19	19	**2.37**	**1.26**
		26.5%	40.2%	13.2%	10.1%	10.1%		
There are different views in the boardroom on how to pursue the firm's objectives		53	75	20	26	15	**2.34**	**1.24**
		28.0%	39.7%	10.6%	13.8%	7.9%		
The best alternatives for the firm are critically discussed		20	67	57	33	12	**2.74**	**1.07**
		10.6%	35.4%	30.2%	17.5%	6.3%		
There are frequent debates on the interests of shareholders and stakeholders		59	66	17	27	20	**2.38**	**1.34**
		31.2%	34.9%	9.0%	14.3%	10.6%		

5.3.3 Knowledge Utilisation

Knowledge utilisation is the extent to which the board put to use the human capital available in the boardroom. Five items on a 5-point Likert scale were used to measure this latent variable. The indicator that received the greatest rating is: directors with relevant knowledge and experience on issues dominate the discussion of that issue in the board meeting (mean score of 2.75). The second most rated item, is the division of labour among directors (mean score of 2.31) with 61 (32.2 per cent) of participants strongly agreeing with the item.

The indicators that received the lowest ratings are: knowledge and skills available in the boardroom are coordinated to achieve more constructive discussions (mean score of 2.17) and quick information flow among board members (mean score of 2.20). These results show that directors of Nigerian listed firms considered allowing a director or group of directors with vast knowledge and experience on a particular issue to have much influence when discussing such issues as a key to knowledge utilisation in the boardroom. Table 5.9 below presents the results of the descriptive analysis for knowledge utilisation.

Table 5.9: Frequencies, Means and Standard Deviations of Knowledge Utilisation

Knowledge utilisation Items	**Strongly agree**	**Some what agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Strongly disagree**	**Mean**	**Standard deviation**
Board members are aware of each other's knowledge and area of expertise	58	73	27	22	9	**2.21**	**1.14**
	30.7%	38.6%	14.3%	11.6%	4.8%		
There is quick information flow among board members	44	98	20	19	8	**2.20**	**1.04**
	23.3%	51.9%	10.6%	10.1%	4.2%		
There is a clear division of labour among board members	61	64	26	21	17	**2.31**	**1.28**
	32.3%	33.9%	13.8%	11.1%	9.0%		
Knowledge and skills available in the boardroom are coordinated to achieve more constructive discussions	55	78	29	22	5	**2.17**	**1.06**
	29.1%	41.3%	15.3%	11.6%	2.6%		
When discussing issues in the boardroom, the most knowledgeable directors have the most influence	19	69	60	23	18	**2.75**	**1.10**
	10.1%	36.5%	31.7%	12.2%	9.5%		

5.4 Board Tasks

In this study two distinct board roles are considered: board control and service tasks. These roles are treated as latent constructs and items were used to measure each construct indirectly. Below are the frequencies, means and standard deviation of board control and service tasks.

5.4.1 Control Task

Board control or monitoring role refers to the ability of directors to monitor the activities of management to ensure agency problems that may arise are minimised or eradicated. This construct was measured with five items on a 5-point Likert scale. The descriptive results summarised in table 5.10 show that the items with higher ratings from participants are: board ensures substantial expenditure are justifiable (mean score of 2.48); board decides remuneration of CEO/MD and other internal directors (mean score of 2.31); and board monitors the activities of CEO/MD and other managers (mean score of 2.22).

The indicator with the least rating among directors is: board is fully informed about the financial position of the firm (2.15). This result indicates the problem of information asymmetry between managers and the board in Nigeria, as the disclosure of the financial statement to the board of directors received the lowest rating among participants (directors). Nevertheless, the directors of Nigerian listed firms considered scrutinising expenditure to ensure the corporation's assets are not wasted unnecessarily and mitigating higher pay package for executives as important factors for an effective oversight function. Table 5.10 summarises the descriptive analysis results for board control role.

Table 5.10: Frequencies, Means and Standard Deviations of Board Control Task

control task Items		Strongly agree	Some what agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Mean	Standard deviation
Your board decides remuneration of CEO and other internal directors		54	78	20	19	18	**2.31**	**1.25**
		28.6%	41.3%	10.6%	10.1%	9.5%		
Your board is fully informed about the financial position of the firm		73	60	20	26	10	**2.15**	**1.23**
		38.6%	31.7%	10.6%	13.8%	5.3%		
Your board ensures substantial expenditures are justifiable		26	87	47	18	11	**2.48**	**1.03**
		13.8%	46.0%	24.9%	9.5%	5.8%		
This board establishes plans and budget for the firm's operation		58	82	19	17	13	**2.18**	**1.17**
		30.7%	43.4%	10.1%	9.0%	6.9%		
This board sufficiently monitors activities of the CEO/MD and other managers		59	73	28	15	14	**2.22**	**1.18**
		31.2%	38.6%	14.8%	7.9%	7.4%		

5.4.2 Service Task

Board service task in this study comprises of both strategic and resource provision roles; it refers to the ability of directors to provide human and relational capital to the firm. It also involves the provision of strategic advice and counsel to the executives and other resources, such as expertise, knowledge, finance and reputation. The service role was gauged with five items on a 5-point Likert scale.

The Majority of directors somewhat agree (41.8%) and strongly agree (16.4%) that their boards positively link the firm with the society (mean score of 2.50 and standard deviation of 1.08). Making initiatives on strategy proposals (mean score of 2.27) is the second most rated item. However, provision of useful advice on financial issues (mean score of 2.02) and making long-term strategy plans (mean score of 2.04) received the least rating among participants. These results indicate that the Nigerian directors are less likely to consider long-term strategic plans as one of the service tasks they are expected to perform. A summary of the results for the board service role is presented in table 5.11 below.

Table 5.11: Frequencies, Means and Standard Deviations of Board Service Task

Service task Items	**Strongly agree**	**Some what agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Strongly disagree**	**Mean**	**Standard deviation**
Your board provides useful advice on management	59	86	15	16	10	**2.14**	**1.16**
	31.2%	45.5%	7.9%	8.5%	6.9%		
This board positively links the firm with society	31	79	42	28	9	**2.50**	**1.08**
	16.4%	41.8%	22.2%	14.8%	4.8%		
This board provides useful advice on financial issues	79	64	20	16	10	**2.02**	**1.16**
	41.8%	33.9%	10.6%	8.5%	5.3%		
Your board makes initiatives on strategy proposal	56	80	17	18	18	**2.27**	**1.25**
	29.6%	42.3%	9.0%	9.5%	9.5%		
This board makes long-term strategy plans	80	64	18	12	15	**2.04**	**1.22**
	42.3%	33.9%	9.5%	6.3%	7.9%		

5.5 Corporate Social Responsibility

In this study, firms' engagement in corporate social responsibility activities is considered as firm-level effectiveness. However, two dimensions of negative CSR (legal and ethical) introduced by Arora and Dharwadkar (2011) are selected as a proxy for corporate social responsibility activities. These legal and ethical CSR activities are treated as latent variables and items were used to measure the constructs. This section discusses the descriptive analysis of these variables which includes frequencies, means and standard deviations.

5.5.1 CSR Legal

This study considers two dimensions of CSR: legal and ethical corporate social responsibility activities. The legal CSR dimension is social responsibility activities which deal with issues related to the law of the land. Companies are expected to comply with all laws of the society where it operates. Four indicators were used to assess the CSR legal dimension using a 5-point Likert scale.

As seen in table 5.12 below, complying with the norms defined in the law when carrying out firm activities (mean score of 2.25) is the most rated item by the participants, followed by complying with the environmental laws (mean score of 2.21). The lowest rated items are: the firm pays taxes and other tax-related as and when due (mean score of 2.04) and complying with laws regarding hiring and benefits of employees (mean score of 2.18).

5.5.2 CSR Ethical

The CSR ethical dimension is concerned with those CSR activities that firms engage in because it seems morally good and it is seen as "the right thing to do". Five questions on a 5-point Likert scale were used to gauge this construct. As can be observed from table 5.13 below, items that received the highest rating by directors are: not giving donations to political rallies and other unethical activities (mean score of 2.64), having an effective code of conduct (mean score of 2.54) and monitoring the potential negative impact of firm activities on society (mean score of 2.39).

Items that received lower ratings are: firm follows the professional and ethical standard (mean score of 2.20) and having a confidential procedure in place for employees to report any misconduct (mean score of 2.36). Table 3.7 summarises the descriptive results of corporate social responsibility (ethical) dimension.

Table 5.12: Frequencies, Means and Standard Deviations of CSR Legal Dimension

CSR (Legal) Items	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Mean	Standard deviation
Directors of this firm try to comply with the environmental laws	62	74	19	19	15	**2.21**	**1.23**
	32.8%	39.2%	10.1%	10.1%	7.9%		
Our firm seeks to comply with all laws regarding hiring and benefits of employees	56	89	13	16	15	**2.18**	**1.18**
	29.6%	47.1%	6.9%	8.5%	7.9%		
We always comply with the norms defined in the law when carrying out our activities	59	75	17	24	14	**2.25**	**1.23**
	31.2%	39.7%	9.0%	12.7%	7.4%		
Our firm pays taxes and other tax-related as and when due	82	66	8	17	16	**2.04**	**1.27**
	43.4%	34.9%	4.2%	9.0%	8.5%		

Table 5.13: Frequencies, Means and Standard Deviations of CSR Ethical Dimension

CSR (Ethical) Items	**Strongly agree**	**Some what agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Strongly disagree**	**Mean**	**Standard deviation**
Managers monitor the potential negative impact of our activities on society	49	77	23	21	19	**2.39**	**1.26**
	25.9%	40.7%	12.2%	11.1%	10.1%		
We follow professional and ethical standards	53	82	27	18	9	**2.20**	**1.10**
	28.0%	43.3%	14.3%	9.5%	4.8%		
Our firm has a confidential procedure in place for employees to report any misconduct at work	47	86	16	21	19	**2.36**	**1.25**
	24.9%	45.5%	8.5%	11.1%	10.1%		
Our company has an effective code of conduct in place	40	62	51	17	19	**2.54**	**1.21**
	21.2%	32.8%	27.0%	9.0%	10.1%		
We don't give donations to political and other unethical activities	29	70	48	24	18	**2.64**	**1.17**
	15.3%	37.0%	25.4%	12.7%	9.5%		

5.6 PLS: Measurement Model

In the first instance, the measurement model, also referred to as an outer model in PLS-SEM, needs to be assessed. The relationships between latent constructs and their manifest indicators are examined to ensure that the items clearly measured the latent constructs they are assigned to and this is done through validity and reliability tests. A good measurement model is the starting point for any meaningful results from the PLS-SEM algorithm. This study uses reflective latent constructs;

therefore, the measurement model is assessed using indicator reliability, composite reliability, convergent validity and discriminant validity.

5.6.1 Indicator Reliability

Indicators reliability, also is known as outer loadings for reflective items, is assessed and the aim is to ensure that all items used in this study shared greater variance with their associated latent constructs. According to Hair Jr *et al.* (2016), the indicator, also known as an item or manifest variable, is reliable only if the loading to its construct meets the threshold of 0.708 ($0.708^2 = 0.50$), approximately 0.70. This means a latent construct should explain at least 50 per cent of the indicator’s variance.

At the initial examination of the loadings, the majority of the items load above the critical values of 0.70. However, three indicators which are chlg4, comt2 and srvc2 were deleted because they have poor loadings of 0.513, 0.434, and 0.478 respectively (see Appendix F). All the constructs used in this study are reflective which means the latent construct caused the items, not the other way round. Unlike formative construct, deleting an item with poor loadings for reflective construct will not change the meaning of the construct (Chin, 1998).

There were minimal items (csrEth5=0.629 and knwlg5=0.636) that had loadings below the threshold of 0.70, but they were retained as their removal failed to improve the composite reliability and average variance extraction (AVE) of their associate latent variables. Indicators that load below a value of 0.70 should be considered for deletion only if that improves the reliability and AVE of the latent variables they intend to measure (Chin, 2010). Moreover, low loading is common for a newly developed indicator, such as csrEth5.

Few indicators with poor loadings, specifically those with adverse effects on discriminant validity and average variance extraction, were deleted. Subsequent measurement results indicate that all the items load above the threshold of 0.70 (see Table 5.14). The only exceptions are csrEth5 and knowlg5 which have loadings below the critical value, but without decreasing discriminant validity and AVE of their respective constructs. Moreover, the bootstrapping results show that all the loadings are statistically significant at ($p < 0.001$).

Table 5.14: Summary of Results from Measurement Model

Constructs	Manifest variables	Outer loadings	Composite reliability (CR)	Cronbach's Alpha (CA)	AVE
Board Size	Board_size	1.000	1.000	1.000	1.000
CEO Duality	Boardlead1	1.000	1.000	1.000	1.000
Board composition	Prop_outsidedir	1.000	1.000	1.000	1.000
Board Gender diversity	Prop_femaledir	1.000	1.000	1.000	1.000
Commitment	Comt1	0.785	0.882	0.823	0.653
	Comt3	0.779			
	Comt4	0.842			
	Comt5	0.823			
Challenge	Chlg1	0.712	0.879	0.827	0.646
	Chlg2	0.788			
	Chlg3	0.871			
	Chlg5	0.836			
Knowledge utilisation	Knwd1	0.712	0.867	0.808	0.569
	Knwd2	0.842			
	Knwd3	0.726			
	Knwd4	0.834			
	Knwd5	0.636			
Control task	Contr1	0.702	0.895	0.854	0.632
	Contr2	0.859			
	Contr3	0.720			
	Contr4	0.842			
	Contr5	0.839			
Service task	Srvc1	0.875	0.911	0.869	0.719
	Srvc3	0.852			
	Srvc4	0.788			
	Srvc5	0.872			
CSR (legal)	CsrLg1	0.746	0.883	0.823	0.654
	CsrLg2	0.848			
	CsrLg3	0.809			
	CsrLg4	0.828			

CSR (ethical)	CsrEth1	0.854	0.886	0.837	0.611
	CsrEth2	0.740			
	CsrEth3	0.793			
	CsrEth4	0.868			
	CsrEth5	0.629			

5.6.2 Composite Reliability

The internal consistency reliability of each construct in the model is assessed through composite reliability. The major concern is to ensure each set of indicators used to measure their respective construct are consistent with each other. The assessment of outer loadings of the items is to ensure all indicators are above a critical value of 0.70 and those retained with low loadings do not lead to poor composite reliability and AVE. Items for a particular reflective construct should be common with each other, this allows internal consistency to be achieved. The internal consistency through composite reliability of all constructs used in this study is above the accepted value of 0.70, as recommended by the literature. Specifically, the composite reliability of reflective constructs ranged from 0.867 to 0.911 (see Table 5.14).

5.6.3 Convergent Validity

Validity is mainly concerned with the accuracy of the measurement and convergent validity is the extent to which reflective items for a particular variable relate or converge strongly to each other. In addition to indicator (outer) loadings, average variance extraction (AVE) is used to assess the convergent validity of the latent constructs. The rule of the sum is that an AVE should be 0.50 or above, this means more variance are shared between items and their constructs than measurement error (Hair Jr *et al.*, 2016). Table 5.14 above shows that all constructs have AVE greater than 0.50.

5.6.4 Discriminant Validity

The distinction between constructs used in the same model is essential. If there is no clear identifiable difference between variables, it means that there is a problem associated with discriminant validity. In such situations, the constructs without clear distinction should be merged or else one should be deleted. As directed by Chin (1998), Henseler et al., (2009) and Hair Jr et al.,

(2016) two approaches were used to assess the discriminant validity in this study, which are the Fornell-Larcker criterion and cross-loadings. For the former, the rule is that the square root of AVE should be greater than its highest correlation with another construct in the model (Hair Jr *et al.*, 2016). Table 5.15 below indicates that the square roots of AVE for the latent constructs were higher than its highest correlation with any other variable in the model.

Cross-loadings are used to ensure indicators load higher on their main constructs than any other variable (Hair Jr *et al.*, 2016). The cross-loadings analysis conducted (see Table 5.16) shows that all manifest variables load greater on their assigned constructs than other variables in the model. Taken together, the Fornell-Larcker criterion and cross-loadings tests indicate that each construct used in this study clearly represents different phenomenon not covered by another variable, thus discriminant validity is achieved.

Table 5.15: Results of the Fornell-Larcker Criterion

	Constructs	1	2	3	4	5	6	7	8	9	10	11
1	**Board composition**	**1.000**										
2	**Board Size**	0.002	**1.000**									
3	**CEO duality**	-0.226	-0.289	**1.000**								
4	**CSR (ethical)**	-0.131	-0.171	-0.053	**0.782**							
5	**CSR (legal)**	-0.124	-0.203	0.011	0.763	**0.809**						
6	**Challenge**	-0.072	-0.049	-0.080	0.258	0.251	**0.745**					
7	**Commitment**	-0.086	0.073	-0.031	0.218	0.243	0.187	**0.742**				
8	**Control task**	-0.066	-0.207	-0.042	0.451	0.481	0.240	0.136	**0.795**			
9	**Gender diversity**	-0.222	0.225	-0.194	-0.092	-0.093	-0.024	0.030	-0.039	**1.000**		
10	**Knowledge utilisation**	-0.125	0.080	-0.024	0.452	0.438	0.207	0.169	0.278	-0.102	**0.754**	
11	**Service task**	-0.091	-0.090	-0.039	0.735	0.679	0.354	0.250	0.420	-0.094	0.447	**0.781**

Table 5.16: Results of the Cross-Loadings

	Board composition	Board size	CEO duality	CSR (ethical)	CSR (legal)	Challenge	Commitment	Control task	Gender diversity	Knowledge utilisation	Service task
Boardlead1	-0.226	-0.289	**1.000**	-0.053	0.010	-0.049	-0.038	-0.042	-0.194	-0.024	-0.043
Board size	0.002	**1.000**	-0.289	-0.171	-0.203	-0.055	0.081	-0.207	0.225	0.080	-0.095
Prop_NEDs	**1.000**	0.002	-0.226	-0.132	-0.124	-0.085	-0.096	-0.067	-0.222	-0.125	-0.088
Propfemale	-0.222	0.225	-0.194	-0.092	-0.094	-0.007	0.029	-0.039	**1.000**	-0.102	-0.095
Chlg1	0.019	0.048	-0.032	0.079	0.114	**0.712**	0.085	0.094	-0.115	0.120	0.167
Chlg2	-0.058	-0.008	-0.075	0.165	0.156	**0.788**	0.152	0.113	0.000	0.131	0.224
Chlg3	-0.093	-0.089	0.061	0.188	0.206	**0.871**	0.145	0.247	-0.028	0.234	0.347
Chlg5	-0.089	-0.063	-0.121	0.297	0.253	**0.836**	0.167	0.251	0.054	0.156	0.329
Cntrl1	0.009	-0.145	0.012	0.331	0.293	0.095	0.091	**0.702**	-0.081	0.200	0.213
Cntrl2	-0.101	-0.146	0.006	0.464	0.482	0.255	0.133	**0.859**	-0.011	0.288	0.481
Cntrl3	-0.038	-0.141	-0.140	0.271	0.339	0.091	0.068	**0.720**	-0.017	0.102	0.202
Cntrl4	-0.050	-0.245	0.003	0.362	0.408	0.236	0.172	**0.842**	-0.030	0.257	0.410
Cntrl5	-0.059	-0.141	-0.086	0.325	0.353	0.245	0.041	**0.839**	-0.034	0.214	0.333
Cmmt1	-0.061	0.128	-0.049	0.155	0.183	0.122	**0.785**	0.058	-0.034	0.162	0.148
Cmmt3	-0.051	-0.010	-0.041	0.187	0.186	0.123	**0.779**	0.119	-0.032	0.136	0.221
Cmmt4	-0.066	0.090	-0.007	0.192	0.223	0.174	**0.842**	0.125	0.021	0.177	0.212
Cmmt5	-0.125	0.063	-0.031	0.168	0.189	0.145	**0.823**	0.119	0.122	0.100	0.205
csrEth1	-0.186	-0.167	0.002	**0.854**	0.629	0.232	0.274	0.468	-0.071	0.342	0.619
csrEth2	-0.158	-0.268	0.061	**0.740**	0.578	0.151	0.072	0.284	-0.018	0.365	0.497
csrEth3	-0.004	-0.028	-0.101	**0.793**	0.619	0.229	0.211	0.273	-0.079	0.377	0.604
csrEth4	-0.134	-0.122	-0.074	**0.868**	0.649	0.177	0.195	0.396	-0.066	0.426	0.642
csrEth5	-0.017	-0.102	-0.090	**0.629**	0.494	0.187	0.055	0.321	-0.130	0.244	0.464
csrLg1	-0.095	-0.083	0.106	0.602	**0.746**	0.177	0.126	0.350	-0.036	0.274	0.500
csrLg2	-0.134	-0.257	0.003	0.630	**0.848**	0.200	0.212	0.388	-0.086	0.345	0.555
csrLg3	-0.102	-0.110	-0.007	0.620	**0.809**	0.233	0.171	0.394	-0.082	0.418	0.591
csrLg4	-0.071	-0.201	-0.058	0.614	**0.828**	0.173	0.269	0.422	-0.095	0.370	0.543

Knwldg1	-0.109	0.068	0.056	0.290	0.314	0.158	0.086	0.116	-0.013	**0.712**	0.292
Knwdg2	-0.082	0.058	-0.064	0.410	0.377	0.213	0.174	0.220	-0.056	**0.842**	0.433
Knwdg3	-0.070	0.063	0.038	0.270	0.288	0.095	0.165	0.180	-0.120	**0.726**	0.257
Knwdg4	-0.097	0.082	-0.058	0.360	0.364	0.151	0.111	0.244	-0.107	**0.834**	0.372
Knwdg5	-0.117	0.029	-0.022	0.344	0.294	0.154	0.122	0.260	-0.082	**0.636**	0.302
Srvc1	-0.078	-0.065	-0.078	0.660	0.590	0.293	0.204	0.339	-0.056	0.339	**0.875**
Srvc3	-0.074	-0.149	-0.002	0.630	0.580	0.372	0.217	0.446	-0.142	0.416	**0.852**
Srvc4	0.008	-0.065	-0.036	0.569	0.533	0.250	0.215	0.348	-0.084	0.362	**0.788**
Srvc5	-0.147	-0.039	-0.032	0.610	0.596	0.280	0.200	0.335	-0.040	0.404	**0.872**

5.7 PLS: Structural Model

After the measurement model is properly assessed and validity and reliability tests are confirmed, the structural model is evaluated. Structural model, also known as an inner model in PLS-SEM, assesses the hypothesised relationship between constructs in the model. At this stage, path coefficients and their significance levels; the level of variance explained by exogenous variables (R^2); effect size (f^2) and predictive relevance (Q^2) of the model were assessed. However, prior to assessing the structural model, a collinearity test should be conducted.

5.7.1 Collinearity Test

Prior to evaluating the structural model, a collinearity test is conducted among each set of independent variables in the model. This is necessary as PLS-SEM is built on OLS regressions of each independent latent variable on its predictor construct and as such, any extreme levels of collinearity among the exogenous variables will produce a meaningless outcome (Hair Jr *et al.*, 2016).

In this study, each set of explanatory (board characteristics, board processes, and board task) variables are tested for collinearity. Board size, board composition, CEO duality and gender diversity serve as predictors of board processes variables. Board commitment, challenge and knowledge utilisation are the explanatory variables of board tasks. Finally, the last sets of predictors in this model are boards control and service roles, as the exogenous variables that predict corporate social responsibility activities. Consistent with the advice given by Hair Jr *et al.* (2016), a variance inflation factor (VIF) above 5.00 is considered as a sign of collinearity. Table 5.17 indicates that none of the set of exogenous constructs has VIF above the critical value of 5.00; in fact, none is above 2.00.

Table 5. 17: Results of the Collinearity Test

Board characteristics	VIF	Board processes	VIF	Board tasks	VIF
Board size	1.128	Commitment	1.055	Control	1.232
Board composition	1.143	Challenge	1.068	Service	1.322
CEO Duality	1.206	Knowledge utilisation	1.068		
Gender diversity	1.159				

5.7.2 Path Coefficients

Path coefficient is an estimation of the relationships between exogenous and endogenous constructs in a model. Hair Jr et al., (2016) explain that path coefficient has a value between -1 to +1; any coefficient close to +1 indicates a positive and strong relationship between the predictor and outcome variable. Conversely, a coefficient value approaching -1 means a negative and strong relationship and values at 0 levels show a weak and usually insignificant relationship between exogenous and endogenous constructs.

Bootstrapping technique, a non-parametric test, is used in PLS-SEM to assess significance level of the estimated path coefficients. This bootstrapping technique is employed to test the significance level of both loadings and path coefficients in this study. To ensure the stability of the results obtained, 5000 subsamples suggested by many authors (such as Hair Jr et al., 2016) have been selected. Table 5.18 shows the results of path coefficients and a significance level of each coefficient.

Table 5.18: Results of the Path Coefficients and Significance Levels

Relationships	Path coefficient	*t*-Value	Significance level
Board size → challenge	**-0.078**	***0.844***	**i/s**
Board size → commitment	**0.072**	***0.806***	**i/s**
Board size → knowledge utilisation	**0.099**	***1.260***	**i/s**
CEO duality → challenge	**-0.105**	***1.104***	**i/s**
CEO duality → commitment	**-0.046**	***0.647***	**i/s**
CEO duality → knowledge utilisation	**-0.071**	***0.787***	**i/s**
Gender diversity → challenge	**-0.036**	***0.403***	**i/s**
Genedr diversity → commitment	**-0.020**	***0.189***	**i/s**
Gender diversity → knowledge utilisation	**-0.178**	***2.314***	**
Board composition → challenge	**-0.116**	***1.410***	*
Board composition → commitment	**-0.111**	***1.224***	**i/s**
Board composition → knowledge utilisation	**-0.181**	***2.307***	**
Challenge → control task	**0.186**	***2.202***	**
Challenge → service task	**0.252**	***3.372***	***
Commitment → control task	**0.060**	***0.813***	**i/s**
Commitment → service task	**0.136**	***1.821***	*
Knowledge utilisation → control task	**0.228**	**2.761**	**
Knowledge utilisation → servicetask	**0.372**	**4.989**	***
Control task → CSR (ethical)	**0.166**	**2.767**	**
Control task → CSR (legal)	**0.231**	**2.987**	**
Service task → CSR (ethical)	**0.657**	**10.983**	***
Service task → CSR (legal)	**0.578**	**7.333**	***

****P<0.001, *P<0.05, *P<0.10, i/n= insignificant*

5.7.2.1 Path Coefficients between Board Characteristics and Board Processes

Figure 5.6 below and table 5.18 above indicate that the majority of the board characteristics variables in this study have inconclusive effects on a board's level of commitment. Specifically, board gender diversity (β = -0.020) and board composition (β = -0.111) have negative, but weak relationships on board level of commitment. Similarly, CEO duality (β = -0.046) is found to have a negative, but insignificant effect on board commitment. The only board characteristic that shows a different directional relationship with commitment is board size as it has a positive (inconclusive) effect on board level of commitment (β = 0.072).

The path coefficient from CEO duality to board level of challenge (β = -0.105) is negative, but not statistically significant and board size has a similar negative effect on the board level of challenge (β = - 0.078). Similarly, gender board diversity (β = - 0.036) is found to have a negative, but weak association with challenge. However, board composition (β = - 0.116, t = 1.410) is found to have a negative and statistically significant (at 0.10 level) effect on board level of challenge.

Results from the path coefficient show that board gender diversity has a negative and strong relationship with knowledge utilisation (β = - 0.178) at 0.05 significant level. Similarly, board composition has a strong and negative path coefficient linking to knowledge utilisation (β = - 0.181) at 0.05 significant level. However, the relationship between CEO duality leadership structure and the ability of the board to utilise knowledge available (β = - 0.071) is negative, but not statistically significant. Interestingly, a large board size (β = 0.099) is found to have a positive, but inconclusive influence on board knowledge utilisation.

5.7.2.2 Path Coefficients between Board Processes and Board Task

The PLS-SEM algorithm results of path coefficient between board processes variables (commitment, challenge and knowledge utilisation) and board task illustrate the importance of this processes variables on board-level effectiveness. Two of the board processes have an important influence on board control task. Specifically, board challenge ($\beta = 0.186$) and knowledge utilisation ($\beta = 0.228$) have positive and strong path coefficients on the board control task at 0.05 significant levels. However, board level of commitment is found to have a positive, but weak effect on control task ($\beta = 0.060$).

All the board processes variables in this study have a strong effect on board service task. Specifically, board level of commitment is found to have a positive and sufficient influence on board service task ($\beta = 0.136$) at 0.05 significant level. Similarly, levels of challenge ($\beta = 0.252$) and knowledge utilisation ($\beta = 0.372$) are positively and strongly related to board service task at 0.001 significant levels.

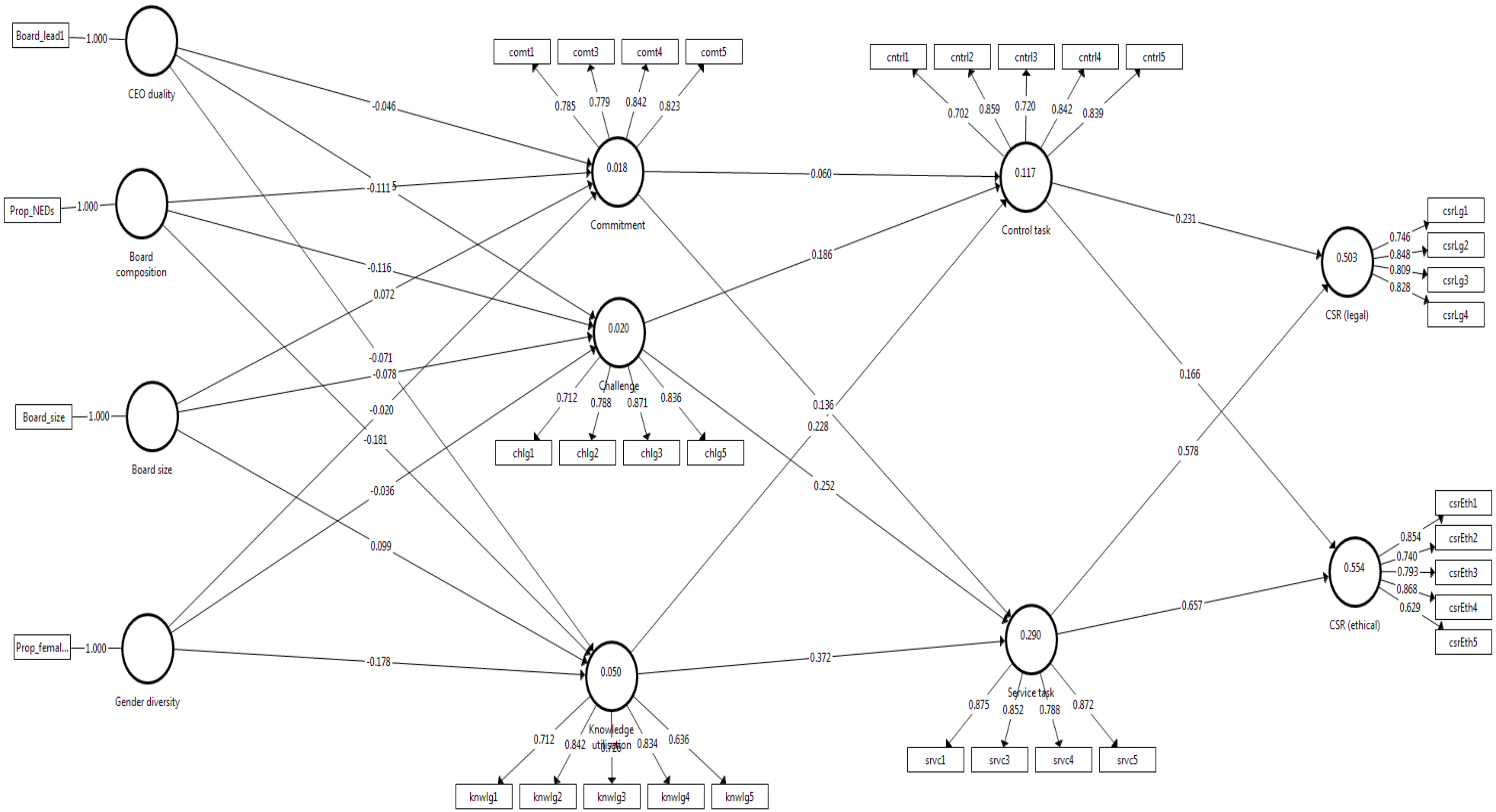

Figure 5.6: Results of Measurement Model and Structural Model

5.7.2.3 Path Coefficient between Board task and CSR

The results from the path coefficient analysis evince that both board tasks (control and service) have greater influences on corporate social responsibility related to legal activities. Board control task is found to influence CSR legal activities positively and strongly ($\beta = 0.231$) at 0.05 significant level. Additionally, service task path coefficient to CSR (legal) is strong and positive ($\beta = 0.578$) at 0.001 significant level.

Similar to relationships between board roles and CSR (legal), board control and service tasks have strong and positive path coefficients on CSR (ethical) activities. Precisely, board control task ($\beta = 0.166$) and service task ($\beta = 0.657$) all have a positive and powerful effect on CSR (ethical) with significant levels of 0.05 and 0.001 respectively.

5.7.3 Coefficient of Determination (R^2)

The coefficient of determination is the amount of variance in the endogenous variables that is explained by the associated exogenous construct(s). PLS-SEM is an analysis tool that focuses on the predictive relevance of the model and a higher level of R^2 means a greater level of predictive accuracy. However, it is worth mentioning that there is no standard guide or threshold on an acceptable level of $R^{2,}$ as it largely depends on the model complexity and the research area (Hair Jr *et al.*, 2016). As a guide, R^2 of 10 to 20 per cent are considered as acceptable in social science studies (Gaur and Gaur, 2006). Due to the complexity of this study, R^2 of 0.10 and above are considered to be acceptable. Table 5.19 below shows the variance explained of independent variables on their respective dependent variables.

Table 5.19: Results of the R Squares

Construct	R^2
CSR (ethical)	0.554
CSR (legal)	0.503
Challenge	0.020
Commitment	0.018
Knowledge utilisation	0.050
Control task	0.117
Service task	0.290

5.7.3.1 Coefficient of Determination for Board Processes Variables

The R^2 of 0.018 for the commitment latent construct indicated that the exogenous variables accounted for only 1.8 per cent. As the R^2 is less than 10 per cent, the board characteristics (board size, CEO duality, board composition, and gender diversity) as exogenous variables failed to have greater effects on the endogenous construct. These board characteristics explained little variance on board level of commitment. This clearly indicates that other variables or factors determine board processes, not board characteristics.

Table 5.19 above shows that only 0.020 variances of the challenge latent construct is explained by the independent variables (board size, board composition, CEO duality and board gender diversity). The independent variables influence the outcome construct with 2.0 per cent below the 10 to 20 per cent acceptable R^2 values set above. This is another failure of board size, board composition, board gender diversity and CEO duality to account for sufficient variances of one of the board process variable (challenge).

Similar to other board processes variables, board characteristics as predictor variables have less influence on knowledge utilisation. Only 0.050 variances are explained by the exogenous variables, which mean that 5.0 per cent (a meagre) of the variance in knowledge utilisation is explained by board size, board composition, gender diversity and CEO duality. Other factors, rather than board characteristics account for 95.0 per cent R^2 of knowledge utilisation.

In summary, board commitment, challenge and knowledge utilisation were not sufficiently influenced by exogenous constructs (board size, CEO duality, board composition and gender diversity), as all the R^2 of the endogenous variables are below the 10 per cent. This means that other factors, rather than the predictor variables, explained more variance in board processes variables.

5.7.3.2 Coefficient of Determination for Board Tasks

Board processes variables serve as the exogenous variables that predict board service task and control task in this model. The R^2 value of 0.117 for board control task indicates that board processes variables were able to marginally influence board control task. Board level of commitment, challenge and knowledge utilisation were able to explain 11.7 per cent of the total variance of the endogenous variable (control task). Moreover, the R^2 of 0.290 for board service task evinces the extent to which board commitment, challenge and knowledge utilisation influence board service task. The predictor variables explained 29 per cent of the total variance of the outcome variable.

5.7.3.3 Coefficient of Determination for CSR

Board control task and service task serve as the predictor variables and corporate social responsibility related to legal and ethical activities are the dependent variables. The independent variables were able to sufficiently account for 0.503 variances of the dependent variable (corporate social responsibility (legal) activities). This means that the direct influence of board control and service tasks, plus the indirect effect of board processes latent constructs account for 50 per cent of the total variance of CSR (legal) activities.

The R^2 value of 0.554 demonstrates how important the independent variables (board control and service tasks) are on the dependent variables (CSR (ethical) activities). The direct impact of board tasks and indirect effects of board processes variables explained 55 per cent of the total variance of

CSR (ethical) activities. Therefore, board control and service tasks are good predictors of corporate social responsibility related to legal activities.

5.7.4 Effect Size (f^2)

In addition to assessing the values of coefficient of determination (R^2) of all the endogenous constructs in the model, the effect size of each exogenous variable on their respective outcome variables has been examined. In other words, changes in the R^2 values of each dependent construct is observed to determine if a particular predictor variable is omitted, in order to know the magnitude effect of that independent variable. The effect sizes of exogenous variables are calculated using the f^2 formula discussed in chapter five. Table 5.20 shows the effect size of each independent variable on its associated outcome variable. As observed above, the variances of board processes explained by the board characteristics are not that significant, therefore, calculations of effect size are meaningless.

For key determinants of board task, knowledge utilisation is the most important variable that explained control role (f^2 = 0.049) and service role (f^2 = 0.129), followed by board level of challenge with effect sizes of 0.033 and 0.058 for control and service tasks respectively. Board level of commitment is the least important variable to explain control task (f^2 = 0.004) and service task (f^2 = 0.018).

The coefficient of determination for corporate social responsibility activities related to legal and ethical are greatly influenced by service task with an effect size of 0.271 and 0.323 respectively. Board control task is less important than service task in regard to CSR activities, as it has an effect size of 0.042 for CSR legal activities and 0.022 for CSR ethical dimension.

Table 5.20: Results of Effect Size

Endogenous construct	Variable excluded	R^2 Included	R^2 Excluded	Effect size (f^2)
Control task	Commitment	0.117	0.113	0.004
	Challenge	0.117	0.084	0.033
	Knowledge utilisation	0.117	0.068	0.049
Service task	Commitment	0.290	0.272	0.018
	Challenge	0.290	0.232	0.058
	Knowledge utilisation	0.290	0.161	0.129
CSR (legal)	Control task	0.503	0.461	0.042
	Service task	0.503	0.232	0.271
CSR (ethical)	Control task	0.554	0.532	0.022
	Service task	0.554	0.231	0.323

5.7.5 Predictive Relevance (Q^2)

In addition to evaluating the R^2 values for model predictive relevance, the study also examines the Stone-Geisser Q^2 value by using the blindfolding procedure mentioned in chapter five. This measure assesses the model's predictive validity through sample re-use (Chin, 1998), it predicts the data points of reflective dependent variables, but is not applicable to formative endogenous construct (Hair Jr *et al.*, 2016). This technique is appropriate as this study uses only reflective dependent latent variables.

Q^2 values greater than zero indicate that the inner model has a predictive relevance, while values less than zero imply a lack of predictive relevance (Henseler *et al.*, 2009). An omission distance (*d*) of 6 is used to test the predictive capability of the model used in this study. Results from the blindfolding procedure show that *control task* (Q^2=0.057), *service task* (Q^2=0.170) and *CSR ethical* *(Q^2=0.280), as well as CSR legal (Q^2=0.269) activities* have adequate predictive relevance. However, board commitment (Q^2=0.001), challenge (Q^2=0.009) and knowledge utilisation (Q^2=0.020) have modest predictive relevance.

Table 5.21 demonstrates the results of the blindfolding procedure test conducted on all endogenous reflective constructs (board processes, board task and CSR) in the model. The Q^2 for board processes, board tasks and corporate social responsibility activities related to legal and ethical ranged from 0.001 to 0.280.

Table 5.21: Results of the Predictive Relevance

Latent construct	Q^2
CSR (ethical)	0.280
CSR (legal)	0.269
Challenge	0.009
Commitment	0.001
Knowledge utilisation	0.020
Control task	0.057
Service task	0.170

5.8 Summary

This chapter presents the research findings generated from the analysis conducted. Firstly, the chapter discusses the descriptive analysis, this involves respondents' background, and frequencies, means and standard deviations of all variables included in this model. Secondly, the chapter presents the results of the measurement model which assesses the reliability and validity of the research constructs. Finally, this chapter presents the results generated from the structural model analysis, which involves path coefficients, the coefficient of determination (R^2), effect size (f^2) and predictive relevance (Q^2) of the model. The next chapter discusses the results in relation to the research hypothesis, context, theories and previous empirical findings.

CHAPTER 6: DISCUSSION

6.0 Introduction

The main aim of this study is to investigate board effectiveness beyond the traditional direct input-output approach. Specifically, the relationships between board characteristics, board processes, board task and corporate social responsibility (legal and ethical) activities are examined. The research is conducted in order to fully investigate board effectiveness beyond the demographic variables (usual suspects). The previous chapter presents the study findings. The current chapter discusses those findings in relations to the existing studies, theories, and study context. This final chapter starts by presenting the research overview (section 6.1), followed by presenting and discussions of the research findings (section 6.2). Section 6.3 highlights the research contributions and section 6.4 discusses the research implication for policymakers. In section 6.5, the research limitations were offered and directions for future scholars were highlighted. In the end, concluding remarks were presented in section 6.5.

6.1 Research Overview

This study examines the relationships between board characteristics (the usual suspects) and board processes; board processes and board task; board task and corporate social responsibility activities. Moreover, the indirect effects of board processes and board task have been examined. The current study realised that a single theory will not be appropriate to fully capture all board roles and directors' functioning and behaviours; therefore, following the advice given by Roberts et al., (2005) and Nielsen and Huse (2010), the agency, resource dependency, and stakeholders theories have been employed to serve as the research theoretical framework in order to fully examine board effectiveness.

This research provides evidence of board effectiveness with sample data collected from directors of firms listed on the Nigerian Stock Exchange, a developing country where corporate governance is in its developmental stage. An existing framework was adopted, amended and extended to suit the context under study. Hypotheses were developed and tested using partial least squares structural equation modeling. Board characteristics considered for this study are those referred to as the 'usual suspects' (Gabrielsson and Huse, 2004) which are: board composition, board size, CEO duality and gender diversity. These 'usual suspects' have been heavily researched and are assumed to have a direct effect on firm performance. However, empirical findings of these variables are inconclusive (Daily *et al.*, 2003). Nevertheless, these board structures are important mechanisms to consider in any serious board effectiveness research; for this reason, the current study includes these 'common suspects' and employed a different approach (through board processes) to fully understand their impact on board effectiveness.

Board processes variables considered in this research include board commitment (effort norms), challenge (cognitive conflict) and knowledge utilisation. Board service and control tasks are the two major board roles used in board literature and were employed in this study to serve as a proxy for board-level effectiveness. As an extension to the existing framework, this study investigates the relationship between board task and corporate social responsibility activities. Rather than including all dimensions of the CSR pyramid developed by Carroll (1991), legal and ethical CSR responsibilities serve as the dependent variables in this study. These areas of CSR are generally neglected in Nigeria. Moreover, Arora and Dharwadkar (2011) criticised previous literature for focusing too much on positive CSR and neglecting the negative CSR, such as legal and ethical dimensions. It is essential for firms to be aware of such negative CSR activities that are likely to attract costs, such as fines, reputational loss, employee motivation and product boycott.

The researcher starts by understanding (exploring) the board processes and board task variables that are applicable in the Nigerian context. A theoretical framework (Figure 3.7), developed by Forbes and Milliken in 1999 and empirically tested in a small number of developed nations (see for example, Wan and Ong, 2005 and Bettinelli, 2011) was adopted, amended, expanded and tested empirically in Nigeria. Semi-structured interviews were initially conducted with seven directors of companies listed on the NSE, in order to ensure the final framework suited the context under study and could sufficiently answer the research questions. The interviews conducted resulted in making amendments to the initial framework (see Figure 3.8) and a number of items were developed, which are employed to measure certain latent variables used in the final framework.

The quantitative analysis conducted in this study using partial least squares structural equation modeling (PLS-SEM), as an analysis tool, presented interesting findings. The researcher hypothesised that board characteristics (board size, board composition and gender diversity) have an important influence on board processes variables (commitment, challenge and knowledge utilisation), while non-separation of duties between CEO and Chairperson would have no significant impact on board processes variables. Moreover, the study predicted that board processes would have a strong influence on board task, which consequently improves corporate social responsibility (legal and ethical) activities.

6.2 Results and discussion

The results obtained from the measurement and structural model were presented in the previous sections. In this section, results of the hypotheses are presented and discussed in relation to the research context, theories, and previous empirical findings. The hypotheses were developed and tested in order to identify the relationships between board characteristics, board processes, board task and corporate social responsibility activities related to legal and ethical dimensions. Summary of the findings from hypotheses being tested, are presented in table 6.2. Thirteen out of the twenty-five hypotheses are confirmed and accepted, while two are partially accepted and ten of the remaining hypotheses were not confirmed, and consequently rejected

6.2.1 Board Characteristics and Board Processes

The first sets of hypotheses are developed to answer the first research question formulated in chapter one, which investigates the influence of board characteristics on board processes variables. Research question number one asks: what is the relationship between board characteristics and board processes of the Nigerian listed firms? This involves examination of the effects of board size, board composition, board gender diversity, and CEO duality on board commitment, challenge and knowledge utilisation. Findings in this regard are discussed in this section.

The SEC (2011) Code prescribes board size not to be less than five but more importantly, "of a sufficient size relative to the scale of complexity of the company's operation" (p.9). Thus, the Nigerian governance system encourages firms to have board size suitable to their activities but the size should not be too small. The expectation is that appropriate board size improves corporate performance. However, the current study did not find relevancy of board size on board processes which consequently enhances corporate performance. H1a of this study predicted a positive relationship between board size and level of challenge among directors. However, the result shows a negative, but insignificant effect of the predictor variable on the outcome variable ($\beta = -0.078$, $t = 0.886$, $p > 0.10$). Therefore, the analysis shows no support for the hypothesis. H1b assumed a negative impact between board size and board level of commitment and H1c predicts a negative influence of board size on knowledge utilisation. In contrast to the hypotheses, the study finds inconclusive results, as the impact of board size on board level of commitment ($\beta = 0.072$, $t = 0.806$, $p > 0.10$) and knowledge utilisation ($\beta = 0.099$, $t = 1.345$, p = > 0.10) are positive, but not statistically significant. Similar to H1a, H1b and H1c are not confirmed.

In summary, results of the analysis show that board size has no significant influence on board processes variables. This is an interesting finding because, ideally, a large board is expected to present diverse knowledge, experience, opinions and ideas in the boardroom, which consequently is expected to trigger series of disagreements and conflict among board members, as well as difficulties in apprehending and using the knowledge available effectively (Forbes and Milliken, 1999).

Although the findings are not statistically significant, some possible explanations for the directional signs contrary to the expectations will be offered. A potential explanation for this positive (instead of negative), but inconclusive relationship between board size and knowledge utilisation, and board size and commitment found in this study, is that Nigerian boards are not large enough for the size to adversely affect the level of cohesiveness. The descriptive analysis conducted in this study shows that the average and median board size of the Nigerian board are 9.36 and 9 respectively, which is quite within the range of what is considered a normal board size of 10 for an effective board (Ntim *et al.*, 2017). Moreover, the Nigerian directors may offer less diverse knowledge and expertise, as they are likely to be excessively submissive to powerful directors (for example, CEOs) for directions. The negative, but non-significant influence found between board size and board challenge testifies to the notion that directors of the Nigerian firms are not too involved in questioning and challenging managerial activities.

The separation of duties between chief executive and chairperson is recognised widely and supported by many corporate governance codes, established in numerous countries, including Nigeria. Section 5.1b of the Nigerian SEC code (2011) governance code recommends that the position of Chairman and CEO shall be separated. The intention is to avoid a situation whereby one single individual (CEO) becomes too powerful and makes the other board members ‘bench warmers’, dependent and submissive. Agency theory postulates for a clear division of ownership and control (Berle and Means, 1932), so that check and balance can be guaranteed. Proponents of this theory believe that it is necessary to separate these two important roles, where the CEO leads the day to day activities of the firm, while the chairperson leads the board, as such the board would be independent of the executives.

However, in the Nigerian context, the separation of these two most important positions does not really matter. Although, the majority of the Nigerian listed firms complied with the corporate governance code requirement and exercised CEO non-duality, actual board independence is not guaranteed. Cases exist where CEOs are promoted to chairmen of the same firm among these listed firms (Adegbite, 2015), which results in total domination of the firm's affairs by these CEOs/Chairmen. Dulewicz and Herbert (2004) argue that for any benefits to be derived from CEO non-duality, the chairman should be a completely outside independent director. The current study shows some support for this argument, as hypotheses 3a, 3b and 3c predicted non-significant relationships between CEO duality and board level of commitment, challenge and knowledge utilisation in the boardroom. The results from the structural model show that CEO duality is negatively, but insignificantly related to board commitment ($\beta = -0.046$, $t = 0.647$, $p > 0.10$), board level of challenge ($\beta = -0.105$, $t = 1.104$, $p > 0.10$) and board ability to utilise knowledge available in the boardroom ($\beta = -0.071$, $t = 0.787$, $p > 0.10$).

The relationship between duality leadership structure and these board processes variables are all statistically insignificant, as predicted. Therefore, the hypotheses predicting the insignificant effect of board leadership structure in the Nigerian context are confirmed. Thus, H3a, H3b and H3c are all supported. In Nigeria, CEO duality may have insignificant relationships with all board processes variables because it is likely there is no real independence between the two positions.

Recently, board gender diversity is another area that has received greater attention in the corporate governance literature. Corporations are increasingly appointing female directors on their boards, even in Nigeria there is some progress in this regard. Some scholars opine that female directors improve open debate (Nielsen and Huse, 2010), increase efforts in board activities (Broadbridge *et al.*, 2006), add diverse knowledge in the boardroom (Zhang *et al.*, 2013), advance the firm's reputation (Bear *et al.*, 2010) and overall CSR activities (Harjoto *et al.*, 2015). However, the benefits of including female directors on the board are still ambiguous. This study finds that board gender diversity hinders knowledge utilisation significantly, but is statistically insignificantly related to board challenge and commitment. H4a predicted that a proportion of women directors on the board improve boards' level of commitment. H4b proposed that board gender diversity has a positive effect on board level of challenge and H4c hypothesised a negative relationship between board gender diversity and knowledge utilisation. The results from PLS-SEM algorithm only show support for H4c. board gender diversity have negative, but weak relationships on board level of commitment ($\beta = -0.020$, $t = 0.189$, $p > 0.10$) and board challenge ($\beta = - 0.036$, $t = 0.403$, $p = 0.10$). Moreover, the results show that a proportion of female directors on the board has a negative and significant effect on knowledge utilisation ($\beta = - 0.178$, $t = 2.314$, $p < 0.05$).

Therefore, this study concludes that board gender diversity is a detriment to board processes or at least not a key determinant of board processes, which in turn hinder board task and consequently decrease CSR activities. This finding is aligned with the discoveries of Ellwood and Garcia-Lacalle (2015) who found that a female proportion on the board of NHS Foundation Trusts (NHS FTs) in England did not influence the service quality.

A potential explanation for these findings could be the lack of a rigorous and transparent appointment process, as the majority of women (and men) directors are not appointed based on merit. Research evidence has shown that most of the women directors on the boards of Nigerian corporations are appointed based on personal ties and not because of competencies (Ujunwa, 2012). Thus, their abilities to challenge opinions of other dominant actors, ask probing questions, provide and utilise knowledge and expertise are in doubt. Additionally, female directors in Nigeria may not necessarily possess different experience and knowledge from their male counterparts. Huse *et al.* (2009) point out that only women with different knowledge and skills with their male counterpart are able to enhance board effectiveness.

Moreover, very few numbers of women are appointed on the board of the Nigerian listed firms. Most of the participants in this survey indicate that their boards have a single female director (see Chapter 5) and for any positive benefits of women inclusion on the board to manifest, a substantial number is required, rather than a token. Bear et al., (2010) argue that the influence of proportion of female directors is more salient when their numbers increase and have a more assertive, rather than minority voice. Jia and Zhang (2013) also concluded that multiple women, as opposed to a single woman, are more beneficial to quality decision making.

Board composition is the most debated and researched corporate governance topic. Post corporate scandals, various countries, including Nigeria, have focused more attention on board composition with emphasis on the proportion of NEDs on the board. The Nigerian corporate governance code emphasises that firms to have a board with majority board members to be NEDs and at least one to be an independent non-executive director. Nigerian firms are actually complying with the corporate governance code, as the majority of the board members are non-executive directors. The proportion of non-executive directors on the board is believed to address agency problems that may arise and provide critical resources, which in turn improves firm performance. This study predicts that an adequate proportion of outside directors improve board level of commitment, challenge and knowledge utilisation, which consequently lead to board-level and firm-level effectiveness. Specifically, H2a hypothesised a positive impact between board composition and board level of commitment, H2b proposed a positive relationship between board composition and level of challenge in the boardroom and H2c predicted board composition to have a positive effect on knowledge utilisation. However, in contrast to the study's hypotheses, the results from the structural model indicate that the proportion of NEDs (as proxy for board composition) has a negative effect on commitment (β = - 0.081, t = 0.661, $p > 0.10$), but not statistically significant. Moreover, board composition is found to have negative and significant influence on challenge among directors (β = - 0.116, t = 1,410, $p < 0.10$), and knowledge utilisation in the boardroom (β = -0.181, t = 2.307, $p < 0.05$). These findings contradict the study hypotheses. Thus, H2a, H2b and H2c are all rejected.

These findings could be attributed to the fact that NEDs of Nigerian boards lack independence. Okike (2007) reports that boards lack independence in Nigeria, as CEOs and chairmen appoint their family and friends as board members. For NEDs to be active, committed, and critical in opinions and effective in information usage, they should be completely independent from the influence of the CEO and should feel free to speak their minds. Westphal and Bednar (2005) explain that the lack of independence of directors is the main reason they cannot challenge the CEOs opinions about the viability of the existing strategy. Appointing incompetent and unqualified persons as NEDs in Nigeria (Ehikioya, 2009) is likely to be another factor that makes outside directors ineffective in Nigeria.

Another potential explanation for the lack of significant effect between outside directors and these board processes variables, is what Westphal and Bednar (2005) call, ‘pluralistic ignorance’. Pluralistic ignorance is a psychological bias, whereby each director is reluctant to raise concerns or disagree with opinions and ideas due to fear that their contribution may be rejected by other board members. This situation is worse where the directors lack independence. Each director is scared to make contributions which are against the opinions of the CEO who determines their appointments and remunerations.

In summary, this study predicts that board characteristics have significant and direct effects on the board processes variable and an indirect impact on board-level effectiveness, which consequently influences corporate social responsibility activities. However, the findings indicate that these board structures either have adverse effects or an insignificant effect on board processes variables which indirectly do not have any meaningful influence on board-level and firm-level effectiveness. Board commitment, challenge and knowledge utilisation were not sufficiently influenced by the independent variable (board size, CEO duality, board composition and gender diversity) as assumed, as all the R^2 of the endogenous variables are below 10 per cent.

6.2.2 Board Processes and Board Tasks

As there is no unanimity on the direct effect of board structure on firm performance from previous studies, board researchers have recently shifted their focus on opening the ‘black box’ to investigate the influence of board processes on board task effectiveness. This is what the current study does by addressing the second research question raised in chapter one. This research question intends to investigate the empirical relationship between board processes and board task (control and service tasks) in the Nigerian context. The results of the analysis to address this question are discussed in this section.

Six hypotheses were developed to test the relationship between board processes variable and board tasks effectiveness. The board level of commitment was proposed to have a positive influence on control (H5a) and service task (H5b); challenge was predicted to influence control task (H5c) and service task positively (H5d) and knowledge utilisation was assumed to have a positive relationship with control role (H5e) and service task (H5f).

Results from the structural model fully supported H5c and H5d, as board level of challenge positively and significantly influence board control task ($\beta = 0.186$, $t = 2.202$, $p < 0.05$) and service task ($\beta = 0.252$, $t = 3.372$, $p < 0.001$). Similarly, H5e and H5f are confirmed, as knowledge utilisation in the boardroom is found to have a positive and strong effect on control task ($\beta = 0.228$, $t = 2.761$, $p < 0.05$) and service task ($\beta = 0.372$, $t = 4.989$, $p < 0.001$). However, board level of commitment is only significantly related to service task ($\beta = 0.136$, $t = 1.821$, $p < 0.10$), not control task. The relationship between commitment and control task is positive, but not statistically significant. Thus, H5a is supported, while H5b is rejected. This supports, as well as contradicts Payne et al., (2009) research which reports that maximum time spent on activities by directors have a positive and significant effect on both board control and service tasks.

The insignificant result found on the relationship between board commitment and control task could be that Nigerian directors are more active in providing resources to the firm, than monitoring the activities of powerful CEOs. It is probable directors are appointed on the board due to their closeness to the CEO and personal connections in the society, as such the oversight function of the board, required by agency theory, may be weak, but more emphasis is given to other roles, such as strategy, link to society as well as advice and counsel (as desired by resource dependency theory) which are directly related to board service task. Recently, a study in New Zealand evinces that directors have started to realise the importance of other roles, such as service task, rather than the control role emphasised by agency theory (Ingley and Van Der Walt, 2005).

Other board processes variables (challenge and knowledge utilistion) have a positive and statistically significant influence on both board tasks (control and service). Specifically, directors' ability to ask questions, disagree with opinions and ideas related to work presented by other board members improves both effective control and provision of resources needed for the firm. These board processes were found to have have greater influence on board control and service tasks. Specifically, board level of challenge and knowledge utilisation were able to explain 11.7 and 0.290 per cent of the total variances of the control and service roles, respectively. This contradicts works of Minichilli et al., (2012) and Zona and Zattoni (2007) that failed to find any significant effect of cognitive conflict (challenge) on the board roles. However, the findings are consistent with previous board research in Italy that reported the positive and significant relationship between cognitive conflict (challenge) and board monitoring and service/strategy tasks (Zattoni *et al.*, 2015).

This study's finding indicates that proper use of knowledge available in the boardroom assists boards in monitoring and provision of resources to the firm. In other words, a clear division of labour among board members, access to information available by all directors and coordination of available knowledge are all key determinants of board task effectiveness. This is similar to what other board processes scholars have reported (Wan and Ong, 2005; Zona and Zattoni, 2007; Minichilli *et al.*, 2012). Similarly, Andrés-Alonso *et al.* (2010) reported that the availability of diverse knowledge, experience in the boardroom and active engagement attitudes of directors to utilise knowledge improved efficiency (effective resource allocations) of 119 Spanish Foundations.

6.2.3 Board Tasks and Corporate Social Responsibility

The importance of linking corporate governance with corporate social responsibility has been documented by various authors (such as Jamali et al., 2008; Ntim and Soobaroyen, 2013). A large number of the past scandals were attributed to the 'cutting-corners', unethical and irresponsible behaviors of directors. These directors targeted higher short-term economic performance, which is directly linked to their remuneration. Nowadays, companies have started to realise that much emphasis on long-term, rather than short-term, performance should be given attention and this can be achieved through long-term strategies initiatives, such as CSR programmes.

Stakeholder theory posits that an effective board should be able to consider the interest of various groups, rather than shareholders alone. The theory contends that firms should operate socially, ethically and morally for the benefits of all those that affect or can be affected by the activities of the corporation (Freeman, 1984). This study investigates the link between board task and corporate social responsibility (ethical and legal) activities directly. In this regard, a specific research question formulated in this study is: to what extent do board tasks influence corporate social responsibility (legal and ethical) activities in the context of the Nigerian listed firms? Moreover, the indirect effects of board task on the relationships between board processes and corporate social responsibility are also investigated.

As the previous studies on CSR received criticism on the basis of combining negative and positive CSR or neglecting negative CSR (Arora and Dharwadkar, 2011), this thesis concentrates on negative CSR (ethical and legal) social responsibility activities. The relationships between each board task and each dimension of negative CSR are examined.

A series of hypotheses were developed and tested to find the relationships between board tasks and corporate social responsibility (legal and ethical) activities. H6a and H6b predicted that board control task has a positive influence on CSR legal and CSR ethical activities. The structural model and bootstrapping test show full support for both H6a and H6b. Board control task is found to have a positive and significant effect on CSR legal ($\beta = 0.231$, $t = 2.987$, $p < 0.05$) and CSR ethical ($\beta = 0.166$, $t = 2.767$, $p < 0.05$) activities.

Hypotheses 7a and 7b predicted that board service task improves CSR legal and CSR ethical activities respectively. The analysis fully confirmed both H7a and H7b; the path coefficients are positive and statistically significant. Service task has a positive and strong effect on CSR legal ($\beta = 0.578$, $t = 7.333$, $p < 0.001$) and CSR ethical ($\beta = 0.657$, $t = 10.983$, $p < 0.001$) activities. This clearly demonstrates that the ability of board members to perform control and service tasks effectively leads to better corporate social responsibility (legal and ethical) activities.

The results of R squares indicate that board control and service tasks account for 50 and 55per cent of the total variances of CSR legal and ethical activities, respectively. Moreover, consistent with the research hypotheses, the results show that board control and service roles have important explanatory power on legal and ethical corporate social responsibility activities. This is an interesting finding, as the result contradicts the classic agency theory perspective. The theory views the board as an internal monitoring mechanism, which mitigates the utility maximisation of the agent, and upholds the main aim to maximise shareholders' wealth, which is consistent with the classical economy argument of Milton Friedman. In this regard, expenditures related to CSR are considered as a waste of corporate assets and not in the best interest of the shareholders. Therefore, effective board control task should mitigate CSR activities. In a recent study from China, it was found that board structure designed based on conventional agency theory have insignificant relations with corporate social responsibility performance (Lau *et al.*, 2016). Moreover, Brown et al., (2006) argue that firms with a greater proportion of outside directors reduce cash contribution to charity. However, it is essential to note that agency theory does not only address the agency problems that arise in a principal-agent relationship, rather it also intends to minimise shareholder-stakeholders conflict that may arise (Ntim and Soobaroyen, 2013; Raelin and Bondy, 2013).

Ideally the board monitoring role is directly linked to short-term performance, rather than long-term performance (Melkumov *et al.*, 2015). However, this study's findings show otherwise, as control task is positively (weakly) linked with CSR which likely leads to long-term performance. This means that the higher the monitoring capabilities of the board, the more the firm engages in corporate social responsibility (ethical and legal) activities. A potential explanation for this positive effect of control role on CSR is that it is likely main concern of the directors of the Nigerian listed firms is to maximise profit, as a result they engage in monitoring of the executives to ensure the firm operates in an ethical and responsible manner, so as to avoid violation of laws and other unethical activities that could reduce profits through undesirable consequences, such as payments of fines, penalties and loss of corporate reputation. Thus, Nigerian boards may likely view CSR as a strategy that improves the firms' financial performance and shareholders' funds (Hong *et al.*, 2016), especially in the long-term.

Therefore, in this study, effective board control role is linked positively with CSR activities. This is consistent with the study of Ntim and Soobaroyen (2013) that find positive influences of control mechanisms (such as the proportion of NEDs) on CSR disclosure of South African non-financial listed firms.

As mentioned earlier, like board control task, service role has a significant influence on corporate social responsibility on both ethical and legal dimensions. However, the influence of service task on CSR activities is stronger than that of control task. This is not surprising as advice and counsel, strategy formulation and provision of critical resources are expected to strongly relate to corporate social responsibility. This is consistent with the findings of other researchers, such as Zhang et al., (2013), Haniffa and Cooke (2005) and Oh et al., (2006). Taking stakeholders and resource provisions perspectives, boards are expected to serve as 'boundary spanners' in which the interest of various stakeholder groups are satisfied and at the same time co-opt critical resources and reputation from the society to the firm. As such, it is quite possible that the more service task provided by the directors, the more likely the firm engage in corporate social responsibility activities.

6.2.4 Test of Mediation

This study has serial and double mediations. The assumptions are that board processes variables mediate the relationship between board characteristics and board task, and board processes have an indirect effect on corporate social responsibility through board roles. The RQ4 is developed in order to find the mediating effect of board processes on the relationship between board characteristics and board tasks. RQ5 intends to examine the indirect influence of board tasks on the relationship between board processes and CSR (legal and ethical) activities in the Nigerian context. Mediation analysis is run with the aid of PLS-SEM (SmartPLS software). To investigate the significance of mediating effects, a bootstrapping procedure is employed.

Baron and Kenny (1986) stated four conditions necessary for mediation effect: there must be positive and significant relationships between (1) exogenous and endogenous variables, (2) exogenous with mediators, (3) mediators with endogenous variables, and lastly, (4) the effect of exogenous variables must change when controlling for the mediating variables. This study's findings provide support for the condition necessary for mediation in the relationships between board processes, board task and CSR (legal and ethical) activities, but not on the path coefficients between board characteristics, board processes and board task.

Board characteristics have no significant effect on board processes; therefore, board processes variables do not mediate the relationship between board characteristics and board task as H8 predicted. With the exception of board size, that has positive (insignificant) effects on knowledge utilsation and commitment, all other board characteristics variables have negative (mostly insignificant) influences on the board processes variables. Thus, one of the condition necessary for mediation is not met (Baron and Kenny, 1986), therefore, H8 that predicts a positive and signifacant mediating effects of board processes on the relationship between board characteristics and board task is not supported. This is consistent with the work of Wan and Ong (2005) in Singapore and contradicts Neilson and Huse (2010) who argue board processes variables mediate the relationship between board gender diversity and strategic controls. Additionally, a moderation test conducted indicated insignificant effect of each board process variable on the relationship between board characteristics and board tasks (see Appendix M).

Investigating the mediating effect of board tasks on the relationship between board processes and CSR (legal and ethical) activities, two hypotheses are tested. Hypothesis 9a predicts that board control role mediate the relationship between board processes and CSR (legal and ethical) activities, and H9b assumes board service task to have an indirect influence on the relationship between board processes and CSR (legal and ethical) activities. The analysis indicates that both hypotheses H9a and H9b are partially supported as these board tasks have different effects on the link between board processes and CSR (legal and ethical) activities. This contradicts the work of Payne et al., (2009) which report that the mediation effect of board effectiveness on the board-firm performance is not detected.

The board control task mediates only the relationship between knowledge utilsation and CSR activities, but it has no mediating effect on the link between other board processes and dependent variable. Therefore, H9a is partially supported. For the relationship between board level of commitment and corporate social responsibility only service, not control task, fully mediates the relationship at 81 per cent (see Table 6.1).

The path coefficient between commitment and control task is not statistically significant and subsequently, did not meet one of the causational conditions introduced by Baron and Kenny. Therefore, control task do not mediate the relationship between commitment, a board process, and CSR activities. However, service task mediates the relationship between commitment and CSR legal and ethical activities. As indicated in figure 6.1, the total (direct) effect between commitment and CSR ethical activities (0.250. t = 3.042, $p < 0.05$) and the indirect effect through service task (0.246 * 0.719 = 0.177, t = 2.921, $p < 0.05$) are all positive and significant. Additionally, the direct effect of commitment on corporate social responsibility legal activities (0.255, t = 3.445, $p < 0.001$) and indirect effects through service task (0.246 * 0.659 = 0.162, t = 2.831, $p < 0.05$) are positive and significant. The decrease of effect between board commitment and the two dimensions of corporate social responsibility activities when the mediator (service task) is included in the model (Figure 6.2) indicates that board service task serves as a variable that mediates the relationship between these exogenous and endogenous constructs. A previous study has also shown that there is link between board processes and CSR activities through effective management of resources available in the firm (Coombes et al., 2011).

This means that the relationship between the two variables is not direct, but rather an indirect effect through service task. Linking resource dependency and stakeholder theories, directors' engagements and efforts toward their responsibilities improves their ability to acquire resources for their firm and offer useful advice and counsel to the management, which in turn leads to activities related to CSR legal and ethical dimensions because of the avalability of resources to satisfy various stakeholders claims (Zhang et al., 2013).

Moreover, those boards that are committed and challenge opinions of other directors in order to satisfy the interest of all stakeholders rather than shareholders alone, are more likely to improve strategic participation roles such as CSR initiatives which improve external legitimacy and reputation (Melkumov et al., 2015).

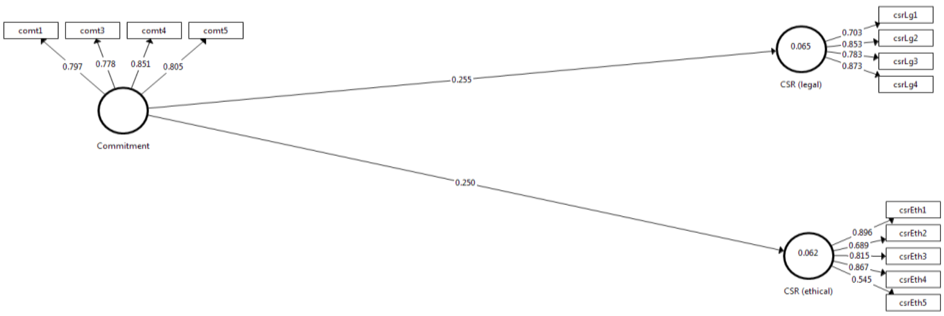

Figure 6.1: The Total Effect of Commitment on CSR Legal and Ethical

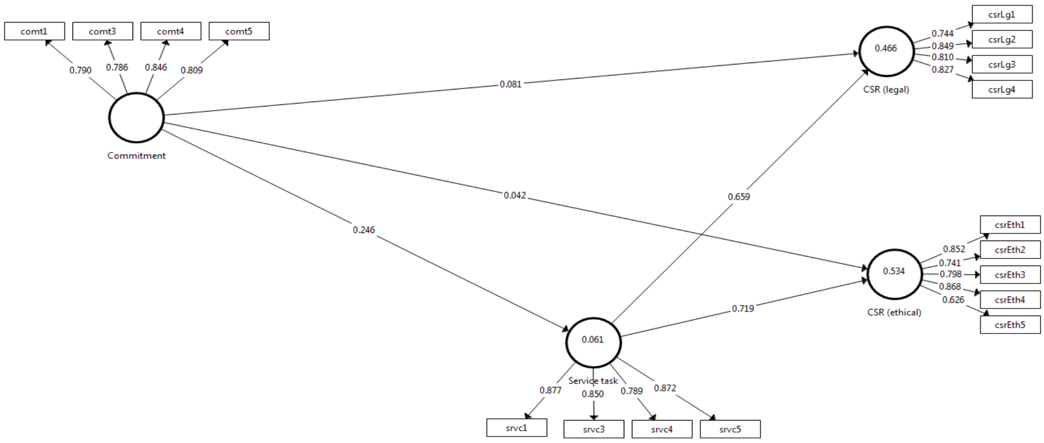

Figure 6.2: The Indirect Effect of Commitment through Service Task on CSR Legal and Ethical activities

Surprisingly, board control and service tasks serve as suppressors, rather than mediators on the relationship between board challenge in the relationship between ‘challenge’ as an independent variable, and CSR ethical and legal activities, as dependent variables. The total effect of challenge on CSR ethical activities ($\beta = 0.261$, $t = 3.424$, $p < 0.001$) and legal ($\beta = 0.247$, $t = 3.231$, $p < 0.001$) are positive and significant (Figure 6.3). Similarly, the indirect effect of the independent variable on CSR ethical activities through control task (0.243 * 0.169 = 0.041, $t = 2.064$, $p < 0.05$) and service task (0.353 * 0.665 = 0.235, $t = 4.272$, $p < 0.001$) are positive and statistically significant (Figure 6.4). Moreover, the indirect effects of challenge through control task (0.243 * 0.233 = 0.057, $t = 1.930$, $p < 0.05$) and service task (0.353 * 0.584 = 0.206, $t = 4.015$, $p < 0.001$) on corporate social responsibility (legal) activities are positive and strongly significant.

As observed, when control and service tasks are included in the model as mediators, the positive direct relationship between the predictor (challenge) and criterion (CSR) changed to a negative sign. Suppression occurs in a situation whereby the direct and indirect effects are of opposite signs (Tzelgov and Henik, 1991). In this case, both control and service tasks serve as suppressors as the indirect effects are positive and statistically significant, while the direct effects are negative and statistically significant. Board control and service roles quell the positive and significant relationship between the exogenous and endogenous variables when added in the model. Thus, board members’ ability to challenge each other’s opinions and ideas through asking probing questions, open debate, brainstorming and disagreeing have a direct influence on corporate social responsibility, without the mediating effects from other factors, such as control and service tasks. This is consistent with the second layer of agency theory (shareholder-society relationship) introduced by Raelin and Bondy (2013), which implies that effective monitoring of executives should be performed in the best interests of the host community.

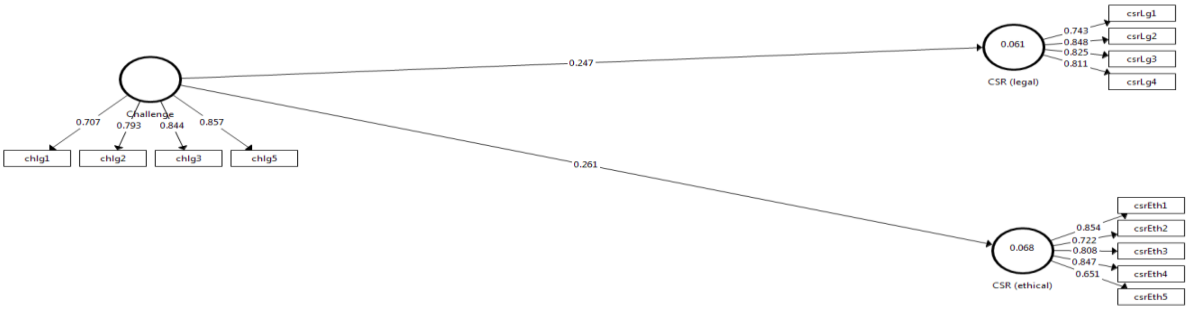

Figure 6. 3: The Total Effect of Challenge on CSR Legal and Ethical Activities

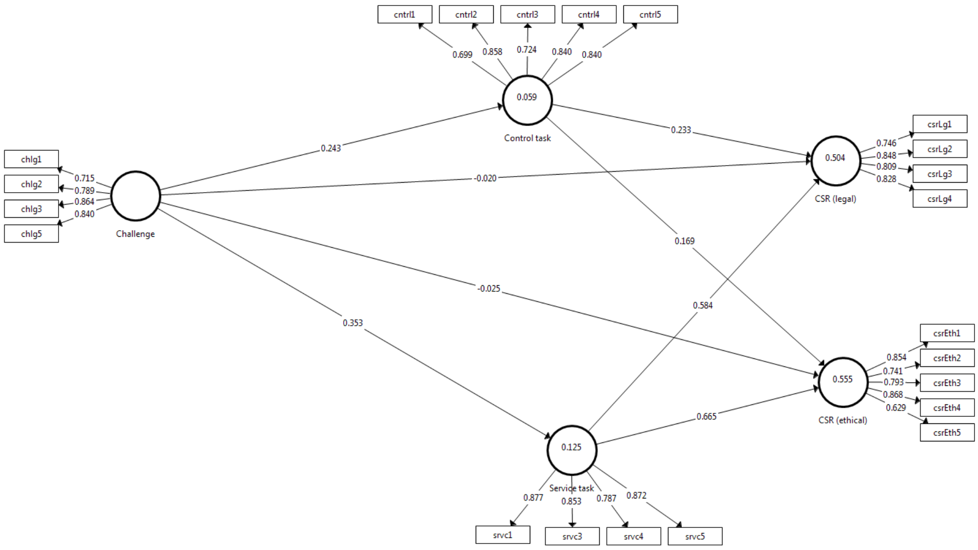

Figure 6. 4: The Indirect Effects of Challenge on CSR through Control and Service Tasks

The mediation analysis signifies the importance of control and service tasks as mediators on the relationship between knowledge utilisation and CSR legal and ethical activities. The total effect of knowledge utilisation on the CSR ethical (β = 0.455, t = 6.858, p < 0.001) and legal (β = 0.442, t = 5.989, p < 0.001) activities are all positive and strong (figure 6.3a). The indirect impact (figure 6.3b) of the exogenous variable on CSR legal activities through control (0.274 * 0.217 = 0.060, t = 2.038, p < 0.05) and service (0.448 * 0.519 = 0.233, t = 4.397, p < 0.001) tasks are all positive and statistically significant. Similarly, the indirect effect of knowledge utilisation on CSR ethical activities through control (0.274 * 0.153 = 0.042, t = 1.933, p < 0.05) and service (0.448 * 0.600 = 0.269, 5.526, p < 0.001) tasks are positive and statistically significant.

This implies that the more a board shares knowledge and coordinates the information available in the boardroom, the higher they perform their tasks (Zhu et al., 2016). These tasks include oversight function (Jensen and Meckling, 1976) and provision of reputation as well as legitimacy (Mallin and Michelon, 2011), which is possible with effective strategies on corporate social responsibility (legal and ethical) activities. The mediation effect of a service task is greater than that of the control role on the relationship between board knowledge utilisation and corporate social responsibility activities (see Table 6.1).

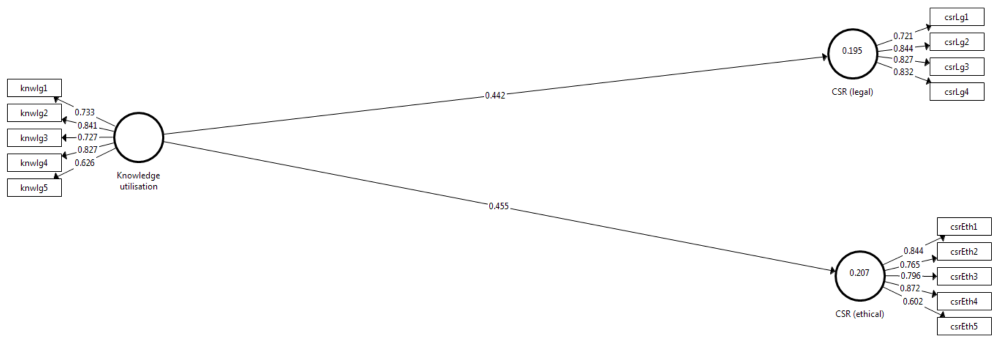

Figure 6. 5: The Total Effect of Knowledge Utilisation on CSR Legal and Ethical Activities

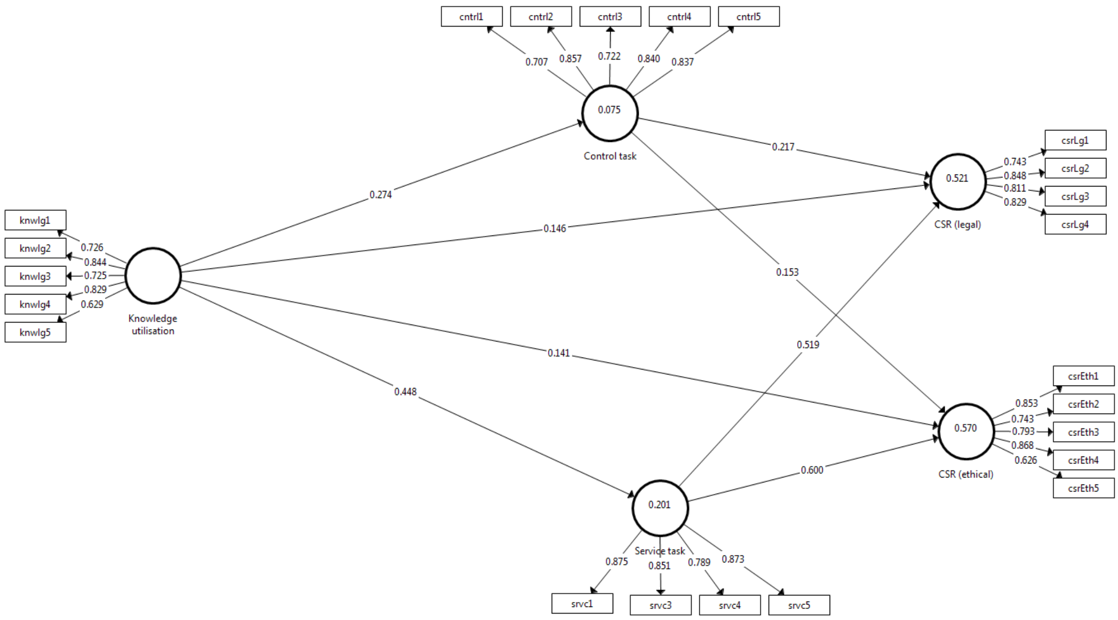

Figure 6. 6: The Indirect Effect of Knowledge Utilisation on CSR through Control and Service Tasks

In summary, the decrease in the influence of the direct relationships between exogenous and endogenous variables, when the mediators are included in the model (see Figures 6.2 and 6.6), indicates that board control and service tasks, to some extent, serve as variables that mediate the relationship between these board processes (commitment and knowledge utilsation) and corporate social responsibility activities along legal and ethical dimensions.

In order to determine the magnitude of the indirect effect of these mediators in relation to the total effects, Variance Accounted For (VAF) is estimated. According to Hair Jr *et al.* (2016), VAF can be calculated as:

$$AVF = \frac{indirect\ effect}{total\ effect}$$

A VAF of less than 20 per cent is regarded as non-mediation and 80 per cent and above considered full mediation. A VAF above 20 per cent, but less than 80 per cent is termed as partial mediation (Hair Jr *et al.*, 2016). Table 6.1 below summarises the size of mediation effect of each mediator included in the model, and the VAF of each mediator is also calculated and presented in the table.

The results show that service task has perfect mediation effect on the relationship between board 'commitment' and CSR ethical activities. Board (control and service) tasks has partial mediation effects on the relationship between knowledge utilisation and CSR legal and ethical activities.

Table 6.1: Results of the Mediating Effects of Board task on the Relationship between Board Processes and CSR

Independent variable	**Mediator**	**Dependent variable**	**t-statistics**	**p**	**size**
Commitment	Service task	CSR ethical	2.921	.04	0.81%
Commitment	Service task	CSR legal	2.831	.05	0.67%
Knowledge utilisation	Control task	CSR ethical	1.933	.05	0.23%
Knowledge utilisation	Service task	CSR ethical	5.526	.00	0.66%
Knowledge utilisation	Control task	CSR legal	2.038	.04	0.29%
Knowledge utilisation	Service task	CSR legal	4.387	.00	0.61%

Table 6.2: Summary of the Results for Hypothesis Testing

Hypotheses	Hypotheses Statements	Findings	Accept/Reject
H1a	Large board size is positively related to the board level of challenge	Negative (non-significant) relationship	Rejected
H1b	Large board size is negatively related to the board commitment	Positive (insignificant) effect	Rejected
H1c	Large board size is negatively related to the board knowledge utilisation	Positive (insignificant) relationship	Rejected
H2a	Board composition is positively related to board level of commitment	Negative, but insignificant relationship is discovered	Rejected
H2b	Board composition is positively linked to challenge in the boardroom	Negative and statistically significant relationship is found	Rejected
H2c	Board composition is positively related to board knowledge utilisation	Negative and statistical effect is found	Rejected
H3a	CEO duality has no significant effect on board level of commitment	insignificant (positive) relationship	Accepted
H3b	CEO duality has no significant influence on level of challenge in the boardroom	Insignificant (negative) effect	Accepted
H3c	CEO duality has an insignificant effect on board knowledge utilisation	Insignificant (negative) effect	Accepted
H4a	A proportion of women directors on the board is positively related to the board level of commitment	Negative, non-significant relationship is found	Rejected

H4b	A proportion of women directors on the board is positively related to challenging among directors	Negative, but weak relationship is discovered	Rejected
H4c	A proportion of women directors on the board is negatively related to board knowledge utilisation	Negative and significant effect between the variables is found	Accepted
H5a	Board level of commitment is positively related to board control role	Positive, but weak relationship is found	Rejected
H5b	Board commitment is positively linked to board service role	Positive and statistically significant relationship	Accepted
H5c	Challenge has a positive influence on board control role	Positive and strong relationship is found	Accepted
H5d	Challenge is positively related to board service role	Positive and significant effect is found	Accepted
H5e	Knowledge utilisation is positively associated to board control role	Positive and significant relationship is discovered	Accepted
H5f	Knowledge utilisation has a positive effect on board service role	Positive and significant influence is found	Accepted
H6a	Board control role influences corporate social responsibility (legal) activities	Significant and positive relationship between the variables	Accepted
H6b	Board control role is positively related to corporate social responsibility (ethical) activities	Positive and significant findings are discovered	Accepted

H7a	Board service role has a positive effect on corporate social responsibility (legal) activities	Strong and positive relationship is found	Accepted
H7b	Board service role is positively connected to corporate social responsibility (ethical) activities	Positive and significant relationship between service role and CSR (ethical)	Accepted
H8	Board processes mediate the relationship between board characteristics and board tasks	Board processes do not mediate the relationship between Board characteristics and board task	Rejected
H9a	Board control role mediate the relationship between board processes and CSR (legal and ethical) activities.	Control task mediates the relationship bewteen knowledge utilsation and CSR, but not other board process and CSR.	Partial supported
H9b	Board service task has an indirect influence on the relationship between board processes and CSR (legal and ethical) activities.	Service task mediates the relationships between board commitment, knowledge utilisation and CSR, but serves as supperssors on the link between challenge and CSR	Partial supported

6.3 Contributions

There is abundant literature on board effectiveness, however what makes a board effective is still a puzzle. Hence, there is a need to clearly and unambiguously understand what makes these corporate leaders effective. A large number of studies on this subject relied heavily on board characteristics as the main determinants of board effectiveness and findings are inconclusive. These mixed results were attributed to the traditional input-output approach followed by the researchers (Daily *et al.*, 2003). This study makes a contribution to board effectiveness beyond the traditional approach that solely depends on board characteristics variables and therefore, contributes to the existing board literature.

In addition, the majority of board literature treat boards as a 'black box' (Daily *et al.*, 2003), whereby board characteristics are expected to directly influence corporate performance. Recently, researchers were called to open the 'black box' and investigate the influence of board processes on the structure-performance relationship (Pettigrew, 1992; Pye and Pettigrew, 2005; Huse *et al.*, 2011). The current study makes a contribution to this streamline of research, as an input-processes-output approach is employed to study board effectiveness. Although some researchers open the 'black box' to investigate board effectiveness, findings are relevant mostly for the developed countries. The only exception is a doctoral thesis of Ogbechie (2012) which limits its inquiries at board-level effectiveness and used limited variables. The current study contributes by providing evidence relevant to the developing market. Moreover, despite the fact that corporate governance scholars are increasingly conducting research on boards, much emphasis is given to examining the influence of boards either on board-level or firm-level effectiveness. Studies that consider both levels of board performance are rare. This study investigates the influence of boards on board level (board task) and firm-level (CSR activities). Therefore, a comprehensive picture of board effectiveness is presented.

As mentioned earlier, the importance of linking corporate governance and corporate social responsibility is highlighted by many researchers (Sánchez *et al.*, 2011; Jizi *et al.*, 2014; Harjoto *et al.*, 2015). Consistent with these scholars, this study argues that a board's ability to improve CSR activities should be considered as firm-level effectiveness, rather than narrowly focusing on short-term financial performance. Therefore, the study introduces a new input-processes-output model that includes CSR activities. Most of the studies on these streamline of research investigate the relationships between board structure, processes and task effectiveness (Wan and Ong, 2005; Zona and Zattoni, 2007; Bettinelli, 2011). This thesis is an extension to these studies, therefore making a relevant contribution to this literature.

Moreover, the findings of this research provide information to policymakers and boards on what directors do to influence their effectiveness and what the impacts are of board task on corporate social responsibility activities in the Nigerian corporate environment. The methodology employed, specifically, partial least squares structural equation modeling (PLS-SEM), a non-parametric analysis tool, makes this study the first in Nigeria that investigates direct and indirect relationships between board characteristics, board processes, board task and corporate social responsibility activities of the firms listed on the Nigerian Stock Exchange.

6.4 Policy Implication

Post corporate scandals of a number of large firms, both in Nigeria and elsewhere around the world, the Nigerian government intensified efforts to ensure best governance practices are established and companies comply with such practices, in order to prevent reoccurrence of similar abuses that led to previous corporate crises. The board of directors' effectiveness is the main target of various corporate governance codes issued by the Security and Exchange Commission for the Nigerian public listed firms. For example, SEC code (2011) code recommends board size not be less than five, but should be an appropriate size relative to the complexity of the firm's operations. The code also recommends boards to be composed of executive and non-executive directors with the majority to be NEDs. Similarly, to ensure boards are free from the influence of the executives, the code emphasises that the two leadership positions should be separated and more than two family members should not sit on a particular board at the same time. The idea behind all these provisions is to guarantee board independence which is assumed to aid the board in performing their duties effectively. However, the current study provides evidence that board internal processes, not board structure, are the prime determinants of board effectiveness (Wan and Ong, 2005; Zona and Zattoni, 2007), which in turn improves firm-level effectiveness. Specifically, this study finds that in Nigeria, board size, the proportion of NEDs, board gender diversity and separation of duties between CEO/MD and chairman, are less important than boards internal working process in determining board effectiveness. Consistent with Roberts et al., (2005), this study argues that board characteristics are conditions that may necessarily lead to board effectiveness, but it is the actual directors' commitment, ability to challenge and adequate use of knowledge available in the boardroom that serve as a prerequisite of board effectiveness. Therefore, policymakers should not restrict their focus on board structure instead, other factors such as internal functioning need to be considered.

6.5 Limitations and Future Directions

Studies that investigate the inner working of boards and similar groups suffered limitation associated with low response rate (Zona, 2015). Nigerian board members are very difficult to reach, the majority of these corporate leaders are high caliber individuals in the society with tight schedules on a daily basis. Recent cases of kidnapping and insecurity, which is so rampant in Nigeria, make access to board members extremely difficult. The usable responses of 189 seems low for a population of 1,430 directors of firms listed on the Nigerian Stock Exchange. Future studies should consider a higher response rate.

Secondly, another limitation of the current study is the number of variables used. the research is limited to only those board characteristics variables termed as 'usual suspect'. Future studies should consider using other board structure variables such as directors' educational background, board ethnicity and age diversity. Similarly, a limited number of board processes variables were used. Future scholars to assess the influence of other board functioning variables. Moreover, only ethical and legal corporate social responsibility dimensions are considered as dependent variables in this study. Future studies should include other dimensions of CSR.

Other limitations of this study include those associated with the shortcomings of the self-reporting survey and generally, the quantitative methodology adopted. The responses collected from directors may not represent reality, but rather misleading answers. Moreover, the research could have collected data of independent, mediators and dependent variables from different sources (such as secondary data), rather than a single source in order to minimise common method bias. Similarly, collecting archival data to measure some variables could have provided enough space to measure other concepts/variables on the quationnaire. Additionally, despite the model is complex and has series of mediators, some variables such as industry type and firm size could have been controlled. Future research should address these limitations. Lastly, other scholars should study board internal functioning through different methodologies, such as in-depth qualitative interview and participant observations.

6.6 Concluding Comments

Research on board of directors has continued to receive condemnation due to a narrow focus on the direct relationship between board structure and firm performance. This direct input-output approach has been challenged by many scholars and calls have been made to open the ‘black box’ to clearly understand board functioning. Ideally, studies that focused on distal measures of board effectiveness, relied on firm-level performance, such as financial outcome, while scholars that open the ‘black box’ focus on proximal measures of board-level performance (Pugliese *et al.*, 2015) such as task performance. Nonetheless, the importance of opening the ‘black box’ to know exactly how boards of directors function is recently emphasised, as the reliance on distal measures led to ambiguous findings.

Roberts et al., (2005) claimed that board structure serves as a condition that determined board effectiveness, but further argue that it is not the structure *per se* that determines board effectiveness, rather the actual conduct or behaviours of directors. The current research agrees with this view and argues that it is not the board structure *per se* that determines board effectiveness, rather the level of directors' commitment, challenge and knowledge utilisation. The study opens the 'black box' of the boards of listed firms in Nigeria. Specifically, the relationships between board characteristics, board processes, board task and corporate social responsibility (legal and ethical) activities are examined. The results of this study show that board processes are more antecedents of board effectiveness than board structures, which is consistent with what Andrés-Alonso *et al.* (2010) and other scholars reported.

Andrés-Alonso and his colleagues find that traditional board structures, such as board size and board composition has a questionable impact on the organisational efficiency of 119 Spanish Foundations, but the availability of diverse knowledge and experience in the boardroom and active engagement attitudes of directors to utilise the knowledge improve the Foundations' efficiency (effective resource allocations). Similar findings were also reported by previous scholars, such as Wan and Ong (2005) from Singapore, and Zona and Zattoni (2007), and Minichilli et al., (2009) from Italy. These unambiguous findings coming from Spain, Singapore, Italy and now Nigeria, which suggest that board' internal working processes are important factors that any researcher investigating board effectiveness should not ignore.

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APPENDICES

Appendix A: Ethical Approval

Research Ethical Approval - Abubakar Zayyana Inbox x

Ram Ramanathan <Ram.Ramanathan@beds.ac.uk> 04/02/2016

to me, Socrates, Sandar, Research

Dear Abubakar,

BMRI Research Ethics Approval No. BMRI/Ethics/2015-16/008

Thanks for sending the revised ethics form. The BMRI Research Ethics Committee has considered your application for Ethics approval for your research project, and is satisfied that you have taken adequate care of ethical requirements. Therefore, I am happy to provide ethics clearance for this project in my capacity as the Chair of the BMRI Ethics Committee.

Since you have sent your ethics application in PDF format, I am unable to provide my approval in the ethics application. Please keep this email as a proof of ethics approval.

While executing your project, please ensure that you adhere to the ethics principles of the University (http://www.beds.ac.uk/research-ref/rgs/research-ethics) at all times.

Please note that if there is substantial change in your research project, you may have to seek ethical approval again.

The BMRI Research Ethics Committee wishes you success on your interesting research project.

Since this project is not externally funded, this clearance is not forwarded to the University Research Ethics Committee for further approval.

I am copying this email to RGS for inclusion in your student record.

Regards
Ram

Appendix B: Consent letter

Beyond the surface: Board of Directors' effectiveness relating to task and corporate social responsibility activities in Nigeria

This is a study which serves as part of my doctoral research in collaboration with the Business Management Research Institute (BMRI), University of Bedfordshire, United Kingdom. The main purpose of this survey is to find what actually makes boards effective in emerging economies like Nigeria. The study intends to investigate the impact of board processes on the relationship between board characteristics, board task and corporate social responsibility activities in Nigeria.

Board effectiveness has a significant impact on the corporate environment and country's economy especially in a developing country like Nigeria. Therefore, understanding the factors responsible for board effectiveness is imperative. The study aims at investigating and providing a profound insight into what makes boards effective in the Nigerian context.

Therefore, I would like to ask your cooperation in order to achieve the aim of this study. Kindly, answer all questions on this questionnaire, it should not take you more than seven minutes to complete. It is important to know that participation is voluntary and that any information provided will remain absolutely confidential and will only be disclosed to the academic researchers involved in this study. Your name and that of your organisation will not be mentioned in this report.

If you require additional information regarding this research, please feel free to contact me at the following address. If you would like to receive an executive summary of this study's findings, please do let me know.

Abubakar Mohammed Zayyana
Department of Law and Finance
Luton Campus, University of Bedfordshire
Bedfordshire, United Kingdom
LU1 3JU
Tel:08036833207, + (44)07553775272
Email: abubakars.gobir@yahoo.com
Abubakar.zayyana@study.beds.ac.uk

For further inquiry about this study, kindly contact the research supervisor at the following contact address:

Dr Sandra Win
Senior Lecturer in Banking and Finance
Department of Law and Finance
Luton Campus, University of
Bedfordshire, United Kingdom
Email: Sandar.win@beds.ac.uk

Appendix C: Participant Information Sheet (PIS)

1. Research project title

Beyond the Surface: Board of directors' effectiveness relating to task and corporate social responsibility activities in Nigeria

2. Invitation

I would like to invite you to take part in a research that intends to investigate the factors responsible for board effectiveness in Nigeria. When making your decision about participation, it is essential to understand the reason behind the choice of this subject, and the research aims. Kindly read the following information and feel free to enquire in case you need further clarification.

3. Purpose of the research

The purpose of this research is to investigate board effectiveness in Nigeria. The study intends to establish a relationship between board characteristics, internal board processes, board task and corporate social responsibility activities for the case of Nigerian listed firms. This research is part of my doctoral dissertation.

4. Choice of participant

The target participants are directors of firms listed on the Nigeria Stock Exchange (NSE). You are chosen because your company is among those companies listed on the NSE and the choice of participants has been made on the basis of expertise, knowledge and experience about the topic under investigation.

5. Participation

If you choose to participate, an interview will be conducted and it will not be more than 45 minutes long.

6. Withdrawal

Participation is voluntary. If you agree to take part, you will be asked to sign a consent form. Choosing to participate in this study does not restrict your right to withdraw at any time without disclosing the reason for doing so. If you decide to withdraw from this study, the information and data collected from you to date will be destroyed. Similarly, your name will be removed from the study files.

7. Risks

There are no potential risks, anticipated discomfort or inconvenience should you choose to participate in this study.

8. Benefits

The information gathered from the study will help the researcher to understand the board internal processes and board task applicable in the Nigerian context. Although a direct effect on participants is difficult to be precisely identified, the study will produce results that will provide important insight and will contribute to the understanding of the corporate governance system in Nigeria particularly in terms of board effectiveness.

9. If there is a problem

Please contact me at 08036833207 if you need to raise a concern/complain. For more formal complaints you can contact the director of this study Dr Sandar Win at Sandar.Win@beds.ac.uk.

10. Confidentiality

All the information you provide will remain absolutely confidential, and would only be disclosed to the academic researchers involved in this study.

11. Study results

The findings of this study will be used for my PhD thesis and may be published in some journal articles. If you want have a copy of the findings please do let me know through my contact below.

12. Further information

For further information about this study contact me at the following contact address:

Abubakar Mohammed Zayyana

Department of Law and Finance

Luton Campus, University of Bedfordshire

Bedfordshire, United Kingdom

LU1 3JU

Tel:08036833207; + (44)07553775272

Email; abubakars.gobir@yahoo.com;

abubakar.zayyana@study.beds.ac.uk

Appendix D: Informed consent form

I have read and understood the foregoing information. I have had the opportunity to ask questions and I received satisfactory answers about the study. I consent voluntarily to be a participant in this study.

Name of participant:

Signature of participant:

Date:

I confirm that the consent has been given freely and voluntarily by the participant. I confirm that the participant was given the opportunity to seek clarification about the study, and all questions asked by the participant have been answered correctly and to the best of my ability.

A copy of this informed consent form has been provided to the participant.

Name of researcher:

Signature of researcher:

Date:

Appendix E: Questionnaire

goo.gl/SfHFyw

Welcome to the survey on board effectiveness by Abubakar M Zayyana.

This study serves as part of my doctoral research in collaboration with the Business Management Research Institute (BMRI), University of Bedfordshire, United Kingdom. The main purpose of this survey is to find what actually makes a board effective in emerging economies like Nigeria. Specifically, the study intends to investigate board effectiveness relating to board tasks and CSR activities, with evidence from directors of listed firms in Nigeria.

Kindly, answer all questions on this questionnaire, it should not take more than 7 minutes to complete. If you are serving on more than one board, kindly complete only one questionnaire for the board of your choice. It is important to know that participation is voluntary and your responses are anonymous. Any information provided will remain absolutely confidential and will only be disclosed to the academic researchers involved in this study. Your name and that of your organization will not be mentioned in this report. Please, click on the next page if you are ready to continue.

Demographic

What is your gender?

1. Male
2. Female

Your company is from which industry?

1. Oil and Gas
2. Industrial Goods
3. Consumer Goods
4. Conglomerates
5. Financial services

6. Healthcare
7. Natural science
8. Services
9. Construction
10. ICT
11. Agriculture

What type of director are you?

1. Executive
2. Non-executive
3. Independent non-executive
4. Others (please specify)……………………………………….

The following statements seek to obtain some opinions regarding board processes, board control and service tasks, and corporate social responsibility (legal and ethical) activities. Kindly indicate the extent to which you agree or disagree with the statements on a scale of 1 to 5, 1 mean strongly agree and 5 means strongly disagree. Please, click next to continue at the end of each page.

	Strongly agree				Strongly disagree
Board members critically analyse any information provided by the managers prior to board meetings	1	2	3	4	5
Board members take notes during meetings	1	2	3	4	5

Board members participate actively in discussion during meetings	1	2	3	4	5
Board members are available when needed for emergency meetings at both committee and board levels	1	2	3	4	5
Board members acquire knowledge on issues that are relevant to the firm before attending board meetings	1	2	3	4	5
There are frequent disagreements about ideas and opinions in the boardroom	1	2	3	4	5
There are frequent debates before board agrees on a particular decision	1	2	3	4	5
There are different views in the boardroom on how to pursue the firm's objectives	1	2	3	4	5
The best alternatives for the firm are critically discussed	1	2	3	4	5
There are frequent debates on the interests of shareholders and stakeholders	1	2	3	4	5

Board members are aware of each other's knowledge and area of expertise	1	2	3	4	5
There is quick information flows among board members	1	2	3	4	5
There is a clear division of labor among board members	1	2	3	4	5
Knowledge and skills available in the boardroom are coordinated to achieve more constructive discussions	1	2	3	4	5
When discussing issues in the boardroom, the most knowledgeable directors have the most influence	1	2	3	4	5

Your board decides remuneration of CEO and other internal directors	1	2	3	4	5
Your board is fully informed about the financial position of the firm	1	2	3	4	5
Your board ensures substantial expenditures are justifiable	1	2	3	4	5

Your board establishes plans and budget for the firm's operations	1	2	3	4	5
The board sufficiently monitors the activities of CEO/MD and other managers	1	2	3	4	5
Your board provides useful advice on management	1	2	3	4	5
This board positively links the firm with the society	1	2	3	4	5
This board provides useful advice on financial issues	1	2	3	4	5
Your board makes initiatives on strategy proposal	1	2	3	4	5
This board makes long-term strategy plans	1	2	3	4	5
Directors of this firm try to comply with the environmental laws	1	2	3	4	5

Our firm seeks to comply with all laws regarding hiring and benefits of employees	1	2	3	4	5
We always comply with the norms defined in the law when carrying out our activities	1	2	3	4	5
Our firm pays taxes and other tax-related as at when due	1	2	3	4	5
Managers monitor the potential negative impact of our activities on society	1	2	3	4	5
We follow professional and ethical standard	1	2	3	4	5
Our firm has a confidentiality procedure in place for employees to report any misconduct at work	1	2	3	4	5
Our company has an effective code of conduct in place	1	2	3	4	5
We don’t give donations to political parties and other unethical activities	1	2	3	4	5

This section is about board and firm characteristics

What was the total number of directors on your board last year?

……………………………………………………………………………………

What was the total number of non-executive (including independent and senior independent non-executive) directors on your board last year?

………………………………………………………………………………………

What was the total number of female directors on your board previous year?

………………………………………………………………………………………

Was the CEO/MD also the Chairman of the board last year?

1. Yes
2. No

What was the total number of full-time employees in your firm as of last year?

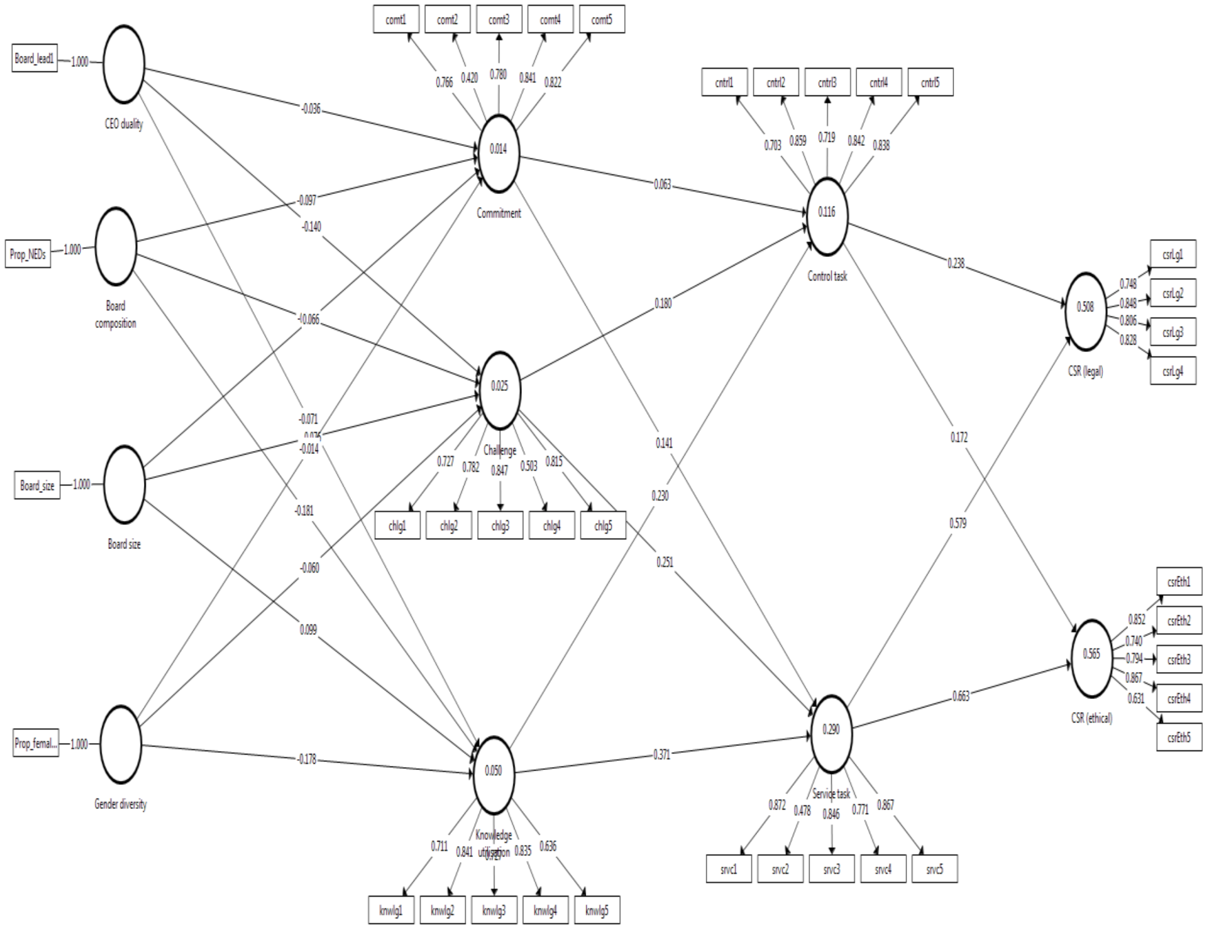
1. Less than 100
2. 100 – 500
3. 501 – 1000
4. 1001 – 2000
5. 2001 – 3000
6. Over 3000

Did you serve on more than one board as of last year?

1. Yes
2. No

Many thanks for your participation. If you require additional information regarding this research or would like to receive an executive summary of this study's findings, please feel free to contact me on: 08036833207; +447553775272 or at abubakars.gobir@yahoo.com; abubakar.zayyana@study.beds.ac.uk

Appendix F: Initial Assessment of the Measurement Model



Appendix G: Descriptive Analysis

```
FREQUENCIES VARIABLES=Industry Num_employees Prop_femaledir
  /ORDER=ANALYSIS.
```

Frequencies

Statistics

		Your company is from which industry	What was the total number of full-time employees in your firm as of last year?	Proportion of women directors
N	Valid	189	189	189
	Missing	0	0	0

Frequency Table

Your company is from which industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Oil and Gas	16	8.5	8.5	8.5
	Industrial goods	23	12.2	12.2	20.6
	Consumer goods	34	18.0	18.0	38.6
	Conglomerates	7	3.7	3.7	42.3
	Financial services	63	33.3	33.3	75.7
	Healthcare	5	2.6	2.6	78.3
	Natural science	6	3.2	3.2	81.5

	Services	12	6.3	6.3	87.8
	Construction	12	6.3	6.3	94.2
	ICT	7	3.7	3.7	97.9
	Agriculture	4	2.1	2.1	100.0
	Total	189	100.0	100.0	

What was the total number of full-time employees in your firm as of last year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 100	36	19.0	19.0	19.0
	100-500	72	38.1	38.1	57.1
	501-1000	27	14.3	14.3	71.4
	1001-2000	22	11.6	11.6	83.1
	2001-3000	25	13.2	13.2	96.3
	0ver 3000	7	3.7	3.7	100.0
	Total	189	100.0	100.0	

Proportion of women directors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	60	31.7	31.7	31.7
	8	2	1.1	1.1	32.8
	8	1	.5	.5	33.3
	9	5	2.6	2.6	36.0
	11	2	1.1	1.1	37.0

11	13	6.9	6.9	43.9
12	1	.5	.5	44.4
13	3	1.6	1.6	46.0
13	3	1.6	1.6	47.6
14	2	1.1	1.1	48.7
14	10	5.3	5.3	54.0
15	2	1.1	1.1	55.0
16	2	1.1	1.1	56.1
17	2	1.1	1.1	57.1
17	1	.5	.5	57.7
18	2	1.1	1.1	58.7
18	4	2.1	2.1	60.8
20	8	4.2	4.2	65.1
21	1	.5	.5	65.6
21	3	1.6	1.6	67.2
22	7	3.7	3.7	70.9
22	5	2.6	2.6	73.5
23	1	.5	.5	74.1
25	11	5.8	5.8	79.9
27	1	.5	.5	80.4
27	2	1.1	1.1	81.5
27	2	1.1	1.1	82.5
29	14	7.4	7.4	89.9
30	3	1.6	1.6	91.5

31	1	.5	.5	92.1
33	1	.5	.5	92.6
33	5	2.6	2.6	95.2
38	4	2.1	2.1	97.4
42	1	.5	.5	97.9
43	3	1.6	1.6	99.5
50	1	.5	.5	100.0
Total	189	100.0	100.0	

FREQUENCIES VARIABLES=Board_size Outside_dir Female_dir Prop_NEDs

/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN MODE

/ORDER=ANALYSIS.

Frequencies

Statistics

		What was the total number of directors on your board last year?	What was the total number of non-executive (including independent and senior independent non-executive) directors on your board last year?	What was the total number of female directors on your board previous year?	Proportion of outside directors
N	Valid	189	189	189	189
	Missing	0	0	0	0
Mean		9.36	6.69	1.46	71.47
Median		9.00	6.00	1.00	71.43

Mode	7	6	0	67
Minimum	4	2	0	23
Maximum	19	15	5	92

Frequency Table

What was the total number of directors on your board last year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	3	1.6	1.6	1.6
	5	6	3.2	3.2	4.8
	6	11	5.8	5.8	10.6
	7	37	19.6	19.6	30.2
	8	24	12.7	12.7	42.9
	9	33	17.5	17.5	60.3
	10	15	7.9	7.9	68.3
	11	23	12.2	12.2	80.4
	12	12	6.3	6.3	86.8
	13	6	3.2	3.2	89.9
	14	12	6.3	6.3	96.3
	15	1	.5	.5	96.8
	16	2	1.1	1.1	97.9
	17	1	.5	.5	98.4
	18	1	.5	.5	98.9
	19	2	1.1	1.1	100.0
	Total	189	100.0	100.0	

What was the total number of non-executive (including independent and senior independent non-executive) directors on your board last year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	5	2.6	2.6	2.6
	3	6	3.2	3.2	5.8
	4	18	9.5	9.5	15.3
	5	32	16.9	16.9	32.3
	6	34	18.0	18.0	50.3
	7	33	17.5	17.5	67.7
	8	19	10.1	10.1	77.8
	9	23	12.2	12.2	89.9
	10	7	3.7	3.7	93.7
	11	7	3.7	3.7	97.4
	12	4	2.1	2.1	99.5
	15	1	.5	.5	100.0
	Total	189	100.0	100.0	

What was the total number of female directors on your board previous year?

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	0	60	31.7	31.7	31.7
	1	39	20.6	20.6	52.4
	2	49	25.9	25.9	78.3
	3	27	14.3	14.3	92.6
	4	13	6.9	6.9	99.5
	5	1	.5	.5	100.0
	Total	189	100.0	100.0	

Proportion of outside directors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	23	1	.5	.5	.5
	25	1	.5	.5	1.1
	33	1	.5	.5	1.6
	40	1	.5	.5	2.1
	50	8	4.2	4.2	6.3
	56	3	1.6	1.6	7.9
	56	3	1.6	1.6	9.5
	56	1	.5	.5	10.1
	57	4	2.1	2.1	12.2
	57	9	4.8	4.8	16.9
	58	1	.5	.5	17.5

60	5	2.6	2.6	20.1
62	1	.5	.5	20.6
63	9	4.8	4.8	25.4
63	3	1.6	1.6	27.0
63	2	1.1	1.1	28.0
64	2	1.1	1.1	29.1
67	14	7.4	7.4	36.5
67	6	3.2	3.2	39.7
69	3	1.6	1.6	41.3
70	6	3.2	3.2	44.4
71	4	2.1	2.1	46.6
71	9	4.8	4.8	51.3
73	6	3.2	3.2	54.5
73	1	.5	.5	55.0
75	11	5.8	5.8	60.8
77	1	.5	.5	61.4
78	10	5.3	5.3	66.7
78	5	2.6	2.6	69.3
79	2	1.1	1.1	70.4
79	1	.5	.5	70.9
80	3	1.6	1.6	72.5
82	1	.5	.5	73.0
82	10	5.3	5.3	78.3
83	1	.5	.5	78.8

	83	4	2.1	2.1	81.0
	86	12	6.3	6.3	87.3
	86	4	2.1	2.1	89.4
	88	3	1.6	1.6	91.0
	88	1	.5	.5	91.5
	88	1	.5	.5	92.1
	89	3	1.6	1.6	93.7
	90	6	3.2	3.2	96.8
	91	3	1.6	1.6	98.4
	92	3	1.6	1.6	100.0
	Total	189	100.0	100.0	

Appendix H: Output from SmartPLS software

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Challenge -> Control task	0.186	0.193	0.085	2.202	0.028
Challenge -> Service task	0.252	0.256	0.075	3.372	0.001
Commitment -> Control task	0.060	0.062	0.074	0.813	0.416
Commitment -> Service task	0.136	0.137	0.075	1.821	0.069
Control task -> CSR (ethical)	0.166	0.168	0.060	2.767	0.006
Control task -> CSR (legal)	0.231	0.235	0.077	2.987	0.003
Gender diversity -> Challenge	-0.039	-0.043	0.098	0.403	0.687
Gender diversity -> Commitment	-0.008	-0.012	0.092	0.089	0.929
Gender diversity -> Knowledge ...	-0.170	-0.172	0.074	2.314	0.021
Knowledge utilisation -> Contr...	0.228	0.232	0.082	2.761	0.006
Knowledge utilisation -> Servic...	0.373	0.376	0.075	4.989	0.000

Final Results	Quality Criteria	Histograms	Base Data
Path Coefficients	R Square	Path Coefficients Histogram	Setting
Total Indirect Effects	R Square Adjusted	Indirect Effects Histogram	Inner Model
Specific Indirect Effects	f Square	Total Effects Histogram	Outer Model
Total Effects	Average Variance Extracted (AVE)		Indicator Data (Original)
Outer Loadings	Composite Reliability		Indicator Data (Standardized)
Outer Weights	rho_A		
	Cronbach's Alpha		

Construct Reliability and Validity

Matrix | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted ... | Copy to Clipboard: | Excel Format | R Format

	Cronbach's Al...	rho_A	Composite Rel...	Average Varian...
Board composi...	1.000	1.000	1.000	1.000
Board size	1.000	1.000	1.000	1.000
CEO duality	1.000	1.000	1.000	1.000
CSR (ethical)	0.837	0.853	0.886	0.611
CSR (legal)	0.823	0.826	0.883	0.654
Challenge	0.827	0.883	0.879	0.646
Commitment	0.823	0.830	0.882	0.653
Control task	0.854	0.882	0.895	0.632
Gender diversity	1.000	1.000	1.000	1.000
Knowledge util...	0.808	0.825	0.867	0.569
Service task	0.869	0.871	0.911	0.719

Final Results	Quality Criteria	Interim Results	Base Data
Path Coefficients	R Square	Stop Criterion Changes	Setting
Indirect Effects	f Square		Inner Model
Total Effects	Construct Reliability and Validity		Outer Model
Outer Loadings	Discriminant Validity		Indicator Data (Original)
Outer Weights	Collinearity Statistics (VIF)		Indicator Data (Standardized)
Latent Variable	Model_Fit		Indicator Data (Correlations)
Residuals			

Discriminant Validity

Fornell-Larcker Criteri... | Cross Loadings | Heterotrait-Monotrait R... | Heterotrait-Monotrait R... | Copy to Clipboard: | Excel Format | R Format

	Board composition	Board size	CEO duality	CSR (ethical)	CSR (legal)	Challenge	Commitment
Board composition	1.000						
Board size	0.002	1.000					
CEO duality	-0.226	-0.289	1.000				
CSR (ethical)	-0.131	-0.171	-0.053	0.782			
CSR (legal)	-0.124	-0.203	0.011	0.763	0.809		
Challenge	-0.072	-0.049	-0.080	0.258	0.251	0.745	
Commitment	-0.086	0.073	-0.031	0.218	0.243	0.187	0.742
Control task	-0.066	-0.207	-0.042	0.451	0.481	0.240	0.136
Gender diversity	-0.222	0.225	-0.194	-0.092	-0.093	-0.024	0.030
Knowledge utilisation	-0.125	0.080	-0.024	0.452	0.438	0.207	0.169
Service task	-0.091	-0.090	-0.039	0.735	0.679	0.354	0.250

Final Results	Quality Criteria	Interim Results	Base Data
Path Coefficients	R Square	Stop Criterion Changes	Setting
Indirect Effects	f Square		Inner Model
Total Effects	Construct Reliability and Validity		Outer Model
Outer Loadings	Discriminant Validity		Indicator Data (Original)
Outer Weights	Collinearity Statistics (VIF)		Indicator Data (Standardized)
Latent Variable	Model_Fit		Indicator Data (Correlations)
Residuals			

Discriminant Validity

Fornell-Larcker Criteri... | Cross Loadings | Heterotrait-Monotrait R... | Heterotrait-Monotrait R... | Copy to Clipboard: Excel Format | R Format

	Board compos...	Board size	CEO duality	CSR (ethical)	CSR (legal)	Challenge	Commitment	Control tas
Board_lead1	-0.226	-0.289	1.000	-0.053	0.010	-0.049	-0.038	-0.04
Board_size	0.002	1.000	-0.289	-0.171	-0.203	-0.055	0.081	-0.20
Prop_NEDs	1.000	0.002	-0.226	-0.132	-0.124	-0.085	-0.096	-0.06
Prop_femaledir	-0.222	0.225	-0.194	-0.092	-0.094	-0.007	0.029	-0.03
chlg1	0.019	0.048	-0.032	0.079	0.114	0.712	0.085	0.09
chlg2	-0.058	-0.008	-0.075	0.165	0.156	0.788	0.152	0.11
chlg3	-0.093	-0.089	0.061	0.188	0.206	0.871	0.145	0.24
chlg5	-0.089	-0.063	-0.121	0.297	0.253	0.836	0.167	0.25
cntrl1	0.009	-0.145	0.012	0.331	0.293	0.095	0.091	0.70
cntrl2	-0.101	-0.146	0.006	0.464	0.482	0.255	0.133	0.85
cntrl3	-0.038	-0.141	-0.140	0.271	0.339	0.091	0.068	0.72

Final Results
Path Coefficients
Indirect Effects
Total Effects
Outer Loadings
Outer Weights
Latent Variable
Residuals

Quality Criteria
R Square
f Square
Construct Reliability and Validity
Discriminant Validity
Collinearity Statistics (VIF)
Model_Fit

Interim Results
Stop Criterion Changes

Base Data
Setting
Inner Model
Outer Model
Indicator Data (Original)
Indicator Data (Standardized)
Indicator Data (Correlations)

Fornell-Larcker Criteri... | Cross Loadings | Heterotrait-Monotrait R... | Heterotrait-Monotrait R... | Copy to Clipboard: Excel Format | R Format

	Board compos...	Board size	CEO duality	CSR (ethical)	CSR (legal)	Challenge	Commitment	Control tas
cntrl3	-0.038	-0.141	-0.140	0.271	0.339	0.091	0.068	0.72
cntrl4	-0.050	-0.245	0.003	0.362	0.408	0.236	0.172	0.84
cntrl5	-0.059	-0.141	-0.086	0.325	0.353	0.245	0.041	0.83
comt1	-0.061	0.128	-0.049	0.155	0.183	0.122	0.785	0.05
comt3	-0.051	-0.010	-0.041	0.187	0.186	0.128	0.779	0.11
comt4	-0.066	0.090	-0.007	0.192	0.223	0.174	0.842	0.12
comt5	-0.125	0.063	-0.031	0.168	0.189	0.145	0.823	0.11
csrEth1	-0.186	-0.167	0.002	0.854	0.629	0.232	0.274	0.46
csrEth2	-0.158	-0.268	0.061	0.740	0.578	0.151	0.072	0.28
csrEth3	-0.004	-0.028	-0.101	0.793	0.619	0.229	0.211	0.27
csrEth4	-0.134	-0.122	-0.074	0.868	0.649	0.177	0.195	0.39

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Quality Criteria
R Square
f Square
Construct Reliability and Validity
Discriminant Validity
Collinearity Statistics (VIF)
Model_Fit

Interim Results
Stop Criterion Changes

Base Data
Setting
Inner Model
Outer Model
Indicator Data (Original)
Indicator Data (Standardized)
Indicator Data (Correlations)

R Square

Matrix | R Square | R Square Adjusted — Copy to Clipboard: Excel Format | R Format

	R Square	R Square Adjus...
CSR (ethical)	0.554	0.549
CSR (legal)	0.503	0.498
Challenge	0.020	-0.002
Commitment	0.018	-0.004
Control task	0.117	0.103
Knowledge util...	0.050	0.030
Service task	0.290	0.278

Final Results
Path Coefficients
Indirect Effects
Total Effects
Outer Loadings
Outer Weights
Latent Variable
Residuals

Quality Criteria
R Square
f Square
Construct Reliability and Validity
Discriminant Validity
Collinearity Statistics (VIF)
Model_Fit

Interim Results
Stop Criterion Changes

Base Data
Setting
Inner Model
Outer Model
Indicator Data (Original)
Indicator Data (Standardized)
Indicator Data (Correlations)

Construct Crossvalidated Redundancy

Total | Case1 | Case2 | Case3 | Case4 — Copy to Clipboard: Excel Format | R Format

	SSO	SSE	Q^2 (=1-SSE/SSO)
Board size	189.000	189.000	
CEO duality	378.000	378.000	
CSR (ethical)	945.000	680.516	0.280
CSR (legal)	756.000	552.601	0.269
Challenge	756.000	749.447	0.009
Commitment	756.000	755.304	0.001
Control task	945.000	891.335	0.057
Gender diversity	378.000	378.000	
Knowledge util...	945.000	926.325	0.020
Non-executive ...	189.000	189.000	
Service task	756.000	627.667	0.170

Final Results
Construct Crossvalidated Redundancy
Construct Crossvalidated Communality
Indicator Crossvalidated Redundancy
Indicator Crossvalidated Communality

Base Data
Setting
Inner Model
Outer Model
Indicator Data (Original)
Indicator Data (Standardized)

Loadings: Results from bootstrapping

cntrl1 <- Control task	0.702	0.701	0.061	11.609	0.000
cntrl2 <- Control task	0.859	0.857	0.026	33.255	0.000
cntrl3 <- Control task	0.720	0.714	0.052	13.794	0.000
cntrl4 <- Control task	0.842	0.840	0.030	28.055	0.000
cntrl5 <- Control task	0.839	0.836	0.031	26.975	0.000
comt1 <- Commitment	0.784	0.783	0.060	12.993	0.000

csrLg1 <- CSR (legal)	0.746	0.743	0.050	14.900	0.000
csrLg2 <- CSR (legal)	0.848	0.846	0.033	25.898	0.000
csrLg3 <- CSR (legal)	0.809	0.808	0.029	27.817	0.000
csrLg4 <- CSR (legal)	0.828	0.824	0.035	23.723	0.000
srvc1 <- Service task	0.875	0.873	0.022	39.247	0.000
srvc3 <- Service task	0.852	0.850	0.028	29.922	0.000
srvc4 <- Service task	0.788	0.786	0.042	18.891	0.000
srvc5 <- Service task	0.872	0.871	0.027	32.635	0.000

csrEth1 <- CSR (ethical)	0.854	0.853	0.027	31.941	0.000
csrEth2 <- CSR (ethical)	0.740	0.740	0.051	14.525	0.000
csrEth3 <- CSR (ethical)	0.793	0.791	0.038	20.784	0.000
csrEth4 <- CSR (ethical)	0.868	0.868	0.018	48.106	0.000
csrEth5 <- CSR (ethical)	0.629	0.625	0.057	10.997	0.000

Appendix I (i): Previous Studies on the Relationship between Board Characteristics and Financial Performance.

Name of the Author (s), Year of the Publication	Title of the Paper	Title of the Journal	Methodology	Country	Main Findings
Liu *et al.* (2015)	Board independence and firm performance in China	Journal of Corporate Finance	Quantitative; Secondary data. A sample of 2057 firms listed on the Shanghai and Shenzhen Stock Exchange. Accounting measures; Return On Assets (ROA) and Return On Equity (ROE).	China	Found a positive and significant relationship between the proportion of independent directors and firm operating performance.
Zhu *et al.* (2016)	Boar d Hierarchy, Independent Directors, and Firm Value: Evidence from China	Journal of Corporate Finance	Quantitative; Secondary data A sample of 1,512 public listed Chinese firms. Market value; Tobin's Q	China	Independent directors that are ranked higher (empowered) in an organisation are more likely to improve firm value (Tobin's Q).
Campbell, Campbell and Mínguez-Vera (2008)	Gender Diversity in the Boardroom and Firm Performance	Journal of Business Ethics	Quantitative; Archival data A sample of 68 firms listed on the Spanish Stock Exchange Market value; Tobin's Q	Spain	An appropriate proportion of women on the board have a positive and significant relationship with firms' financial performance.

Mahadeo *et al.* (2012)	Board Composition and Financial Performance: Uncovering the Effect of Diversity in an Emerging Economy	Journal of Business Ethics	Quantitative; Archival data A sample of 42 listed firms. Accounting measures (ROA)	Mauritius	The proportion of women on the board is positive and significant with financial performance.
Abdullah et al (2016)	Does Having Women on Boards Create Value? The Impact of Societal Perceptions and Corporate Governance in Emerging Markets	Strategic management journal	Quantitative; Archival data A sample of 841 companies listed on the main board in Bursa Malaysia for the year 2008. Accounting measures (ROA) and market measures (Tobin's Q)	Malaysia	Women directors have a positive relationship with ROA, but negatively related to Tobin's Q.
Adjaoud *et al.* (2007)	The Effect of Board's Quality on Performance: A study of Canadian Firms	Corporate Governance: An International Review	Quantitative; Archival data A sample of 219 Canadians companies. Financial measures (ROI, ROE, EPS, and market-to-book) and Value performance measures (EVA and Market Value Added)	Canada	Board composition (board independence, audit committee, nominating committee, and CEO non-duality) is positively and significantly associated with value performance measures, but insignificantly related with accounting measures.

De Andres *et al.* (2005)	Corporate Boards in OECD countries: Size, Composition, Functioning and Effectiveness	Corporate Governance: An International Review	Quantitative; Archival data Sample of 450 large non-financial firms from ten OECD countries. Market value (Equity market-to-book ratio, and financial q).	Belgium, France, Germany, Italy, Switzerland, Spain, UK, Holland, Canada, and the US	The larger board has a negative and significant relationship with firm performance. No significant relationship is found between the proportion of independent directors and firm value.
Mangena *et al.* (2012)	Corporate Boards, Ownership Structure and Firm Performance in an Environment of Severe Political and Economic Crisis	British Journal of Management	Quantitative; Archival data A sample of 53 non-financial firms listed on the Zimbabwe Stock Exchange for the period 2000-2005. Accounting measures (ROA) and Market value (Tobin's Q)	Zimbabwe	Board size is positively and significantly related to firm performance in the post presidential election in Zimbabwe, not before,. The proportion of non-executive directors (NEDs) has a negative and significant effect on firm performance in both post and pre-presidential election periods.
Carter *et al.* (2010)	The Gender and Ethnic Diversity of US Boards and Board	Corporate Governance: An International Review	Quantitative; Archival data Sample of 641 firms in the S&P 500.	US	No significant effect found between board gender diversity,

	Committees and Firm Financial Performance		Financial measure (ROA) and Market value (Tobin's Q)		board committees and corporate financial performance.
Cho and Kim (2007)	Outside Directors, Ownership Structure, and Firm Profitability in Korea	Corporate Governance: An International Review	Quantitative; Archival data A sample of 347 firms listed on the Korean Stock Exchange. Accounting measures (ROA)	Korea	Find a positive relationship between the proportion of NEDs and firm's profitability, but the strength of the relationship is reduced due to higher large shareholder rate in the sample.
Jackling and Johl (2009)	Board structure and Firm Performance: Evidence from India's Top Companies	Corporate Governance: An International Review	Quantitative; Archival data 180 firm-years observation of top non-financial India's companies listed on the Bombay Stock Exchange. Accounting measures (ROA) and Market value (Tobin's Q).	India	The proportion of NEDs and large board size has positive and significant relationships with firm performance. CEO duality is positively related to corporate performance.
Setia-Atmaja (2009)	Governance Mechanisms and Firm Value: The Impact of Ownership Concentration and Dividends	Corporate Governance: An International Review	Quantitative; Archival data A sample of 316 companies listed on the Australian Stock	Australia	Found a positive link between the proportion of NEDs and firm value. Firm ownership concentration

			Exchange over the period 2000-2005. Market value (Tobin's Q)		and low dividend pay-outs moderated the relationship between board independence and firm performance.
Kaymak and Bektas (2008)	East meets West? Board Characteristics in an Emerging Market: Evidence from Turkish Banks	Corporate Governance: An International Review	Quantitative; Archival data All the 27 Banks from Turkish for the period 2001-2004. Accounting measures (ROA, and Growth in total assets)	Turkey	NEDs have a negative influence on firm performance. Executive directors are found to have a positive and significant effect on corporate performance. CEO Duality is negatively related to ROA. Large board size is positively connected to performance.
Essen *et al.* (2013)	Does "Good" Corporate Governance Help in a Crisis? The Impact of Country-and Firm-Level Governance Mechanisms in the European Financial Crisis	Corporate Governance: An International Review	Quantitative; Archival data from a sample of large firms across 26 European countries (2004-2009). Measurement of dependent variable: Cumulative	26 European countries	Small board size, the proportion of NEDs, non-CEO duality, meeting frequency and board's committee's structure are negatively related to firm performance.

			adjusted stock return.		
Klein *et al.* (2005)	Corporate Governance, Family Ownership, and Firm Value: The Canadian Evidence	Corporate Governance: An International Review	Quantitative; Archival data A Sample of 263 Canadian Firms. Market value (Tobin's Q)	Canada	Board composition and independence are negatively related to firm performance
Veltrop *et al.* (2015)	A Tale of Two Factions: Why and When Factional Demographic Faultlines Hurt Board Performance	Corporate Governance: An International Review	Quantitative; Questionnaire and archival data A sample of 318 Dutch pension fund boards registered with DNB in 2009. Accounting measure (ROI)	Netherlands	Board factional demographic faultlines have a negative effect on firm performance.
Yeh *et al.* (2011)	Committee Independence and Financial Institution Performance during the 2007-08 Credit Crunch: Evidence from a Multi-Country Study	Corporate Governance: An International Review	Quantitative; Archival data Sample from 20 largest financial institutions from G8 countries. Accounting measures (ROA and ROE) and Market value (stock returns)	Australia, Canada, France, Germany, Italy, Japan, UK, and the US	The proportion of NEDs on audit and risk committees is positively related to firm performance during the 2007-08 financial crisis Civil law and excessive risk-taking moderate NEDs-performance relationship
Kiel and Nicholson (2003)	Board Composition and Corporate Performance:	Corporate Governance: An	Quantitative; Archival data Sample from 348	Australia	Larger boards and proportion of inside directors are

	How the Australian Experience Informs Contrasting Theories of Corporate Governance	International Review	Australian largest listed companies. Accounting measures (ROA) and market value (Tobin's Q)		positively and significantly related to Tobin's Q, but not significantly associated with ROA CEO Duality has an insignificant relationship with firm performance
Grove *et al.* (2011)	Corporate Governance and Performance in the Wake of the Financial Crisis: Evidence from US Commercial Banks	Corporate Governance: An International Review	Quantitative; Archival data A sample of 236 public US commercial banks. Accounting measure (ROA), Market-based (future excess return-alpha) and Loan quality (Non-performing assets ratio)	US	Find a negative and positive relationship between board size and firm performance (ROA and alpha). Small board size has a positive and significant effect on firm performance (Loan quality) No evidence to show a negative relationship between the proportion of inside directors and firm performance. CEO Duality has a negative and significant impact on ROA and alpha, but the negative

					effect on loan quality is not significant.
Singh and Gaur (2009)	Business Group Affiliation, Firm Governance, and Firm Performance: Evidence from China and India	Corporate Governance: An International Review	Quantitative; Archival data from top 500 for India and China. A sample of 400 Indian firms and 413 Chinese firms. Accounting measures (ROA, ROE, and Return on Sales).	India and China	The proportion of NEDs is negatively related to firm performance.
Ramdani and Witteloostuijn (2010)	The Impact of Board Independence and CEO Duality on Firm Performance: A Quantile Regression Analysis for Indonesia, Malaysia, South Korea and Thailand	British Journal of Management	Quantitative; Questionnaire A sample of listed firms from Stock Exchanges in four East Asian countries. Accounting measures (ROA)	Indonesia, Malaysia, South Korea, and Thailand	CEO duality and proportion of inside directors have a positive effect on the firm with low-performance. CEO non-duality and proportion of NEDs have a positive influence on high-performing firms.
Elsayed (2007)	Does CEO Duality really affect Corporate Performance?	Corporate Governance: An International Review	Quantitative; Archival data A sample of 92 Egyptian listed firms from 19 industries. Accounting measures (ROA) and	Egypt	The relationship between CEO duality and corporate finance is negative, positive, and neutral depending on

			Market value (Tobin's Q)		the industry type.
Rose (2005)	The Composition of Semi-Two-Tier Corporate Boards and Firm Performance	Corporate Governance: An International Review	Quantitative; Archival data Sample from non-financial Danish listed firms 446 firm-years observation. Market value (Tobin's Q)	Denmark	Board size has a negative influence on firm performance The relationship between inside directors and corporate performance is insignificant
Dulewicz and Herbert (2004)	Does the Composition and Practice of Boards of Directors Bear any Relationship to the Performance of their Companies	Corporate Governance: An International Review	Quantitative; Archival data, sample of at least 86 firms from FAME and QUEST databases. Cash Flow Return on Total Assets (CF ROTA) and Sales Turnover (sales)	UK	The proportion of NEDs has an insignificant effect on CFROTA and negative (significant) influence on sales performance Board size is not significantly related to both performance measures.
Erhardt *et al.* (2003)	Board of Directors Diversity and Firm Financial Performance	Corporate Governance: An International Review	Quantitative; Archival data Sample from 112 large US firms. Accounting measures (ROA and ROI).	US	Board diversity has a positive and significant effect on firm performance
Iyengar and Zampelli (2009)	Self-Selection, Endogeneity, and the	Strategic Management Journal	Quantitative; Archival data	US	The antecedents of duality

	Relationship between CEO Duality and Firm Performance		Sample from non-financial, non-utility S&P companies in the ExeuComp database for 1995 to 2003 1,880 firm-years observations. Accounting measures (ROA and EPS), Market value (Tobin's Q) and Market return		leadership structure moderates the relationship between CEO duality and firm performance relationship Selective bias leads to a negative relationship between CEO duality and firm performance measured with market return and EPS, but not with ROA and Tobin's Q
Luan and Tang (2007)	Where is independent director efficacy?	Corporate Governance: An International Review	Quantitative; Archival data A sample of 259 Taiwanese firms in electronic industry. Accounting measures (ROE)	Taiwan	The proportion of outside directors on the board has a positive and significant effect on firm performance.
Rose (2007)	Does Female Board Representation Influence Firm Performance? the Danish Evidence	Corporate Governance: An International Review	Quantitative; Archival data from 1998 to 2001 The sample consists of non-financial firms listed on the Copenhagen Stock Exchange	Denmark	The relationship between the proportion of women directors on the board and corporate performance is negative, but not significantly

			443 firm-years observations. Market value (Tobin's Q)		different from zero
Chapple and Humphrey (2014)	Does Board Bender Diversity have a Financial Impact? Evidence using Stock Portfolio Performance	Journal of Business Ethics	Quantitative; Archival data A sample of 577 S&P/ASX 3000 The period from 2004 to 2011. Overall market outcome (capital market gains)	Australia	Find no significant relationship between the proportion of women directors on the board and corporate performance
Ali *et al.* (2014)	Board Age and Gender Diversity: A Test of Competing for Linear and Curvilinear Predictions	Journal of Business Ethics	Quantitative; Archival data A sample of 288 large companies listed on the Australian Stock Exchange as of 2012. Accounting measures (ROA) and Employee productivity	Australia	Gender diversity is positively and significantly related to employee productivity, but insignificantly effect ROA
Ellwood and Garcia-Lacalle (2015)	The Influence of Presence and Position of Women on the Boards of Directors: The Case of NHS Foundations Trusts	Journal of Business Ethics	Quantitative; Archival data A sample of NHS Foundation Trusts (FTs) in England 316 firm-years observations.	England	Presence of female directors on the board has an insignificant effect on both measures of firm performance.

			Accounting measures (ROA) and Service quality (Clinical negligence costs)		Woman as CEO or Chair of the board has a positive and significant impact on service quality, not on ROA.
Haß *et al.* (2016)	Is Corporate Governance in China related to Performance Persistence?	Journal of Business Ethics	Quantitative; Archival data A sample of 1,384 firms listed on the Shanghai and Shenzhen Stock Exchanges from 2001 to 2011. Accounting measures (ROA) The sum of ROAs and Volatility ROA	China	Board size has a positive effect on performance persistence. CEO duality is negatively and significantly related to short-term performance persistence. NEDs have a positive effect on poor performing firms.
Ryan and Haslam (2005)	The Glass Cliff: Evidence that Women are Over-Represented in Precarious Leadership Positions	British Journal of Management	Quantitative; Archival data FTSE 100 companies on the London Stock Exchange. Share price (percentage of movement over 12 months preceding 12 December 2003)	UK	Firm performance was relatively stable in both before and after the appointment of male directors. However, those firms that appointed women directors had experienced continually poor performance in the months before the appointment.

					In a stable market, the appointment of female directors improves firm performance
Ferris and Yan (2007)	Do Independent Directors and Chairmen Matter? The Role of Board of Directors in Mutual Fund Governance	Journal of Corporate Finance	Quantitative; Archival data A sample of 448 fund families listed in the CSRP database. Fund's total return within each investment objective during 2001	US	The proportion of NEDs and the presence of an independent chairman have no significant effect on preventing the likelihood of a fund scandal. A large board, multiple directorships of NED and unexplained independent directors' compensation are positively and significantly related to fund scandal
Francoeur *et al.* (2008)	Gender Diversity in Corporate Governance and Top Management	Journal of Business Ethics	Quantitative; Archival data A sample of 230 companies from Financial Post's List of the 500 Canadian largest firms. Firm's return by its beta, size and book-	Canada	There is a positive and significant relationship between women as officers of a firm that operates in a complex environment and abnormal return.

			to-market ratio		The proportion of female directors has no significant relationship with financial performance.
Hutchinson and Gul (2004)	Investment Opportunity Set, Corporate Governance Practices and Firm Performance	Journal of Corporate Finance	Quantitative; Archival data A sample of 437 from top 500 firms listed on the Australian Stock Exchange for 1998 to 1999. Accounting measures (ROE)	Australia	The proportion of NEDs on the board decreases the negative effect of growth opportunity and firm performance
Combs *et al.* (2007)	The Moderating Effect of CEO Power on the Board Composition-Firm Performance Relationship	Journal of Management Studies	Quantitative; Archival data Event study (CEO's death) methodology A sample of 73 US firms. Abnormal returns	US	CEO power moderates the relationship between board composition and firm performance. The stock price falls when a powerful CEO dies with an outside dominated board or less powerful CEO with executive dominated the board.

Appendix I (ii): Previous Studies on the Relationship between Board and Corporate Social Responsibility

Name of the Author (s) and Year of the Publication	**Title of the paper**	**Tittle of the Journal**	**Methodology and Performance (CSR) Measure**	**Country**	**Main findings**
Walls *et al.* (2012)	Corporate Governance and Environmental Performance: Is There Really a Link?	Strategic Management Journal	Quantitative; Archival data, a sample of 313 firms cutting across 29 industries from S&P 500 firms. Kinder, Lydenberg, and Dominis's (KLD) dataset.	US	Board independent, less diverse board and larger board have a significant negative effect on environmental performance
Bear *et al.* (2010)	The Impact of Board Diversity and Gender Compensation on Corporate Social Responsibility and Firm Reputation	Journal of Business Ethics	Quantitative; Archival data A sample of 51 health care firms drawn from Fortune's 2009 Most Admiral List. CSR measure (KLD)	US	CSR is positively related to corporate reputation Female directors are positively and significantly associated with institutional and technical strengths A positive, but weak link is found between the diversity of directors' resources and environmental performance.

					An additional number of female directors on the board improve CSR activities.
Jo and Harjoto (2012)	The Causal Effect of Corporate Governance on Corporate Social Responsibility	Journal of Business Ethics	Quantitative; Archival data From a sample of 2,952 firms for the period 1993 to 2004. CSR performance (KLD), Firm value(Tobin's Q)	US	CSR does not affect corporate governance variables, but governance variables positively influence CSR activities. CSR positively and significantly affect firm financial performance.
Jo and Harjoto (2011)	Corporate Governance and Firm Value: The Impact of Corporate Social Responsibility	Journal of Business Ethics	Quantitative; Archival data A sample of 2,952 US firms from 1993-2004. CSR performance (KLD), Firm value(Tobin's Q)	US	Choice of CSR engagement varies with the internal and external governance mechanisms CSR engagement improves firm value CSR activities that improve firms' value are mostly from firms' internal social enhancement, not the external enhancement.

Harrison and Coombs (2012)	The Moderating Effects from Corporate Governance Characteristics on the Relationship between Available Slack and Community-Based Firm Performance	Journal of Business Ethics	Quantitative; Archival data source (from 1990-2004). A sample of 1,060 from a population of 44 two-digit SIC code industries. KLD	US	Available slack has a positive and significant link with community-based performance. The proportion of NEDs has a negative and significant impact on available slack and this decreases the effect of slack on community-based performance.
Ntim and Soobaroyen (2013).	Black Economic Empowerment Disclosure by South African Listed Corporations: the Influence of Ownership and Board Characteristics	Journal of Business Ethics	Quantitative; Archival data source (from 2003 to 2009). A sample of 75 listed South African non-financial and utility firms at the end of 2009. Black Economic Empowerment (BEE) scores (content analysis)	South Africa	Board diversity, (excluding gender), board size and the proportion of NEDs have a positive and significant relationship with the level of BEE disclosure. CEO duality and proportion of women directors have an insignificant effect on BEE disclosure.
Bai (2013)	How does Board Size and Occupational	Journal of Business Ethics	Quantitative; Archival data sources,	US	Board size is positively related to the

	Background of Directors Influence Social Performance in For-Profit and Non-Profit Organisations? Evidence from California Hospitals		Sample 363 (137 for-profit and 226 non-profits) Californian hospitals Hospital's expenditures for community benefits.		firm value of non-profit hospitals. Board size is negatively and significantly associated with the performance of for-profit hospitals.
Jia and Zhang (2013)	Critical Mass of Women on BODs, Multiple Identities and Corporate Philanthropic Disaster Response: Evidence from Privately Owned Chinese Firms	Journal of Business Ethics	Quantitative; Archival data source, A sample of 492 listed and 913 observations related to Wenchuan and Yushu earthquakes. Corporate philanthropic disaster response CPDR (Donations and Giving).	China	The proportion of women (at least 3) is positively and significantly related to CPDR.
Arora and Dharwadkar (2011)	Corporate Governance and Corporate Social Responsibility: the Moderating Roles of Attainment Discrepancy and Organisational Slack	Corporate Governance: An International Review	Quantitative; Archival data, A sample of 518 US firms. KLD	US	Effective governance mechanisms mitigate negative CSR in high-performing firms (positive slack) and curtail positive CSR in low-performing firms (negative slack).
Brammer *et al.* (2009)	Corporate Reputation and	British Journal of Management	Quantitative; Archival data,	UK	The proportion of women

	Women on the Board		A sample of 199 UK FTSE 100 companies. Corporate reputation (Britain's most admiral companies' survey from management today, 2002)		directors is positively related to the reputation of firms from consumer services, but negatively related to firms from producer services.
Musteen *et al.* (2010)	Corporate Reputation: Do Board Characteristics Matter?	British Journal of Management	Quantitative; Archival data source, A sample of 324 firms from manufacturing and service sectors in Fortune's list of most admired companies in the US. Corporate reputation (Fortune's reputational rankings).	US	Independent outside directors and larger boards are significantly related to corporate reputation. CEO non-duality is negatively associated with corporate reputation.
Brown *et al.* (2006)	Corporate Philanthropic Practices	Journal of Corporate Finance	Quantitative; Archival data source, A sample of 207 firms from Fortune 500 firms identified in the 1998 issue. Giving (cash contribution to charity)	US	Larger boards are positively and significantly related to corporate giving. Board composition has no significant effect on corporate giving.

Jamali *et al.* (2008)	Corporate Governance and Corporate Social Responsibility Synergies and Interrelationship.	Corporate Governance: An International Review	Qualitative; In-depth semi-structured interviews (2 hours) with 8 medium and large companies operating in Lebanon.	Lebanon	Corporate governance serves as the pillar of CSR and governance in developing markets is shifting towards sustainable CSR.
Ntim and Soobaroyen (2013).	Corporate Governance and Performance in Socially Responsible Corporations: New Empirical Insight from a Neo-Institutional Framework.	Corporate Governance: An International Review	Quantitative; Archival data source (from 2002 to 2009). A sample of 75 non-financial firms listed on the Johannesburg Stock Exchange. CSR Index	South Africa	Effective corporate governance (board size, diversity and NEDs) mechanisms improve CSR practice. CG and CSR jointly have a strong and significant influence on financial performance.
Hafsi and Turgut (2013).	Boardroom Diversity and Its effect on Social Performance: Conceptualization and Empirical Evidence.	Journal of Business Ethics	Quantitative; Archival data source, A sample of 95 firms listed in the S&P 500 (manufacturing and service industries). CSR (KLD)	US	Differences within the board (diversity in boards) have a positive and significant effect on CSR performance. The diversity of boards has no direct effect on CSR performance.
Khan *et al.* (2013).	Corporate Governance and Corporate Social	Journal of Business Ethics	Quantitative;	Bangladesh	Board independence and presence

	Responsibility Disclosures: Evidence from an Emerging Economy.		Archival data source (2005-2009). A sample of 116 manufacturing companies listed on the Dhaka Stock Exchange, Bangladesh.		of audit committee have positive and significant relationships with CSR disclosures. CEO duality has an insignificant effect on CSR disclosures.
Zhang *et al.* (2013).	Board Composition and Corporate Social Responsibility: An Empirical Investigation in the Post-Sarbanes-Oxley Era.	Journal of Business Ethics	Quantitative; Archival data source, A sample of 516 of the largest firms (64 industries) listed on the US Stock Exchange. Fortunes Magazine's America's Most Admiral Corporations (FAMA)and KLD.	US	Proportions of NEDs and women on the board have a positive and significant effect on CSR (FAMA) performance. Women directors (not NEDs) have a positive effect on CSR (KLD) performance.
Jizi *et al.* (2014).	Corporate Governance and Corporate Social Responsibility Disclosure: Evidence from the US Banking Sector.	Journal of Business Ethics	Quantitative; Archival data source, 291 firm-year observations of US-listed banks from 2009 to 2011. CSR rating scores.	US	The proportion of NEDs, board size and CEO duality are positively and significantly related to CSR disclosure.
Isidro and Sobral (2015).	The Effect of Women on Corporate Boards on Firm Value, Financial	Journal of Business Ethics	Quantitative; Archival data source, 922 firm-year observations	16 European countries	The proportion of women on the board has an indirect effect

	Performance, and Ethical and Social Compliance.		(16 countries and 3 year period) drawn from The Financial Times 2011 classification of the 500 largest European firms.		on firm value through influence on ethical and social compliance.
Harjoto *et al.* (2015).	Board Diversity and Corporate Social Responsibility.	Journal of Business Ethics	Quantitative; Archival data source, A sample of 1,489 US firms from 1999 to 2011. KLD	US	Board diversity has a positive and significant influence on CSR components in the community, environment, product and corporate governance areas, but not in the employees and human rights areas. The effect of gender diversity is stronger in the firms that operate in consumer-oriented product and those openly in more competitive markets.
Shaukat et al., (2016).	Board Attributes, Corporate Social Responsibility Strategy, and Corporate Environmental	Journal of Business Ethics	Quantitative; Archival data source from Asset4 and DataStream Universe of UK	UK	CSR orientation boards are found to have a positive and significant

	and Social Performance.		listed firms cutting across 10 industries from 2002 to 2010 2,028 firm-year observations.		influence on CSR strategy, which in turn improve environmental and social performance, but the relationship is endogenously determined and self-reinforcing.
Lau *et al.* (2016).	Corporate Social Responsibility in China: A Corporate Governance Approach.	Journal of Business Ethics	Quantitative; Archival data source with a sample of 471 Chinese firms. CSR rating scores	China	Board structure (proportion of NED and female directors) does not have a significant effect on CSR performance.
Galbreath (2016).	When Do Board and Management Resources Complement Each Other? A Study of the Effects on Corporate Social Responsibility	Journal of Business Ethics	Quantitative; Archival data source, A sample of 295 Australian firms from Australian Securities Exchange 300 (ASX300). Sustainability Investment Research Institute (SIRIS)-CSR Index.	Australia	Proportions of NEDs and women directors jointly have a greater influence on CSR, than individually.
Hong *et al.* (2016).	Corporate Governance and Executive Compensation for Corporate Social Responsibility	Journal of Business Ethics	Quantitative; Archival data source, Sample of 2,561 executive-observations.	US	Better governed firms are more likely to provide compensation

			KLD		contracts linked to CSR. Compensation with ties to CSR is positively and significantly related to CSR activities.
Hussain *et al.* (2016).	Corporate Governance and Sustainability Performance: Analysis of Triple Bottom Line Performance.	Journal of Business Ethics	Quantitative; Archival data source, The sample involved 100 US companies from the high-performing Global Fortune 2013 list, 152 reports issued by selected firms during the period 2007 to 2011. GRI information (content analysis).	US	Board independence, women directors, CEO duality and board meetings have no significant relation to the economic bottom of sustainability performance. NEDs positively and significantly influence the environment and social sustainability performance. CEO duality has a negative and significant effect on environmental performance. Diversity influences positively the social, but not environmental sustainability performance. Board meetings and

					board size have no effect on environmental sustainability performance.
Muttakin *et al.* (2016).	The Effect of Board Capital and CEO Power on Corporate Social Responsibility Disclosure.	Journal of Business Ethics	Quantitative; Archival data source, A sample of non-financial companies listed on the Bangladesh Dhaka Stock Exchange from 2005-2013 (1,005 firm-year observations). CSR disclosure index.	Bangladesh.	Board capital is positively and significantly related to CSR disclosure. Powerful CEO is negatively associated with the level of CSR disclosure and may likely decrease the impact of board capital on CSR disclosure.
Liao *et al.* (2016).	Corporate Boards and Corporate Social Responsibility Assurance: Evidence from China.	Journal of Business Ethics	Quantitative; Archival data source, A sample of 2,054 firm-year observations of Chinese listed firms. CSR assurance (dummy variable).	China.	Board size, women directors and CEO non-duality have a positive and significant effect on CSR assurance. Proportions of independent NEDs and supervisory directors have negative impacts on CSR assurance.
Ibrahim *et al.* (2003).	Board Members in the Service Industry: An	Journal of Business Ethics	Quantitative; Questionnaire,	US	Outside directors are positively and

	Empirical Examination of the Relationship between Corporate Social Responsibility Orientation and Directorial Type.		A sample of 307 US board members (198 outside and 109 inside directors).		significantly related to discretionary CSR activities, but have a weaker effect on economic CSR activities. Outside and inside directors have no significant difference in regard to ethical and legal CSR activities.
Prado-Lorenzo and Garcia-Sanchez (2010).	The Role of the Board of Directors in Disseminating Relevant Information on Greenhouse Gases.	Journal of Business Ethics.	Quantitative; Archival data source, A sample of 283 non-financial and insurance companies listed on the FTSE Global Equity Index. Carbon Disclosure Project (CDP) 6 scores on GHGE.	28 countries (cutting across both developing and developed countries) with the largest sample (115) from the US.	CEO duality has a positive and significant effect on the dissemination of greenhouse gases information, but the firm's environmental behaviour and sensitivity of the industry eliminate the effect. Independent NEDs encourage less greenhouse emission information disclosure in firms with lower environmental behaviour and in those firms that operate in industries with a higher

					risk of litigation.

Appendix I (iii): Summary of the Previous Empirical Studies on the Board Processes

Name of the Author (s) and Year of Publication	**Title of the paper**	**Title of the Journal**	**Country of the Study**	**Methodology**	**Main findings**
Huse *et al.* (2009)	Women and Employee-Elected Board Members and Their Contributions to Board Control Tasks	Journal of Business Ethics	Norway	Quantitative; Questionnaire, Responses from 840 board members of Norwegian firms	Women directors have a positive and significant effect on strategic types of control and CSR control tasks, but insignificantly related to behavioural and budget control tasks. The ratio of women has no significant effect on creative discussions, but women's backgrounds and esteem have a significant impact on the creative discussion.
Andrés-Alonso *et al.* (2010)	Beyond the Disciplinary Role of Governance: How Boards Add Value to Spanish Foundations	British Journal of Management	Spain	Quantitative; The questionnaire received 119 responses from Spanish foundations listed in a national register.	Board size and proportion of NEDs have a weak effect on organisational efficiency, but diverse knowledge in the boardroom and active engagement of directors have a strong impact on firm efficiency.
Pugliese *et al.* (2015).	An Observational Analysis of the Impact of Board Dynamics and Directors'	British Journal of Management.	Australia	Qualitative; Direct observation and interview	Smooth turn-taking between directors in the boardroom may likely be the best way to assess whether board

	Participation on Perceived Board Effectiveness.				members have the opportunity to question and monitor executive, rather than the ratio of outside to inside directors. Taking fewer amounts of turns by the main contributor in the boardroom provides ample opportunity for other directors to be more engaged and give sufficient contributions in an open environment. These are associated with perceived board effectiveness.
Melkumov *et al.* (2015).	Directors' Social Identifications and Board Tasks: Evidence from Finland.	Corporate Governance: An International Review	Finland	Quantitative; Questionnaire, 92 responses from Finland's largest industrial firms.	Directors' identification with the focal organisation has positive effects on financial monitoring and strategic evaluation, but has an inverted-U shape relationship with top management monitoring. Directors' identification with the organisation has a positive impact on external legitimacy, networking, advice and counsel, and strategic participation tasks. Directors' shareholder's

					identification is positively related to only management monitoring tasks. Further, it has a negative effect on strategic participation.
Tuggle et al., (2010).	Attention Patterns in the Boardroom: How Board Composition and Processes Affect Discussion of Entrepreneurial issues.	Academy of Management Journal	US	Quantitative; Archival data, a sample of 184 public listed firms from 18 industries.	Boards with weak (not strong) faultlines (heterogeneity) are more likely to allocate greater attention to entrepreneurial issues. The frequency of board meetings, venue of the meetings and the structure of the meetings may likely effect board member's attention to the discussion of entrepreneurial issues. Informal meetings moderate the relationship between board heterogeneity and discussion of entrepreneurial issues. It also reduces the negative effect of strong faultlines and attention to entrepreneurial issues.
Machold *et al.* (2011).	Board Leadership and Strategy Involvement in	Corporate Governance: An	Norway	Quantitative; Questionnaire,	Board members' knowledge utilisation, board development, and

	Small Firms: A Team Production Approach.	International Review.		Sample of 140 Norwegian firms.	board leadership efficacy have a greater influence on board strategy involvement and this is possible with boards that have CEO duality.
Minichilli *et al.* (2009).	Making Boards Effective: An Empirical Examination of Board Task Performance.	British Journal of Management	Italy	Quantitative; Questionnaire, 301 responses from the largest Italian industrial firms.	Board critical debate and commitment have a positive and significant influence on advice and networking roles. The commitment of directors has a positive effect on strategic participation, output control, and strategic control roles. Firm size and outside directors are negatively related to strategic participation. Board members' background diversity has a negative effect on advice, output control and strategic control roles.
Kula (2005).	The impact of the Roles, Structure, and Process of Board on Firm Performance: Evidence from Turkey.	Corporate Governance: An International Review.	Turkey	Quantitative; Questionnaire, responses from 386 small and non-listed Turkish stock ownership firms.	Board resource acquisition role, CEO non-duality, and board processes (board effectiveness and access to information) are positively and

					significantly related to firm performance. CEO dualities, outside directors, service and monitoring roles have insignificant effects on firm performance.
Nielsen and Huse (2010).	The Contribution of Women on Boards of Directors: Going Beyond the Surface.	Corporate Governance: An International Review.	Norway	Quantitative; Questionnaire, 201 responses from CEOs of Norwegian firms having 50 to 5,000 employees.	Board development and open debates have positive effects on board strategic and operational controls. Board level of conflict is negatively related to strategic control, but not operational control. Women directors are positively related to strategic control and decrease boards' levels of conflict. Women directors have no significant relationship with open debate. The relationship between women and strategic control is fully mediated by board development and decreased conflict
Wan and Ong (2005).	Board Structure, Process, and Performance: Evidence from	Corporate Governance: An International Review.	Singapore	Quantitative, Questionnaire and Archival data, 212 responses	Effort norms, presence and use of knowledge and skills are positively related to board

	Public-Listed Companies in Singapore.			from multiple respondents (chairmen, executive, non-executive directors and company secretaries) of Singapore incorporated firms.	monitoring, service and strategic roles. The cognitive conflict has a positive influence on strategic roles, but insignificant effect on monitoring and service roles. There is no relationship between board structure and board processes and effectiveness.
Zona and Zattoni (2007).	Beyond the Black Box of Demography: Board Processes and Task Effectiveness within Italian Firms.	Corporate Governance: An International Review.	Italy	Quantitative; Questionnaire, 301 responses from CEOs of the largest Italian manufacturing firms.	Board size, effort norms and use of knowledge and skills have positive effects on monitoring task. Cognitive conflict is not significantly associated with monitoring task. Outside directors, cognitive conflict and use of knowledge and skills are positively and strongly related to networking role, but effort norms have a weak effect on networking task. Board processes variables have greater explanatory power than structure variables.
Robert et al., (2005).	Beyond Agency Conceptions of the Work of the	British Journal of Management.	U.K	Qualitative, 40 In-depth interviews	While board structure contributes to

	Non-Executive Directors: Creating Accountability in the Boardroom.				board effectiveness, it is the actual conduct of NEDs that determines board effectiveness. No single theory is appropriate to reflect the actual directors' behaviours and experience. Therefore, scholars should use theoretical pluralism to fully understand board processes and dynamics.
Ingley and Van Der Walt (2005).	Do Board Processes Influence Director and Board Performance? Statutory and Performance Implications.	Corporate Governance: An International Review.	New Zealand	Quantitative; Questionnaire, 418 responses from population drawn from a National database of 3000 members of the Institute of Directors (IoD).	Improving shareholder's wealth has number fourth greatest importance in regard to board tasks. Board influence on key corporate activities: Fundamental strategic directions (38.7%) Shareholders value (16.4%). Relationship with shareholders is (37.2) Relationship with stakeholders is (20.3%). Directors and board share strategy development (65.8), rather than management alone developing the

					strategy (1.0) and seek approval (20.0). Board main role is to define the strategy (34.6), rather than approve (7.3), ratify (4.7) or monitor (3.3).
Rutherford and Buchholtz (2007).	Investigating the Relationship between Board Characteristics and Board Information.	Corporate Governance: An International Review.	US	Quantitative; Questionnaire and Archival data, Responses from Chairperson of public US 149 firms in Chemicals, Printing and Publishing, and Industrial Machinery and Equipment industries.	The proportion of non-executive directors increases the quality of information received, but NEDs' tenure does not improve the quality of information.
Bezemer *et al.* (2007).	Investigating the Development of the Internal and External Service Tasks of Non-Executive Directors: The Case of the Netherlands (1997-2005).	Corporate Governance: An International Review.	Netherlands	Quantitative; Archival data, 900 firm-year observations of the top 100 listed firms in the Netherlands from 1997 to 2005.	NEDs' service task is more focused on internal service tasks (advice and counsel), than external service (boundary spanner) role.
Brundin and Nordqvist (2008).	Beyond Facts and Figures: The Role of Emotions in Boardroom Dynamics.	Corporate Governance: An International Review.	Sweden	Qualitative; Observation, open-ended interviews, and document analysis (diary notes from CEOs). Attended five board meetings each	Short-term and long-term emotions affect board work and improve or impede board task (service and control roles) performance.

				lasted for 2 to 3 hours of Trigon, a manufacturer of furniture components in Sweden	
Westphal and Bednar (2005).	Pluralistic Ignorance in Corporate Boards and Firms' Strategic Persistence in Response to Low Firm Performance.	Administrative Science Quarterly.	US	Quantitative; Questionnaire and archival data, 225 responses	Due to a spiral of silence among board members, poor strategies are persistently used. Reluctant to express concerns about strategy by each director as a result of demographic heterogeneity or fewer friendship ties among directors increases pluralistic ignorance.
Payne *et al.* (2009).	Corporate Board Attributes, Team Effectiveness and Financial Performance.	Journal of Management Studies.	US	Quantitative; Questionnaire and Archival data, 217 responses from CEOs, inside and outside directors of Fortune 1000 companies.	Knowledge, external information, power and time spent have positive and significant impacts on board effectiveness,(service and control tasks) and firm performance. Internal information and incentives do not significantly influence board-level and firm-level performance. Board effectiveness has a significant effect on firm performance. Mediation effect of

					board effectiveness on the board-firm performance is not detected.
Coombes *et al.* (2011).	Behavioural Orientations of Non-Profit Boards as a Factor in Entrepreneurial Performance: Does Governance Matter?	Journal of Management studies.	US	Quantitative; Questionnaire, a sample of 140 non-profit New York organisations.	Strategic, active and cohesive boards are more likely to manage their resources effectively through innovative, risk-taking and proactive behaviours. These behaviours have positive and significant effects on social, not financial performance.
Parker (2007).	Internal Governance in the Non-Profit Boardroom: A Participant Observer study.	Corporate Governance: An International Review	Australia	Qualitative; A longitudinal research observer study of two non-profit boards in two years period.	CEO-Board relationship: both boards have a cordial, mutual and supportive relationship with their CEOs, but with two different approaches; 'leading from the front' and 'leading from behind'. Deliberate agenda structuring can be done in an informal meeting setting. Informal meetings lead to transparency, reduce confrontations and stress and enhance cohesion among directors even when there is an intense debate or disagreement in the boardroom.

Parker (2008).	Boardroom Operational and Financial Control: An Insider view.	British Journal of Management.	Australia	Qualitative; Longitudinal complete member researcher participant observer of two boards.	Strategic orientation of directors drives the focus on board operational and financial controls. Both boards show greater attention to the financial impacts of strategic proposals.
Liu *et al.* (2016).	Removing Vacant Chairs: Does Independent Directors' Attendance at Board Meetings Matter?	Journal of Business Ethics.	China	Quantitative; Archival data, A sample of 12,131 firm-year observations from A-share firms listed on the Chinese market from 2004 to 2011.	Firms with independent NEDs that attend board meetings are more likely to protect shareholders wealth especially in non-state-owned enterprises and when external supervision is weak.
Zhu *et al.*, 2016	Board Processes, Board Strategic Involvement and Organisational Performance in For-Profit and Non-Profit Organisations.	Journal of Business Ethics.	Canada.	Quantitative; Questionnaire, 373 responses form directors of for-profit firms and NPOs in Canada.	Board meeting frequency (both general and strategic) has a positive and significant effect on board in strategic involvement for-profit organisations and NPOs. Only strategic, not general meetings improve the strategic involvement of non-profit organisations. Outside board meetings review has no significant impact on board strategic

					involvement in both for-profit organisations and NPOs. Information utilisation (not availability) has a positive effect on board strategic involvement in for-profit organisations, but not in NPOs. Board strategic involvement positively and significantly influence corporate performance in both for-profit organisations and NPOs.
Zhang (2010).	Board Information and Strategic Tasks Performance.	Corporate Governance: An International Review.	Norway	Quantitative; Questionnaire, 318 responses from CEOs in the year 2003 and 2005.	Using diverse information significantly improves board current strategy, but not future strategy. Possessing diverse information influences both current and future strategies.

Appendix J: Qualitative data analysis process

Data Transcription

Data transcription is an important phase in qualitative data analysis, it involves a verbatim account of all verbal and non-verbal utterances (Braun and Clarke, 2006). All the interviews conducted in this study were tape-recorded and transcribed in a word document. Transcription of each interview was done before the next interview took place. This helped to write exactly what was recorded, as the words spoken were still fresh in the mind of the researcher. The interviewer checked and rechecked interview transcriptions with the recorded data (verbatim) to ensure consistency between the spoken words and the word-processed account, this is known as data cleaning (Saunders *et al.*, 2016) in qualitative research.

Following the advice given by Saunders *et al.* (2016), each interview transcription has been saved with a separate filename, taking confidentiality issue into account. For example, Mr 3INEDM represents participant number three, an independent non-executive director and male.

The interviews were conducted in English as it is the official language in Nigeria. Therefore, the transcription process is less stressful as it requires no translation of the tape-recorded data. Transcription process is time consuming, frustrating and difficult to comprehend (Braun and Clarke, 2006), but it assists in the current study as the researcher familiarises and immerses himself with the data and through this transcription process the researcher begins to understand the meanings and create initial codes from the data set.

Identifying Initial Codes and Themes

After the interview transcriptions, the researcher becomes familiar with the data trends and patterns, then as a result generates a list of ideas about what is in the dataset. This forms the basis for generating initial codes from the data set. Coding is a process that involves labelling each unit of data within a dataset; namely, a code summarises meaning of the data extract (Saunders *et al.*, 2016). In this study, data extracts with similar meanings are coded together, while those that are dissimilar are separated and a different code created for them. The data was initially coded manually, before using computer-assisted qualitative data analysis software (CAQDAS) - NVIVO, this helped the researcher to further familiarise himself with the data.

As mentioned earlier, this study uses a theory-driven (deductive) technique. Therefore, the interview data gathered was approached with the aim of finding specific themes/categories in relation to the research conceptual framework. However, beyond the framework, certain patterns appear and were considered. Therefore, this study, though employs a deductive approach, it also adopts a data-driven (inductive) approach. This is essential in order to avoid extensive restrictions in relation to what comes up from the data and to accommodate meanings gathered from the participants (Saunders *et al.*, 2016). This assists the researcher in making necessary changes in the proposed research conceptual framework in order to suit the context under study.

The researcher read the data several times and was able to identify certain interesting terms/codes in the dataset which serve as potential themes. Thirty-five codes were identified and data extracts were allocated appropriately to each relevant code. Some data extracts are used once in a code, while others are allocated in more than one code depending on the suitability of the data extract. The 35 codes identified were organised to form different potential themes/nodes. Each code and its data extract(s) are collated to the relevant identified potential theme/node. However, it is important to note that most of the data was coded based on literature (theory-driven), taking into consideration categories that are common in the related literature (board task, board processes, and CSR activities).

Under board processes five themes were identified, which include: directors' *commitment, challenge, knowledge utilisation, availability of human capital* and *negative conflict*. Boards' *control role*, *resources provisions* and *strategy advisory* serve as themes under the ‘board task’ category. The data shows a number of themes under CSR activities which comprises of *philanthropic, ethical, legal, economic activities, profit and CSR, CSR and task* (see figure 6.1). At this stage, different codes were merged to form main node/theme, while others serve as child node/theme.

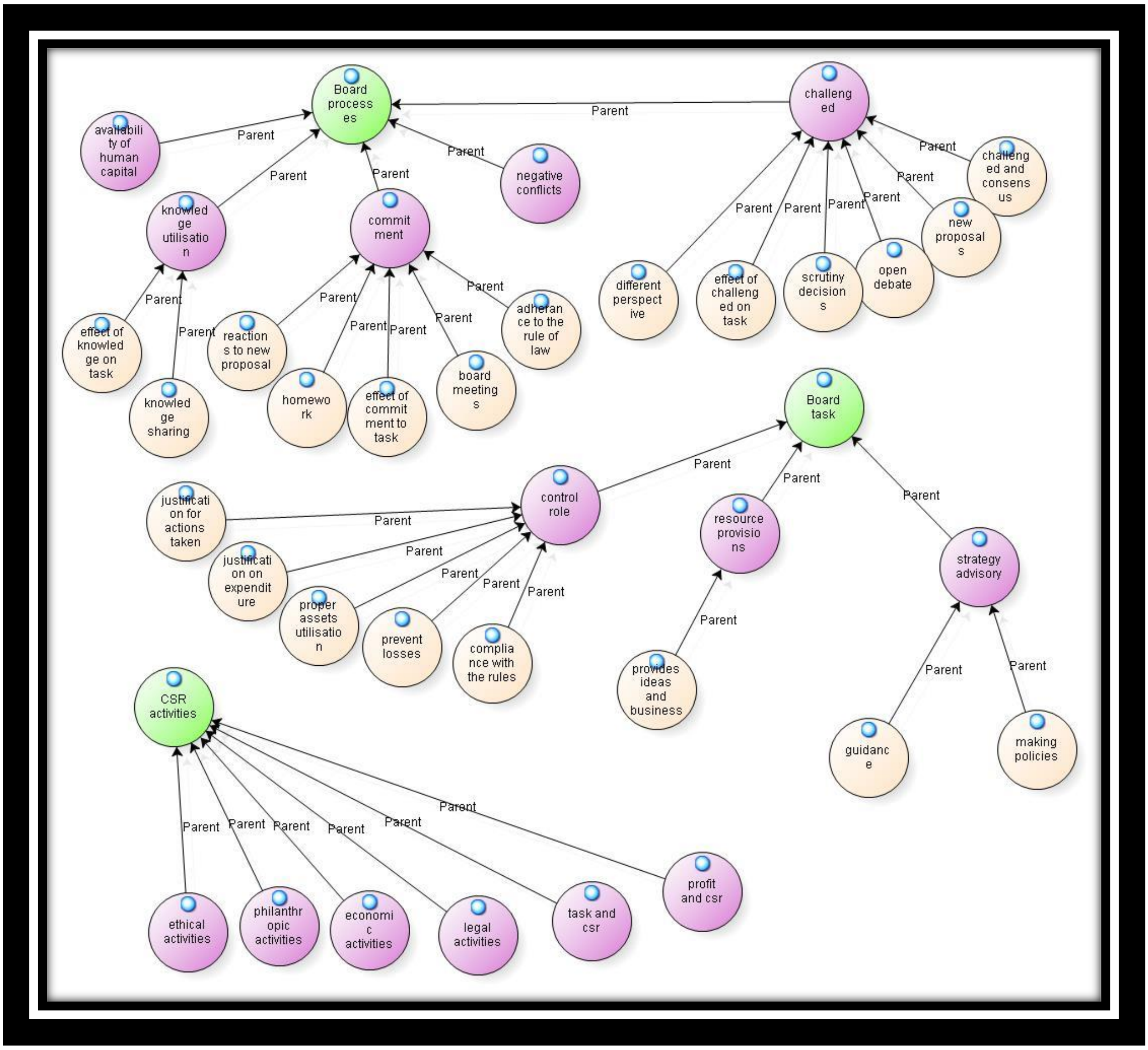

Figure6.1: Initial Thematic Map Indicating 3 Broad Categories, 14 Main Themes, and 21 Child Themes.

Keys
Green = Broad Categories
Yellow = Main Themes
Pink = Child Themes/Nodes

Reviewing Themes

At this stage, the researcher reviewed and refined the main potential themes identified at the earlier stage in order to determine whether they really serve as an overarching theme or there is need to split, merge or discard the themes (Braun and Clarke, 2006). The views of Patton (1990) on internal homogeneity and external heterogeneity are considered at this stage. After reading carefully all the data extracts allocated to each theme, the researcher finds that data extracts for each parent node/theme are coherent and consistent with each other. However, there is no external heterogeneity between two main themes (*resource provision* and *strategy advisory*). There is no clear identifiable distinction between these two parent themes, they both contain similar meanings. For this reason, the two themes were collapsed together to form a single theme (*service theme*). Similarly, sub-themes under '*control role*' seem to be problematic, as they do not have enough data extracts to support their existence and they need to be distinct from each other. Therefore, these child nodes were merged under the main theme (*control theme*). At the end of this process, all the themes were fully supported with sufficient data extracts and a candidate thematic map was achieved, as data within each theme was coherent.

Some data extracts that did not fit into any theme were discarded, as such data extracts cannot serve as independent themes because they lack support from sufficient coded data. Similarly, also removed from the initial thematic map include '*availability of human capital*' and '*negative conflict*' because each of these themes either lacks relevancy in the current study or have no sufficient coded data unit to support its existence. Overall, a thematic map was developed at this stage with nine themes and all valid in relation to the data set (see figure 6.2).

As the interviews conducted were not many, re-reading the data set does not provide any other relevant theme needed in this study, thus the thematic map is accurate in regards to this study. The interviews were conducted with the aim to explore and obtain board members' perspectives and understandings of the board processes, board task and corporate social responsibilities activities that are suitable to use in the context under examination (Nigeria). An initial conceptual framework was designed based on the previous literature and the study's research questions. Hence, data were coded and themes were identified in a way to answer the research questions.

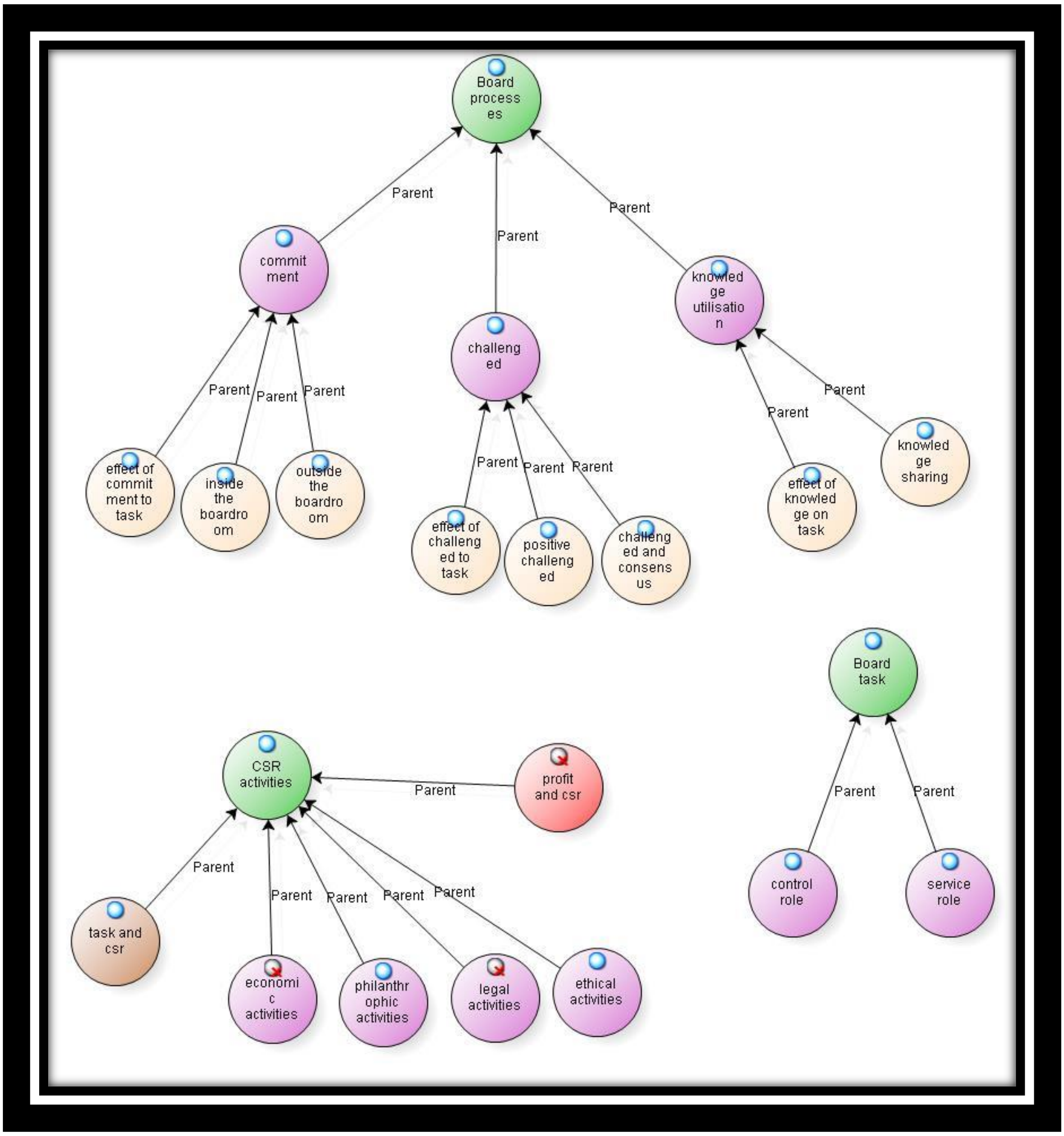

Figure6.2: Developed Thematic Map with 3 Broad Categories, 11 Main Themes and 8 Child Themes

Naming Themes

At this stage, the final parent and child nodes/themes were identified and finally defined. The working names of the themes were maintained in the final analysis, but have been considered under different categories identified from the literature. For instance, *control* and *service* themes have been discussed under board task, while *challenge, commitment* and *knowledge utilisation* were analysed under board processes.

Refined data extracts within the themes were used for the final analysis and each theme carries a distinct data aiming to capture exactly what the theme is all about. For example, a '*control theme*' captures only data related to any form of monitoring aspect of boards. Data extracts attached to each theme are organised into an internal coherent pattern. However, themes (*profit and CSR as well as Task and CSR*) were removed completely from the thematic map because the themes are beyond the objective of the current study. The appearance of this theme shows the importance of the relationship between profit and corporate social responsibility activities in the Nigerian context. This might be an interesting phenomenon to investigate further in the future studies.

The main themes found under CSR activities were redefined and renamed to ethical and philanthropic CSR dimensions (see figure 6.3). Nevertheless, CSR legal activities were also apparent in the dataset. Nigerian corporations are heavily criticised by previous studies for not doing much on legal and ethical CSR activities. Majority of the previous studies focused on philanthropic dimension of social responsibility. For this, legal CSR is considered in this research instead of philanthropic social activities in the new research conceptual framework. Therefore, corporate social responsibility activities related to legal and ethical dimensions are recognised as the outcome variables in the current research conceptual framework.

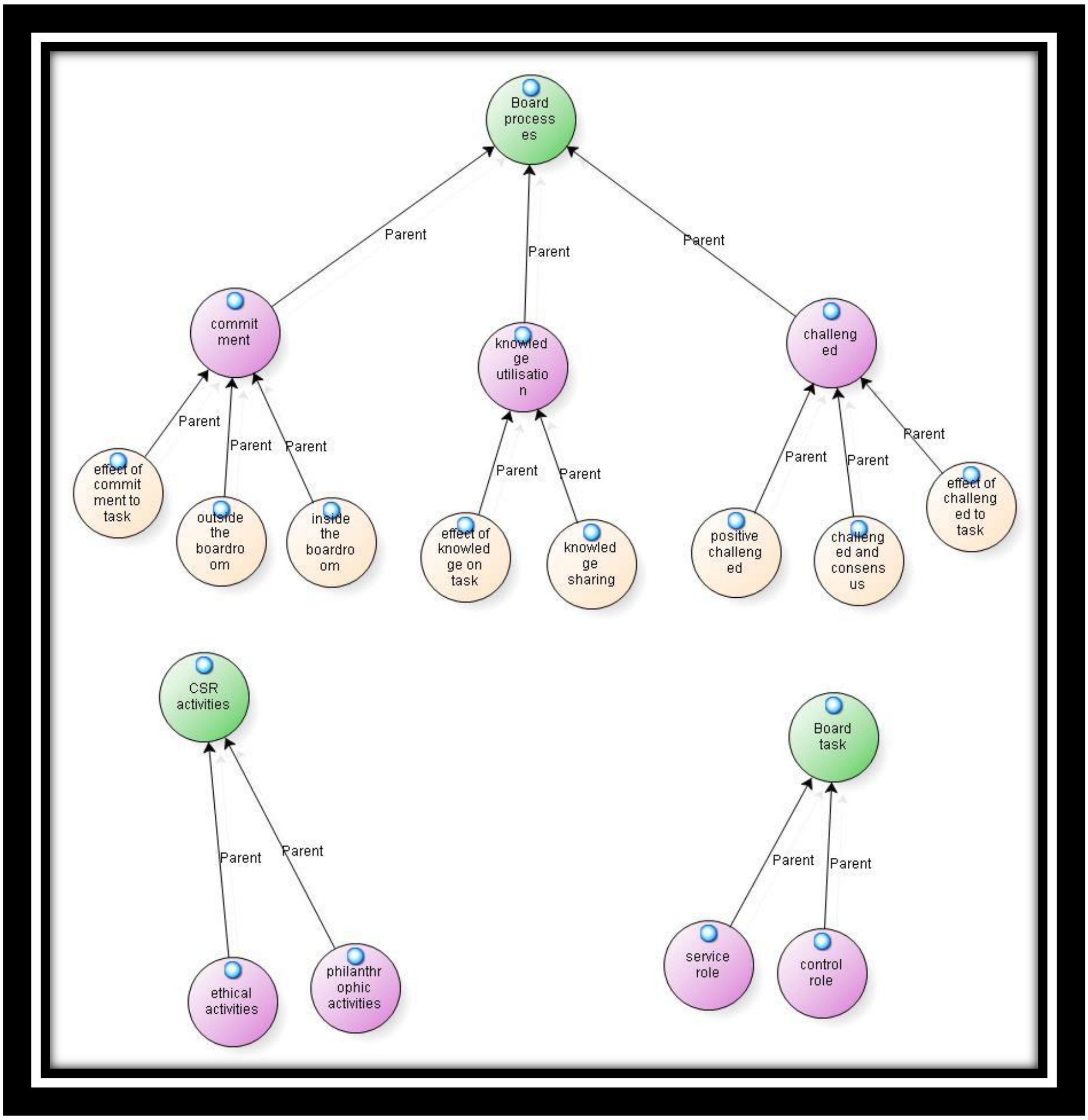

Figure6.3: Final Thematic Map showing 3 Broad Categories, 7 Main Themes, and 8 Child Themes.

Keys
Green = Broad Categories
Yellow = Main Themes
Pink = Child Themes/Nodes

Reporting Findings

Under the main research categories (board task, processes and CSR activities), themes and sub-themes emerged from the data set. For board task, *control* and *service* roles are the main themes. Three major board processes factors emerged, which include board *commitment, challenge* and *knowledge utilisation*. Participants of the interview mentioned the various type of CSR activities that their company's engaged with, this involves *positive CSR* (philanthropic and economic activities) and *negative CSR* (legal and ethical activities). However, only negative CSR dimensions are considered in this study.

Board Task

It is quite evident from the data that Nigerian boards' main focus are to monitor the activities of managers. This is consistent with the aim of agency theory which is to monitor and prevent the opportunistic agent from utility maximisation (Jensen and Meckling, 1976). The Nigerian Corporate Governance Code emphasises that boards of directors shall effectively protect companies' assets and ensure corporations are run effectively. The results from the interview show that directors in Nigeria consider the *control role* as the main task of the board with the majority of respondents emphasising on this idea. For example, an independent non-executive director states that:

'Board controls and monitors the managers…the monitoring aspect is number one, because you don't establish a business and just leave the manager on his own, you have to, that is why I said we meet quarterly, the management….submit in quarterly management report which encompasses all activities in the company. The production figures will be there, in fact, at the…at the…beginning of a year, we have a budget of how many tonnes we have to produce that year…and what is the expected revenue. The selling cost, the expected revenue…then the expenditure….then the bottom line. So if the management couldn't make the target for that quarter…..it has to explain why' (3INEDM).

Another participant (*7NEDM)* narrates that all major planned expenditures have to secure approval from the directors before management engages in such spending, but the executive can go ahead with expenditure that involves meagre amounts of money.

A managing director (Mr 2MDM), who also serves as chairman of the same company, explains that 'board looks at what I and other directors are doing regularly…..and if there is an area of concerns they raise it and ensure it is addressed'. Similarly, another executive director mentioned that their board oversees the activities of the managers and they make sure that the company is run according to the suggestions made at the board meetings (Mr 6EDM).

Provision of resources, useful strategy advice and good guidance are other themes that appear under board task. Put together, these themes were merged and entitled '*service role'*. This role is equally important for firms to survive in Nigeria. One participant discusses how their board strategizes to ensure sufficient production: 'right now, we are planning to expand the plant, production. Our capacity is now 500,000. So we are now, in term of production, we are the smallest cement company in Nigeria. Strategy has been made now to increase the capacity to 1.5 million tonnes per annum…from 500,000' (3INEDM).

Another participant who is non-executive director stated that board task is "to give good guidance to the firm. As you know, our work is not to run the day-to-day activities of the firm rather give advice and ensure those advice are adhered to. You see….what our board is all about is to serve as a good guide to managers" (Mr 5NEDM).

The two board tasks that emerged from the data indicate that in order to perform their duties effectively, boards should go beyond control role. In addition to monitoring, boards are expected to provide strategic advice and resources, which complement agency theory assumptions. Therefore, both control and service tasks are equally important roles to be performed in the Nigerian context. According to the SEC (2011) code, "it is the responsibility of the board to oversee the effective performance of the management in order to protect and enhance shareholders value and to meet the company's obligations to its employees and other stakeholders" (p.8). The code also recommends that the board should set firm's strategy and provides strategic advice and guidance, ensure that human and financial resources available are utilised towards attaining those goals.

Board Processes

The main themes found under this category are similar to those introduced in the theoretical work of Forbes and Milliken (1999). Effort norms, cognitive conflict and use of knowledge and skills are the common traits found in almost all the board processes literature (see for example Wan and Ong, 2005; Zona and Zattoni, 2007). However, evidence from the interviews show that the wording needs to be changed in the Nigerian context. For example, directors interviewed dislike the word 'conflict' in the boardroom, instead they prefer to have different views: "it's not conflict, but we do have our differences and challenges" (4NEDF). Another participant states: "I cannot call it disagreement and conflict as such, I think it is different views…that is what I will call it" *(2MDM).* In a similar vein, Mr 5NEDM argues: "we don't have conflicts in our board instead we have different opinions, views or perspectives. If you say…….we have…eh…eh…..conflicts, it means we are quarreling with each other".

Basically, themes that appeared from the interviews under 'board processes' are 'challenge' instead of 'cognitive conflict' and 'commitment' instead of 'effort norms'. Although both terms are the same, the wording was misunderstood by the participants. Therefore, in order to achieve the research aim, changing the wording is necessary and important in the Nigerian context.

It is essential for a non-executive director to ask probing questions and challenge anything he is not clear with and this attitude is of benefit to the board. One non-executive director from the participants explains that: 'When a new idea or opinion is introduced in the board meeting, I will listen and ensure I really understand what he or she is saying, then see if I have any concerns or issues regarding this opinion, and if there is a concern, I would challenge the ideas or at least seek clarification from the person who brings the idea' *(7NEDM).*

However, challenging the executives should be done with caution in order to avoid confrontations and instigating a lack of trust among board members. The current study investigates whether, as a result of challenging each other's opinions, there is negative effects on interpersonal relationships among board members. An executive director said not at all, because both executives and non-executives have the same goal 'we are all firing from different angles towards the goal post. If one of an executive member is shooting wrongly, maybe the chairman would say…ah…let us weight the other opinions from two members, maybe we are four or five" *(Mr 1EDM).*

Speaking on the same vein, an independent non-executive director says that "at the end of the meeting, after the challenge and disagreement, an agreement will be reached, so that is the most important thing. It is normal, it is just like what you see on the television, the National Assembly debate on issues (laugh), but by the end of the meeting, people must have understood, maybe something you have not understood from the beginning. By the time you go to the meeting and ask questions…then things are explained to you…and things are put in proper perspective…..then you may….you may agree' (Mr 3INED).

The commitment of board members, especially those that serve as part-time directors is crucial to achieving the board aim. Empirical evidence emerged that board composition with NEDs improves board level of involvement and effort norms (Judge and Zeithaml, 1992; Bettinelli, 2011).

A non-executive director explains his level of commitment: 'although I am too busy with other outside schedules, but I am committed to my roles here. I always ensure that I do everything possible to attend the board' needs, for example, I missed not many, maybe just one board committee meeting throughout last year. I also try to maintain a cordial relationship in and outside the boardroom with other board members' (Mr 5NEDM).

Mr 3INEDM states that, 'under normal circumstances, each board or company is supposed to be fully committed and have at least four meetings per annum….that is quarterly. The management, of course, will bring in their proposals, circulate the papers before the meeting' and he continues "that will enable the board members to go through the papers, come up with any suggestion'.

Similarly, a female non-executive director shows commitment toward completing her homework before attending a board meeting, she states: 'I always prefer to have agenda of the meeting communicated to me in details and such document to be given to me before…..at least a day or two….to the meetings' (Mrs 4NEDF). Broadbridge *et al.* (2006) suggest that because of their inexperience in the board work, women directors prepare more for board meetings, seek knowledge about the nature of the board work and identify areas of improvements.

Another board process factor identified from the interview is the ability of board members to utilise the knowledge available within them. Data from the interview suggests that Nigerian boards comprise of people with different knowledge backgrounds: 'we have eight board members and almost all came from different educational background and some serve in different boards as executive or non-executive directors. Beside me as a professional lawyer, we have those who specialised in finance, engineering' *(Mr 5NEDM).* Similarly, another participant said: 'We have different people under the current board. We have the engineers, we have financial experts, we have strategist; which am one' *(Mrs 4NEDF).*

However, availability of human capital does not guarantee utilisation of such resource and the important factor that determines board effectiveness is the utilisation, rather than availability of such human capital. The interview participants indicate their readiness to put the resources available to use. Mr 3INEDM described how they utilise knowledge available in their board:

‘It’s important to have people from different background. If you are discussing compliance of the company, you will see that, maybe, the lawyer will talk more than the others. If you are discussing finance, the accountant will talk more; if you are talking about the plant…..like I told you one director was a former managing director of this company, so he knows the plant very well and he can advise you…even if you call him on the phone in the night….because he knows what you are talking about’. Overall the participant summarised his views as *‘a*nybody with background knowledge of the topic in question will have more influence because his views will be more in line with what is required, because he is more knowledgeable, yeah”.

Corporate Social Responsibility

The four main layers of the CSR pyramid developed by Carroll (1991) serve as common themes identified in this interview. This includes CSR activities related to *economic, ethical, legal and philanthropic*. The interview data shows that Nigerian corporations engage in both positive and negative CSR, however, more emphasis is given on positive CSR, especially philanthropic activities, such as building schools, donations to charity and constructions of water boreholes to host communities. Mr 7NEDM narrates that their firm has ‘a sustainability report published annually on its website, yes. We constructed so many feeder roads and built wells for our host community and we also built and renovated schools. For example, we just completed 2-8km and 1.6km paved asphalt roads in Ebendo and Umusan communities respectively. Also, we just constructed four water borehole projects in Obodugwa community’.

Another interviewee states that ‘I can tell you that we do a lot of corporate social responsibilities by building dispensaries around our area of population that is Wamakko local government, which is our base. And I don’t know, you know, there is Cement school at Wurno road where the school is supported by the company, yes. We have a primary, junior secondary school and senior secondary school’ (3INEDM)

In a similar way a female non-executive director explains that their company 'engages in philanthropist activities, there are some communities we provided with electricity, water, pumps and build schools sometimes for the communities that are around the quarry site of the company, yes' (4NEDF).

For *negative CSR* activities, thought data shows evidence that Nigerian firms engage in legal and ethical CSR activities, but are not as prevalent as theme related to positive CSR activities. This implies that Nigerian boards are more engaged with *positive CSR,* specifically philanthropist activities. However, this is just a preliminary finding, further investigation is needed before drawing a final conclusion.

Notwithstanding, themes identified in relation to *negative CSR* include compliance with laws by paying taxes, reducing the impact of firm operations on the environment, non-donations to political activities/parties and diversity in the workforce. An executive director states that 'our company is a law-abiding, comply with all environmental laws and pay tax, we have SUDA here, land fees, environmental fees…or all those kind of things apart from the tax itself. There are other taxes or resemblance in taxes that the government charged; we pay, we don't waste time for that' (Mr 1EDM).

Mr 2MDM a managing director and also chairman of a construction company states that 'we do not do anything that has to do with political activities at all and is clearly stated in our regulations. We don't contribute to any political issues, no'.

Similarly, an independent non-executive director explains that 'we *try to mitigate any negative* effect we caused to our host community. Even if there is no any, I told you, every year the corporate social responsibility committee comes in with requests that include roads, wells……like I told you" (3INEDM).

The interviews data shows evidence on the relationship between board task and CSR activities. For example, it was found that the *control task* of the board helps a company in

Nigeria to actively engage in CSR activities. One respondent explains that it is only through effective monitoring, which ensures management complies with the laid down initial proposals, that CSR activities are performed: ‘we have a corporate social responsibility committee and they bring in their proposals on where they want the firm to assist the host community through corporate social responsibility. If approval is given by the board, then we meet every three months to discuss performance of management to see if there are implementations of such approvals regarding many areas including proposals from CSR committee’ (3INEDM).

In summary, the findings from the interview indicate three board processes, two board tasks, and different activities related to the corporate social responsibility of Nigerian boards. The board processes identified are directors’ *commitment, challenge* and *knowledge utilisation*. These factors are similar to those used in previous literature such as Zattoni *et al.* (2015), Zona and Zattoni (2007) and Wan and Ong (2005). Similarly, board tasks (*control task and service task*) found from the interviews are dominant in the board processes literature see, for example, Huse *et al.* (2009), Minichilli *et al.* (2012) and Pugliese *et al.* (2014). All the four layers of CSR developed by Carroll (1991) were salient from the interview’ data. This includes *economic, philanthropic, ethical* and *legal CSR activities*. However, for the purpose of this study, ethical and legal social responsibility activities are considered as the interested CSR dimensions that Nigerian board of directors should improve upon. Arora and Dharwadkar (2011) criticised previous studies for much emphasis on positive CSR activities, such as economic and philanthropic CSR dimensions with little or no attention on negative corporate social responsibility activities, such as legal and ethical activities. A complete and new conceptual framework and hypotheses to be tested quantitatively are presented in the next section.

Appendix K: Author's membership certificate of SCGN


M/2017/341

LEADERSHIP & INTEGRITY

By the Authority of the Board of

SOCIETY FOR CORPORATE GOVERNANCE NIGERIA

Instrument of Admission of Associate Members

Be it known that

Abubakar Zayyana

is admitted as a

Member

And with all the rights, privileges and immunities appertaining thereto, having satisfied the requirements of the guidelines for the admission of Associate Members as prescribed by the society.

In testimony whereof, we have caused our signature and common seal of the society to be affixed hereto, as provided by the constitution and articles of the Society for Corporate Governance Nigeria.

Given at Lagos, Nigeria,

this 6TH *day of* DECEMBER *in the year of our Lord 20*17

President

Hon Secretary

The Society for Corporate Governance Nigeria Limited by Guarantee is a registered not-for-profit No. 620,268 and is committed to the development of corporate Governance.

This Certificate remains the property of the Society and the Society reserves the right to revoke same from a non-financial member or a member convicted by any Court for an offence involving fraud.

Appendix L: Attendance certificate of BAFA Annual conference

CERTIFICATE OF ATTENDANCE

This is to certify that

Abubakar Mohammed Zayyana

participated in the

BAFA 2017 Annual Conference and Doctoral Masterclasses

held at the

Heriot-Watt University, Edinburgh on 10-12th April 2017

and presented the following paper

'Beyond the surface: Board of directors' effectiveness relating to the task and corporate social responsibility performance in Nigeria'

Appendix M: Results of the moderation effects of board processes on the relationships between board characteristics and board tasks.

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
CEO duality -> Control task	-0.063	-0.065	0.068	0.921	0.357
Commitment -> Control task	0.151	0.188	0.082	1.853	0.064
Moderating Effect 1 -> Control task	-0.064	-0.041	0.116	0.557	0.578

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
CEO duality -> Service task	-0.091	-0.086	0.029	3.184	0.002
Commitment -> Service task	0.247	0.262	0.079	3.128	0.002
Moderating Effect 1 -> Service task	-0.103	-0.111	0.040	2.569	0.010

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
CEO duality -> Control task	-0.043	-0.025	0.063	0.678	0.498
Challenge -> Control task	0.264	0.288	0.070	3.760	0.000
Moderating Effect 1 -> Control task	-0.050	0.041	0.127	0.390	0.696

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
CEO duality -> Service task	-0.074	-0.065	0.034	2.190	0.029
Challenge -> Service task	0.344	0.360	0.066	5.210	0.000
Moderating Effect 1 -> Service task	-0.061	-0.053	0.080	0.764	0.445

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
CEO duality -> Control task	-0.062	-0.052	0.036	1.739	0.083
Knowledge utilisation -> Control task	0.260	0.280	0.056	4.615	0.000
Moderating Effect 1 -> Control task	-0.119	-0.150	0.077	1.548	0.122

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
CEO duality -> Service task	-0.068	-0.067	0.027	2.480	0.013
Knowledge utilisation -> Service task	0.434	0.438	0.066	6.535	0.000
Moderating Effect 1 -> Service task	-0.045	-0.079	0.095	0.472	0.637

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board composition -> Control task	-0.034	-0.025	0.079	0.426	0.670
Commitment -> Control task	0.147	0.160	0.083	1.773	0.077
Moderating Effect 1 -> Control task	0.160	0.143	0.157	1.021	0.308

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board composition -> Service task	-0.066	-0.070	0.076	0.872	0.383
Commitment -> Service task	0.239	0.250	0.070	3.417	0.001
Moderating Effect 1 -> Service task	-0.088	-0.090	0.118	0.747	0.455

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board composition -> Control task	-0.050	-0.052	0.079	0.637	0.525
Challenge -> Control task	0.259	0.282	0.071	3.633	0.000
Moderating Effect 1 -> Control task	-0.003	0.000	0.116	0.026	0.979

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board composition -> Service task	-0.062	-0.070	0.073	0.845	0.398
Challenge -> Service task	0.351	0.358	0.068	5.193	0.000
Moderating Effect 1 -> Service task	0.002	0.008	0.115	0.021	0.983

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board composition -> Control task	-0.042	-0.027	0.077	0.544	0.587
Knowledge utilisation -> Control task	0.291	0.304	0.068	4.299	0.000
Moderating Effect 1 -> Control task	0.178	0.080	0.183	0.976	0.330

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board composition -> Service task	-0.017	-0.019	0.060	0.285	0.776
Knowledge utilisation -> Service task	0.439	0.447	0.069	6.372	0.000
Moderating Effect 1 -> Service task	-0.117	-0.130	0.085	1.381	0.168

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board size -> Control task	-0.218	-0.219	0.059	3.721	0.000
Commitment -> Control task	0.170	0.179	0.087	1.965	0.050
Moderating Effect 1 -> Control task	0.101	0.043	0.134	0.753	0.452

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board size -> Service task	-0.120	-0.118	0.061	1.958	0.051
Commitment -> Service task	0.256	0.266	0.078	3.298	0.001
Moderating Effect 1 -> Service task	-0.081	-0.040	0.141	0.575	0.566

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board size -> Control task	-0.211	-0.197	0.060	3.538	0.000
Challenge -> Control task	0.247	0.265	0.083	2.976	0.003
Moderating Effect 1 -> Control task	-0.097	-0.012	0.125	0.778	0.437

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board size -> Service task	-0.093	-0.084	0.060	1.539	0.124
Challenge -> Service task	0.355	0.365	0.070	5.091	0.000
Moderating Effect 1 -> Service task	-0.115	0.015	0.137	0.833	0.405

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board size -> Control task	-0.235	-0.234	0.055	4.277	0.000
Knowledge utilisation -> Control task	0.307	0.317	0.062	4.914	0.000
Moderating Effect 1 -> Control task	-0.003	-0.013	0.093	0.031	0.975

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Board size -> Service task	-0.128	-0.125	0.052	2.480	0.013
Knowledge utilisation -> Service task	0.461	0.463	0.066	7.014	0.000
Moderating Effect 1 -> Service task	-0.033	-0.050	0.085	0.394	0.694

*Final analysis PhD.splsm | Bootstrapping (Run No. 25)

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Commitment -> Control task	0.153	0.171	0.078	1.955	0.051
Gender diversity -> Control task	-0.074	-0.072	0.086	0.865	0.387
Moderating Effect 1 -> Control task	0.089	0.036	0.154	0.579	0.563

*Final analysis PhD.splsm | Bootstrapping (Run No. 26)

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Commitment -> Service task	0.252	0.260	0.070	3.597	0.000
Gender diversity -> Service task	-0.093	-0.099	0.076	1.228	0.220
Moderating Effect 1 -> Service task	0.109	0.018	0.140	0.781	0.435

*Final analysis PhD.splsm | Bootstrapping (Run No. 27)

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Challenge -> Control task	0.253	0.271	0.073	3.455	0.001
Gender diversity -> Control task	-0.052	-0.058	0.080	0.644	0.520
Moderating Effect 1 -> Control task	-0.077	0.029	0.138	0.553	0.580

*Final analysis PhD.splsm | Bootstrapping (Run No. 28)

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Challenge -> Service task	0.346	0.352	0.070	4.908	0.000
Gender diversity -> Service task	-0.078	-0.070	0.072	1.078	0.282
Moderating Effect 1 -> Service task	-0.051	-0.051	0.125	0.403	0.687

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Gender diversity -> Control task	-0.046	-0.035	0.085	0.543	0.587
Knowledge utilisation -> Control task	0.288	0.311	0.068	4.240	0.000
Moderating Effect 1 -> Control task	0.097	0.070	0.155	0.628	0.530

*Final analysis PhD.splsm | Bootstrapping (Run No. 30)

Path Coefficients

Mean, STDEV, T-Values, P-Va... | Confidence Intervals | Confidence Intervals Bias C... | Samples | Copy to Clipboard: Excel Format | R Format

	Original Sampl...	Sample Mean (...	Standard Devia...	T Statistics (|O...	P Values
Gender diversity -> Service task	-0.051	-0.039	0.076	0.677	0.499
Knowledge utilisation -> Service task	0.444	0.458	0.068	6.576	0.000
Moderating Effect 1 -> Service task	-0.059	0.043	0.157	0.375	0.708