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Impact of corporate governance on financial and non-financial performance of hospitals: Evidence from National Health Service in England

by

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Thesis for the degree of Doctor of Philosophy in Business Studies and Management

September 2021

University of Southampton

Abstract

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Doctor of Philosophy

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The objective of the research is to investigate the impact of corporate governance on financial and non-financial performance of 128 National Health Service (NHS) hospitals. The sub-objective of the research is to determine the impact of corporate governance on financial and non-financial performance by hospital type, namely, trust and foundation trust hospitals. The data was hand-collected from the annual reports of the NHS hospitals and other sources, such as quality reports, for the period 2014 to 2018. Return on Assets (ROA) was used to measure financial performance and the 62-day cancer referral and treatment target was used to measure non-financial performance. The data was analysed using two techniques of fixed effects ordinary least squares multiple regression and fixed effects logistic regression.

The main findings indicate that board expertise, especially nurses, board meetings, board diversity, CEO gender and academic directors have a significant negative impact on financial performance of English NHS hospitals. On the other hand, multiple directorships have a significant positive impact on non-financial performance of the English NHS hospitals, while board expertise, particularly nurses and board diversity exert a significant negative impact on non-financial performance of English NHS hospitals.

At hospital type level, further empirical results reveal that board expertise, especially nurses on the board, board diversity and CEO gender have a significant negative effect on financial performance of NHS trusts. Similarly, CEO gender exhibits a significant negative impact on financial performance of NHS foundation trusts. For non-financial performance, multiple directorships and honoured directors have a significant positive impact on non-financial performance of NHS foundation trusts while board expertise, particularly nurses, and board diversity reveal a significant and negative impact on non-financial performance of NHS foundation trusts. Notably, all the corporate governance indicators have an insignificant impact on non-financial performance of NHS trusts.

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Research Thesis: Declaration of Authorship

Print name: Laura Obwona Achiro

Title of thesis: Impact of corporate governance on financial and non-financial performance of hospitals: Evidence from the National Health Service in England

I 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.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
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. None of this work has been published before submission

Signature: Date: 20th September 2021

Acknowledgements

First and foremost, I would like to give thanks to God Almighty for giving me the strength and guidance to complete this PhD thesis. Secondly, I would like to express my heartfelt gratitude to my main supervisor, Professor Ven Tauringana who carried many hats as a supervisor and mentor. Your invaluable and dedicated involvement and support has been extremely momentous in helping me complete this project. I am greatly indebted to you. I would also like to extend my appreciation to my second supervisor, Dr Qingjing Zhang, who offered her support, advice and guidance in the writing and completion of my thesis. I am also greatly indebted to the University of Southampton and Paragon Hospital Kampala Limited for the funding received towards my PhD.

Second but very importantly, I would like to thank my family for their unwavering support, encouragement and love. Dr Marios and Mrs Evelyn Obwona, my dear parents, thank you for being the most loving and inspirational people in my life. I dedicate this thesis to you, mum and dad, for your endless love, support and encouragement. To my siblings, Dr Kay, Patricia, Paul, Jenny, Brian, Emmanuel and my little niece, Nina, thank you for being the most amazing support system and for always being there for me. May God bless you, thank you, thank you.

Definitions and Abbreviations

CQC	The Care Quality Commission is the independent regulator of health and social care services in England.
NHS	National Health Service is the universal health care provider in the United kingdom.
NPM	New Public Management is a term used to describe the re-organisation of public sector entities to emulate business methods of management, reporting and accounting approaches (Dunleavy and Hood, 1994).
UK	United Kingdom is a sovereign country made up of England, Scotland, Wales and Northern Ireland.
US	United States is a sovereign country commonly known as the United States .

Chapter 1 Background, summary of findings and thesis structure

1.1 Background

The National Health Service (NHS) in England has been afflicted by reports of scandals that have been used to paint an unflattering and damaging image of the health services (Hutchison, 2015). There have been two types of scandals concerning, on the one hand, financial failings reflecting issues of misreporting, manipulation of accounts, and poor financial resource management. On the other hand, the scandals are related to the substandard quality of care services provided to patients. With regards to financial failings, as recent as 2021, the National Audit Office brought to light a first-time financial scandal related to the University Hospital of Leicester NHS trust where a £46 million gap was identified in the trust's 2018/19 financial accounts. Although this was eventually corrected, the trust received a lot of criticism from its auditors and the National Audit Office. As a result, the trust's corporate governance mechanisms were called into question, with the Care Quality Commission stepping in with an inquiry into the Chief Executive Officer and Chief Finance officer, followed by the resignation of the Board Chair.

More prevalent are the medical scandals concerning the quality-of-care services delivered to patients by the NHS hospitals. There have been several reports of high profile cases involving doctors (Mannion *et al.*, 2019). Amongst them include the case of Harold Shipman, who caused the untimely death of over 250 victims, majority of whom were elderly patients under his care as a general practitioner (Smith, 2004; Hutchison, 2015; Mannion *et al.*, 2019). Similarly, Dr Jane Barton, who by over administering opiate drugs, caused the premature deaths of over 450 patients at the Gosport war memorial hospital (Gosport Independent Panel, 2018; Mannion *et al.*, 2019). A litany of similar medical malpractices involving influential doctors such as Clifford Ayling, Rodney Ledward, Richard Neale, Dick van Velzen, James Wisheart, and Ian Paterson reveals a distressing pattern of the incompetent and unprofessional misconduct of doctors, whose actions were known but not acted upon by senior managers in the health care organisations (Dixon-Woods, Yeung and Bosk, 2011; Walshe and Chambers, 2017). Several other highly publicised cases were reported, including the paediatric cardiac surgery scandal which occurred at the Bristol Royal Infirmary in the 1980s and 1990s, where two doctors were implicated with the death of over 35 children who underwent cardiac surgery at the hospital (Kennedy, 2001; Dixon-Woods,

Yeung and Bosk, 2011; Mannion *et al.*, 2019). Subsequently, a case involving the illegal removal, retention and disposal of human organs and tissues, primarily children's, was discovered at the Alder Hey and Liverpool University hospitals in the period 1988 to 1995, also described as the 'van Velzen years' (Redfern, 2001). In another account of avoidable deaths, the Staffordshire NHS foundation trust scandal made headlines where at least 400 patients were reported to have lost their lives as a result of the horrifying standards of care at the hospital which saw patients being regularly neglected (Alghrani *et al.*, 2011). There are also other reports of neglect involving nurses, such as the Morecambe Bay scandal where at least 12 mothers and babies died at the Furness General Hospital between 2004 and 2012, in circumstances perceived as avoidable (Kirkup, 2015). Furthermore, gross misconduct of midwives was exposed in the most recent and so far the most extensive failing in the history of the NHS at the Shrewsbury and Telford hospital between 2000 and 2019, where a total of 1,862 families were affected by maternal and baby mortalities, also revealing cases of babies being diagnosed with brain damage due to a shortage of oxygen at birth (Ockenden, 2020).

Following the continued public concern coupled with media pressure, the Secretary of State for Health initiated public inquiries into some of the highly publicised scandals (Kennedy, 2001; Redfern, 2001; Smith, 2004; Francis, 2013; Gosport Independent Panel, 2018; Ockenden, 2020). These inquiries were launched to alleviate political pressure, reinstate public confidence and encourage reforms to the system (Mannion *et al.*, 2019). The inquiries investigated the root causes of the failings and proposed recommendations to improve the system and avoid a re-occurrence of failings. For instance, the Francis Report on the Staffordshire NHS foundation trust scandal cited severe failings on the part of the trust board where the focus was placed on cutting costs, meeting financial targets and attaining foundation trust status at the expense of the quality of care services given at the hospital (Alghrani *et al.*, 2011; Francis, 2013; Mannion *et al.*, 2015). In addition, other public inquiry reports such as the Bristol Royal Infirmary events in the 1990s and the mistreatment of long-stay patients at Ely hospital in the late 1960s both attributed the failings to hospital board leadership and governance (Mannion *et al.*, 2015). Notably, the majority of failings are linked to systemic failures at the organisational level, rather than to the individuals involved (Mannion *et al.*, 2019). Such cases have also led to concerns being raised over the board's ability to perform their statutory responsibility of overseeing the quality and safety of care services delivered by the hospitals (Mannion *et al.*, 2015).

Increasingly, it is being recognised that effective governance is fundamental for advancing the quality of care in relation to patient experiences, safety and effectiveness (Gautam, 2005;

Goeschel, Wachter and Pronovost, 2010; Bismark and Studdert, 2014). Corporate governance is commonly examined in two categories of internal or external governance mechanisms (Gillan, 2006). This study focuses on internal governance mechanisms proxied by the board of directors especially because hospital boards are increasingly held accountable for their statutory responsibility for overseeing the quality and safety of care delivered in the hospitals (Gautam, 2005; Goeschel, Wachter and Pronovost, 2010; Mannion *et al.*, 2015; Jones *et al.*, 2017). Furthermore, board of directors are widely perceived as the cornerstone of corporate governance (Gillan, 2006; Naciti, 2019) and are responsible for an organisation's internal control system, tasked with the overall duty for the functioning of the firms (Jensen, 1993). Basing on a legalistic perspective, boards contribute to organisational performance by undertaking their legally mandated responsibilities, and the performance of the board is determined by the board's composition, characteristics, structure and process (Zahra and Pearce, 1989). The aspects of board size, committee types, relationships to other boards in conglomerates are all encompassed in the governance structure which influences the efficacy and efficiency of the board (Goeschel, Wachter and Pronovost, 2010). A limited number of studies have examined the impact of corporate governance in light of the board of directors and their impact on hospital performance. The findings indicate that clinician participation exerts a positive impact on the financial performance of hospitals (Molinari *et al.*, 1993; Molinari *et al*., 1995; Veronesi, Kirkpatrick and Vallascas, 2014) and enhances hospital outcomes (Goodall, 2011; Bai, 2013; Bai and Krishnan, 2015). However, some studies argue that integrating clinicians on hospital boards results in lower hospital efficiency (Succi and Alexander, 1999) and higher operating costs (Alexander and Morrisey, 1988; Goes and Zhan, 1995). Veronesi, Kirkpatrick and Vallascas (2014) indicate in their study that the statistical significance of the traditional corporate governance variables like board size is not consistently related to the non-financial performance of the NHS hospitals. More so, Succi and Alexander (1999) argue that the prevailing empirical studies on hospitals have not been able to provide consistent evidence that clinician participation in hospital management and governance improves hospital efficiency or performance outcomes.

1.2 Statement of the Research problem

Governments and policymakers, in particular, raised concerns about the efficacy of corporate governance, especially with the rise of corporate scandals involving large well known public companies in the US such as Enron, WorldCom, Tyco, and Qwest (Bhagat and Bolton, 2019). Subsequently, several empirical studies have investigated the impact of corporate governance on the performance of organisations and found mixed results (Peni, 2014; Musleh Alsartawi, 2019;

Duppati *et al.*, 2020; Puni and Anlesinya, 2020). However, most of the identified studies used public listed firms as the context of their study, leaving other types of organisations largely unexplored. It is therefore questionable as to whether corporate governance would impact performance of public listed firms in the same way as not-for-profit firms. The NHS trust and foundation trust hospitals adopted the board of director model of the private sector in line with the New Public Management reforms that came into play in the 1980's (Ferlie, FitzGerald and Ashburner, 1996; Clatworthy, Mellett and Peel, 2000; Farrell, 2005). However, according to Hermalin and Weisbach (2001), the governance mechanisms of different types of organisations are impacted by the different functional objectives. For example, for-profit organisations focus on profit maximisation objectives while the objectives of other types of organisations are internally determined and not defined by economic theory (Hermalin and Weisbach, 2001). Therefore, the observable characteristics of the board of directors of the NHS trusts and foundation trusts are similar to the configurations of the board of directors of the listed firms. The impact of this similar arrangement on financial and non-financial performance is yet to be explored for the NHS trusts and foundation trusts. The findings will also provide evidence of whether the impact on public listed firms is similar to not-for-profit hospitals given the differences in institutional objectives of the different organisation forms i.e., listed firms and public hospitals. It is therefore justifiable to use the research design and corporate governance philosophies used to investigate the impact of corporate governance on performance of listed firms to that of NHS trusts and foundation trusts in this study.

Although hospital outcomes directly affect the lives of people, and with the numerous incidences of medical scandals where systemic lapses in corporate governance configurations have been criticised as being among the contributing factors for the failures, there is a dearth of studies in the sector. Generally, hospitals play a major role of providing health care to the society, and therefore, increased attention should be directed at investigating the effect corporate governance on hospital performance. It is therefore particularly important to investigate the relevance of corporate governance in hospital settings because of the significance of the structure of the systems by which the hospitals are directed and controlled with the aim of attaining their objective of delivering quality health care services. Uncovering the optimum corporate governance configurations of the hospitals is central to this study because there is existing evidence of a relationship between corporate governance practices and healthcare quality (Brown, 2019) backed by theoretical underpinnings that suggest that corporate governance has an influence on performance. The few studies that have been conducted in the context of hospitals have mainly focused on hospitals in the US (Molinari *et al.*, 1995; Goodall, 2011; Bai,

2013). The identified US studies have predominantly been based on private for-profit or not-for-profit hospitals given that private healthcare providers are the primary providers of healthcare services in the US (Kumar, Ghildayal and Shah, 2011). Only a handful of studies have been conducted outside of the US, for example, in the context of UK NHS hospitals (Veronesi, Kirkpatrick and Vallascas, 2013, 2014) and hospitals in other European countries such as Germany (Kuntz and Scholtes, 2013). Nevertheless, generalising findings from US hospitals to hospitals in other countries is limited because, among all OECD countries, the US is one of only two countries without a universal healthcare system (Kumar, Ghildayal and Shah, 2011). Therefore, this study attempts to address this gap by exploring the impact of corporate governance on the performance of NHS hospitals in England. The English NHS was selected as the context for the study for a number of reasons. Firstly, compared to other health systems, the NHS presents an informative case study for the concerted effort that the state has put in marketizing welfare governance through a series of important reform attempts in the 1990s and 2000s (Greener and Powell, 2008). Moreover, the NHS is also widely viewed by outsiders as a remarkable example of 'socialised medicine' in the western world (Webster, 2002) and according to Pencheon (2015), is one of the most well-regarded establishments in the UK that is funded by restricted government resources and benefits from an effective model of intervention that is focused on hospital care system that integrates specialist, emergency and primary care system. And yet, the NHS, similar to many public institutions faces similar challenges in contriving its services to meet the changing demand (Pencheon, 2015). Basing on these reasons, the findings on the impact of corporate governance on financial and non-financial performance of the NHS would make an important contribution for both hospitals and public institutions. Furthermore, in examining the impact of corporate governance on the performance of NHS hospitals, the investigation was extended to the different types of hospitals in the NHS, namely, trusts and foundation trusts. No other study that investigated the relationship in the context of UK hospitals was found to have analysed the impact of corporate governance on the performance of the two different types of hospitals in the NHS.

In addition, the majority of the identified studies explored the impact of clinicians appointed as board directors and their impact on hospital performance. In other words, the central proxy for corporate governance used in these studies was the clinicians on hospital boards (Molinari *et al.*, 1993; 1995; Veronesi, Kirkpatrick and Vallascas, 2014). Meanwhile, other traditional corporate governance indicators such as board size, board independence and diversity have been largely unexplored in the studies on hospitals. Furthermore, unlike previous studies, the investigation in

this study incorporates all the observable characteristics, processes and structure of the board of directors of the English NHS hospitals.

Notably, exploring the impact of corporate governance on hospitals' financial performance has dominated studies on governance and hospital performance. This is possibly because the majority of studies used private and for-profit hospitals in the US as the context of study (Molinari *et al.*, 1993; 1995). Measuring the impact of corporate governance on financial performance can then be linked to the primary objective of the private and for-profit hospitals to achieve financial viability. Only a few studies looked at the hospitals' non-financial performance (Veronesi, Kirkpatrick and Vallascas, 2013) or both financial and non-financial performance (Prybil, 2006). However, it is imperative that both financial and non-financial performance are considered and investigated when assessing overall hospital performance because corporate governance mechanisms are responsible for both financial sustainability and health outcomes. For public healthcare institutions, service performance is vital, although also financial constraints must be addressed (Ellwood and Garcia-Lacalle, 2015). The overall performance of hospitals is therefore important and should be prioritised as such, and attention should be paid to both facets of performance as they are equally essential. This study, therefore, explores the impact of corporate governance on both financial and non-financial performance of the NHS hospitals in England.

Lastly, most of the studies are cross-sectional (Goldstein and Ward, 2004; Bai, 2013; Bai and Krishnan, 2015) with only a few taking a longitudinal approach (Goes and Zhan, 1995). It is generally easier to detect and measure unobservable effects in longitudinal studies than cross-sectional studies (Gujarati and Porter, 2009). Therefore, the period of this study spans over 5 years in which the trends of corporate governance and performance can be observed. In view of the gaps identified in existing corporate governance and performance literature, this study focuses on investigating the impact of corporate governance on the financial and non-financial performance of hospitals using evidence from the National Health Service (NHS) in England from 2014 to 2018.

1.3 Research objectives

The primary objective of this study is to investigate the impact of corporate governance on the financial and non-financial performance of trusts and foundation trusts in the English NHS.

The secondary objective is:

1. To determine the impact of corporate governance on financial and non-financial performance of the NHS trusts and NHS foundation trusts separately.

1.3.1 Research questions

Arising from the above objectives, the following are the research questions:

1. What is the impact of corporate governance on the financial and non-financial performance of trusts and foundation trusts in the English NHS?
2. What is the impact of corporate governance on financial and non-financial performance of the NHS trusts and NHS foundation trusts when analysed separately?

1.4 Scope of the research

Previous studies have adopted different indicators of corporate governance in firms considering characteristics of the board of directors such as board size (Nguyen *et al.*, 2016), board independence (Kweh *et al.*, 2019), board diversity (Scholtz and Kieviet, 2018), frequency of board meetings (Vafeas, 1999) and the firm's ownership structure (Mangena, Tauringana and Chamisa, 2012). However, given the focus of this study as the English NHS, a public-funded health system controlled by the state, attention is focused on the board attributes as posited by Zahra and Pearce (1989). Focusing on the board of directors seems appropriate given that their responsibility comprises of ensuring strategic guidance of the company, effective monitoring of management, and ensuring accountability to the company and shareholders (OECD, 2004). It is, therefore, suitable to adopt the approach proposed by Zahra and Pearce (1989), where board attributes of composition, characteristics, structure, and processes are linked to the strategic outcomes of financial, systemic, and social performance of organisations.

Meanwhile, the rise of the new public management reforms highlights formal performance measurement in most areas of the public sector (Goddard, Mannion and Smith, 1999). Goddard *et al.* (1999) note that the NHS trusts are mainly held accountable for their financial performance, particularly on the requirements to break even on income and expenditure, attain a 6% return on net assets and safeguard adequate financial resource management through operating within the annual external financing limit set by the NHS Executive. They also emphasise that assessment of the non-financial performance of the NHS is mainly through the Patient's Charter initiative, which was launched in 1992 and focuses on a variety of process measures from the quality of food to the number of complaints received on an annual basis. Notably, they highlight that national and

local targets have been set for certain indicators that have received a lot of attention, for example, the range of waiting times for admission of patients on referral lists and activity in the accident and emergency (A&E) departments. These measures are useful in driving performance and setting a precedence for good practice in the NHS (Goddard, Mannion and Smith, 1999). Therefore, it seems paramount that non-financial indicators are included in hospital performance measurement because they play a valuable role in assessing their performance (Kludacz-Alessandri, 2016). This study, therefore, examines hospital performance by using both financial and non-financial performance measures.

1.5 Research methodology

In order to achieve the primary and secondary objectives set out in Section 1.3, a literature review of previous empirical studies was conducted to identify the gaps in the existing literature. The review also helped identify the theoretical framework to adopt in explaining the relationship between corporate governance and the performance of firms. Based on the objectives of this study, non-probability sampling was adopted to gain insights into the particular case of the hospitals in the NHS in England. The English NHS represents 128 acute trusts and foundation trusts from 2014 to 2018. Data was collected from annual reports of the trusts and foundation trusts for 5 years. Using arguments from previous studies and identified theories, testable hypotheses were developed and analysed using data collected from the sample. Data were collected for both the observable corporate governance variables and the hospitals' financial and non-financial performance. The panel data were analysed using fixed effects ordinary least squares (OLS) regression techniques to determine the explanatory power of the corporate governance variables on financial performance and fixed effects logistic regression to determine the explanatory power of corporate governance variables on non-financial performance. Meanwhile, robustness checks utilising alternative financial and non-financial performance measures, lagging the independent variable to create instrumental variables, and employing the 2SLS estimation for financial performance and ordered logistic regression technique for non-financial performance were employed to ensure the validity and reliability of findings.

1.6 Summary of results

1.6.1 Board size

The findings related to board size indicate that the relationship between board size and financial performance is insignificant and negative for NHS hospitals and foundation trusts. However, for the trusts, the effect exerted by board size on financial performance is positive and insignificant. On the other hand, the coefficient for board size is positive and statistically insignificant for the non-financial performance of the NHS hospitals, as well as for the trusts and foundation trusts.

1.6.2 Board independence

Concerning board independence, the regression results indicate that when the proportion of outside directors increases, the financial and non-financial performance of the NHS hospitals declines. This insignificant negative impact on hospitals' financial and non-financial performance is consistent for both trusts and foundation trusts.

1.6.3 Board expertise

Board expertise has a significant negative impact on the financial and non-financial performance of the hospitals in the English NHS. In addition, at the hospital type level, board expertise exerts a significant effect on the financial performance of the trusts and an insignificant negative impact on the financial performance of the foundation trusts. Likewise, the coefficient of board expertise on the non-financial performance of trusts is negative and insignificant, while the coefficient for the foundation trusts is significant and negative. On further analysis, the impact of both doctors and nurses is negative on the financial performance of NHS hospitals, with the impact of nurses being statistically significant. However, the coefficient of doctors is positive but insignificant for the non-financial performance of NHS hospitals, while the coefficient of nurses is significant negative for the non-financial performance of the NHS hospitals.

1.6.4 Board meetings

The frequency of board meetings is found to have a negative impact on the financial and non-financial performance of the English NHS hospitals. The effect of board meetings is statistically significant on the financial performance of the NHS hospitals, while it is insignificant on the non-financial performance of NHS hospitals. When analysed at the hospital type level, the impact of

board meetings is insignificant and negative on the financial performance of trusts and foundation trusts. On the other hand, the effect of board meetings varies on the non-financial performance of the trusts and foundation trusts, with the coefficient being insignificant and positive for trusts and insignificant and negative for foundation trusts.

1.6.5 Board diversity

When probing the effect of board gender diversity on hospital performance, the empirical results show that board gender diversity has a significant negative impact on NHS hospitals' financial and non-financial performance in England. At the hospital type level, the effect exerted by board gender diversity is significant and negative for the financial performance of the trusts and insignificant and negative for the financial performance of the foundation trusts. Furthermore, the coefficient of board diversity for non-financial performance is insignificant and negative for trusts and significant and negative for foundation trusts.

1.6.6 CEO tenure

The regression results depict an insignificant positive impact on the financial and non-financial performance of the NHS hospitals. According to the two types of hospitals, the impact on CEO tenure is insignificant and positive on the financial performance of the trusts and foundation trusts, irrespective of hospital type. Meanwhile, the coefficient of CEO tenure is insignificant and negative for non-financial performance of trusts, and insignificant and positive for the non-financial performance of the foundation trusts.

1.6.7 CEO gender

In terms of CEO gender, the empirical results indicate a significant negative impact on the financial performance of NHS hospitals in England. This impact remains significant and negative for the effect of CEO gender on the financial performance of both trusts and foundation trusts. Meanwhile, the coefficient of CEO gender for the non-financial performance of NHS hospitals is negative and insignificant. Notwithstanding, the impact that CEO gender exerts on the non-financial performance of the trusts and foundation trusts varies with the coefficient being positive and insignificant for the trusts and negative and insignificant for the foundation trusts.

1.6.8 Academic directors

The impact of academic directors on the board has a significant negative impact on the financial performance of NHS hospitals in England. The impact remains negative but statistically insignificant for both trusts and foundation trusts at the hospital type level. On the other hand, academic directors report an insignificant positive coefficient for the non-financial performance of NHS hospitals, trusts and foundation trusts.

1.6.9 Multiple directorships

Directors with multiple board roles have an insignificant negative impact on the financial performance of NHS hospitals. The insignificant negative impact of multiple directorships persists for the financial performance of the trusts and foundation trusts. However, the coefficient of multiple directorships for the non-financial performance is positive and statistically significant for NHS hospitals and foundation trusts in England. For the trusts, the coefficient of multiple directorships for non-financial performance is also positive but insignificant.

1.6.10 CEO background

The study's findings show that the impact of the background of the CEO on the financial and non-financial performance of NHS hospitals in England is negative and insignificant. Furthermore, at the hospital type level, the impact of CEO background on both financial and non-financial performance of the trusts and foundation trusts remains negative and insignificant.

1.6.11 Honoured directors

The appointment of directors with honours has an insignificant positive impact on NHS hospitals' financial and non-financial performance in England. Furthermore, at the hospital type level, honoured directors have an insignificant positive effect on the financial performance of the trusts and foundation trusts. However, the relationship varies for non-financial performance where the coefficient of honoured directors is negative and significant for trust hospitals and significant and positive for foundation trusts.

1.7 Contribution of research

The study provides imperative insights into the impact of corporate governance on hospitals' financial and non-financial performance in the English NHS. There are several studies in the

literature on corporate governance aimed at understanding the effect of corporate governance mechanisms on the performance of listed firms. However, little is known about how corporate governance impacts performance in the context of other types of institutions outside of listed firms, and specifically NHS hospitals in England. The few studies that investigated the relationship between corporate governance and performance of hospitals focused on the impact of co-opting clinicians to the board on financial performance (Veronesi, Kirkpatrick and Vallascas, 2014) and non-financial performance of NHS hospitals (Veronesi, Kirkpatrick and Vallascas, 2013). No study so far has been identified to explore the impact of corporate governance, taking into account several board attributes of composition, characteristics, structure, and process on both financial and non-financial performance of the NHS hospitals. This study therefore attempts to address the gap in the existing corporate governance literature by extending the scope of research to include hospitals, aside from the prevalently used listed firms.

Furthermore, the study investigates the impact of corporate governance on the NHS hospitals as trusts and foundation trusts, combined and separately. The further segregation of the trusts and foundation trusts in the analysis of data was done to explore whether the impact of corporate governance on the financial and non-financial performance varies according to hospital type. No other study is identified to have analysed the NHS hospitals jointly and separately as trusts and foundation trusts. In addition, the hospitals used in this study are outside the US, which is the commonly used context for study in most identified studies (Molinari *et al.*, 1993; Weiner and Alexander, 1993; Jha and Epstein, 2010). This study aims to provide new evidence on the impact of corporate governance mechanisms on the performance of hospitals outside the US. Using the National Health Service (NHS) in England extends the scope of the investigation to a universal health system aside from the US, which does not have a universal health system.

Hospitals need both good financial and non-financial performance to survive, especially in the current environment where the public has access to data on hospitals' performance and can scrutinise this information in selecting a healthcare provider. Non-financial performance, in addition to financial performance measures, is therefore deemed equally vital in assessing hospitals' performance (Goddard, Mannion and Smith, 1999; Pink *et al.*, 2007; Kludacz-Alessandri, 2016). This study, therefore, investigates the effect of corporate governance on both the financial and non-financial performance of hospitals. The findings of this study clarify the peculiarities of how the different corporate governance mechanisms impact the financial and non-financial performance of the hospitals. The corporate governance mechanisms that are important for

improving financial performance and which mechanisms drive non-financial performance in hospitals in the English NHS are highlighted.

According to the findings, board expertise and particularly nurses, frequency of board meetings, board diversity, CEO gender and academic directors exert a significant adverse effect on the financial performance of the NHS hospitals. At the hospital type level, board expertise, board meetings, board diversity and CEO gender have a significant adverse effect on the trusts' financial performance. Meanwhile, for the foundation trusts, only CEO gender exerts a significant negative impact on financial performance. On the other hand, multiple directorships have a significant positive impact on the non-financial performance of the NHS hospitals. Meanwhile, board expertise and board diversity exert a significant negative impact on the non-financial performance of the NHS hospitals. At the hospital type level, multiple directorships and honoured directors have a significant and positive impact on the non-financial performance of the foundation trusts. In contrast, board expertise and, in particular, nurses and board diversity have a significant and negative impact on the non-financial performance of the foundation trusts. For the trusts, the results indicate that all the corporate governance indicators adopted have an insignificant impact on non-financial performance. The majority of corporate governance mechanisms adopted by the NHS hospitals have a similar effect on financial and non-financial performance regardless of hospital type. Such insights are necessary for deciding which corporate governance structures to adopt in relation to the hospitals' financial and non-financial goals and objectives.

Corporate governance mechanisms vary for different types of organisations driven by different objectives (Hermalin and Weisbach, 2001). Given that listed firms are profit-driven and public institutions are service-oriented, corporate governance practices adopted are expected to be different. A case in point is the effect that the market's reaction to particular corporate governance mechanisms of listed firms has on the firm value. Corporate governance mechanisms such as appointing female directors on the board of listed firms will drive the value of listed firms (Duppati *et al.*, 2020), while the same corporate governance mechanisms will not impact the performance of public hospitals. This is because hospital performance and outcomes are the main drivers of patient choice compared to firm image and outlook for listed firms, which the public generally perceives as a signal for future firm performance. This study, therefore, sheds light on how the numerous corporate governance mechanisms impact performance in service-oriented public hospitals.

Several prior corporate governance studies have provided support for the agency theory complemented by resource dependence, stewardship and stakeholder theories in explaining the

relationship between corporate governance mechanisms and firm performance. This study provides evidence to support the stakeholder-agency, which is a combination of the agency and stakeholder theories. The study also uses arguments of the critical mass and upper echelons theories in explaining corporate governance and performance relationships in the context of hospitals in the English NHS. The use of multiple theories ensures that all the various corporate governance mechanisms and their corresponding relationships with financial and non-financial performance are adequately explained and undergirded by appropriate theoretical concepts. For instance, the critical mass theory is used to explain the relationship between board gender diversity and hospital performance. This provides an alternative perspective of understanding how appointing 3 or more female directors on the boards beyond just having one representative affects their contribution to performance. In this particular study, the female directors are a minority on the board. Therefore, the arguments of the critical mass theory are adopted to explain why board diversity has a negative impact on financial and non-financial performance of the hospitals.

The study covers 5 years which is different from the cross-sectional approach adopted by the studies identified on corporate governance and performance of hospitals. Only one study has been identified to have adopted a longitudinal approach (Goes and Zhan, 1995), while the rest used a cross-sectional approach (Molinari *et al*., 1995; Jiang *et al.*, 2009; Goodall, 2011; Kuntz and Scholtes, 2013; Bai and Krishnan, 2015). The use of 5 years of study provides a broader and better understanding of the relationship between corporate governance and hospital performance over a period of time. Adopting a longitudinal approach has its benefits, mainly enhancing the scope of study to observe and analyse the changes and trends over a period of time (Saunders, Lewis and Thornhill, 2016). This study, therefore, contributes significant evidence of the impact of corporate governance on the financial and non-financial performance of hospitals over 5 years from 2014 to 2018.

1.8 Thesis outline

The thesis is presented in 8 chapters. Following the introductory and background discussion in chapter 1, chapter 2 gives an insight into the nature and governance of the English NHS. It provides an overview of the evolution of the NHS in England from its inception in 1948 to its current state. A discussion of the reforms responsible for the changes as overseen by successive governments is also presented in this chapter. Furthermore, the governance structure of the NHS

in England is described, paying particular attention to the governance structure of the NHS hospitals, namely, trusts and foundation trusts. In addition, the performance measurement framework in the English NHS is also discussed in chapter 2.

Chapter 3 presents a comprehensive review of the existing literature on corporate governance and performance studies. The studies discuss the impact of corporate governance on the performance of firms backed by empirical evidence from data analysis of different types of data sets. The overall findings and explanations from this literature review are discussed in this chapter. A comprehensive account of the congruence and variations in the effect of corporate governance on different types of firms in different countries across a range of periods is provided.

Subsequently, the theoretical framework is presented in chapter 4. The chapter explains the multiple theories adopted in the study to explain the relationships between corporate governance mechanisms and firm performance. The chapter summarises five corporate governance theories; stakeholder-agency, stewardship, resource dependence, upper echelons, and critical mass theories. It also gives a detailed description of each theory, its assumptions and how the theory explains the underlying relationship between corporate governance and performance.

Chapter 5 discusses the hypotheses developed based on the studies summarised in chapter 3 and theories proposed in chapter 4. Several hypotheses are proposed, and the underlying explanation for these propositions is also detailed in the chapter. The arguments for the different propositions in the context of the NHS hospitals in England are also elaborated in this chapter.

The research methodology adopted for the study is specified and presented in chapter 6 of the thesis. The research methodology includes a description of the paradigm used to guide the direction of the research. The research methodology, strategy and design are also defined in this chapter. The sampling and data collection techniques are presented in addition to the selection and operationalisation of the dependent, explanatory and control variables. The two statistical models used as the baseline estimation analysis tools are also specified and discussed in this chapter together with the sensitivity tests employed to confirm the robustness of the results. A brief discussion of the inherent issues in data analysis, such as multicollinearity, endogeneity and unobserved heterogeneity, and their resolutions, are also provided. Lastly, a summary of the ethical considerations is discussed in the chapter.

Following on, the findings of the data analysis using ordinary least square (OLS) and logistic regression methods as the baseline estimation techniques are discussed in chapter 7. The results from testing all the proposed hypotheses in chapter 5 are discussed, starting with a detailed

description of statistics, followed by an account of each of the corporate governance variables and their corresponding relationship and statistical significance with the financial and non-financial performance of the NHS hospitals. The discussion also includes a comparison of the results with the hypotheses proposed and the theory or theories that underpin the results. Explanations and possible reasons for the results backed by evidence from previous empirical studies are also provided with the context of the English NHS. A discussion of the results from the sensitivity tests and data analysis are also presented in this chapter.

The last chapter of the thesis provides a summary of the overall study and a summary of the findings from the analysis of data collected from 128 trusts and foundation trusts for a period of 5 years from 2014 to 2018. Chapter 8 also presents the deductions made from the findings as well as the implications and limitations of the study. Finally, areas for further studies are proposed based on the limitations of the current study.

Chapter 2 Nature and Governance of the National Health Service Trusts and Foundation Trusts in England

2.1 Introduction

The purpose of this chapter is to provide an insight into the nature of the National Health Service (NHS) trusts and foundation trusts. This provides a fundamental contextual discussion of the formal governance structures and performance measurement in the NHS. Collectively known as providers, NHS trusts and foundation Trusts are the designated providers of hospital and specialist care in England (Department of Health and Social Care 2018-19). On one hand, the NHS trusts are financially and operationally separate legal entities responsible for one or more hospitals, with accountability to the Department of Health and the Secretary of State for Health (Nagendran *et al.*, 2019). On the other hand, NHS foundation trusts are a new type of hospital provider introduced in 2003 with greater financial freedom and less accountability to central government control (Giorgio *et al.*, 2008). The government's proposition was that NHS trusts that perform well are able to achieve foundation trust status and essentially gain a degree of operational and financial autonomy from the Department of Health (Nagendran *et al.*, 2019).

The rest of the chapter is arranged as follows: - Section 2.2 presents the background and evolution of the NHS in the United Kingdom (UK). Section 2.3 reviews the structure of the NHS in England and Section 2.4 provides insight into the governance of the NHS trusts and foundation trusts. Performance measurement and accountability of the NHS trusts and foundation trusts is discussed in Section 2.5 and the chapter is concluded in Section 2.6.

2.2 Background

The National Health Service (NHS) was established in 1948 as a publicly organised and tax funded system providing healthcare services for the population of the UK, effectively replacing the regulated, private, charitable, local authority establishment that previously existed (Bevan and Hood, 2006). Each of the four countries in the UK has an NHS system with universal coverage offering comprehensive benefits with similar values, operating principles (Bevan *et al.*, 2014) and their own specific arrangements under devolved settlements (Mannion *et al.*, 2019). Specifically

for the NHS in England, formal accountability is to parliament through the Secretary of State for Health (Mannion *et al.*, 2019). The service is regulated and operates under an independent umbrella body that is mandated to ensure the existence of an effective and comprehensive system for commissioning primary health care and specialist services for patients.

The NHS has progressively evolved since its inception as a post-war health system (Webster, 2002) to a modern system providing comprehensive, integrated, patient-centric healthcare to the UK population. The evolution of the NHS is a result of several reforms and re-organisations made by successive governments in a bid to transform the NHS into an efficient national institution. The NHS today is an institution that is an assembly of past accomplishments and modifications based on the systemic failures experienced by the institution over the years. Pettigrew, Ferlie and McKee (1992) emphasize that the changes in the NHS have been subtle, and at the same time ambitious, in a move to secure value for money, develop general management and adopt private sector personnel, models, and techniques.

2.3 Evolution of the National Health Service

Politics played a more significant role than economics in driving the development of the National Health Service (NHS) (Oliver, 2005). Since the NHS was created in 1948, it has undergone a number of successive structural reorganisations and reforms, with the most significant reforms being introduced by the Conservative administrations (Oliver, 2005; Mannion *et al.*, 2019). The introduction of health reforms within the European health systems were conveyed by a shift from a professionally driven to a managerially driven service (Dent, 2005) and a changing perception of the patient (Dent, 2006). This change represented a shift from the internal market to managerialism which attempted to involve patients and the public in decision making and strategy (Dent, 2006).

The NHS was proposed through the white paper, a National Health Service 1944, where the government announced plans to create an umbrella healthcare service purposed to provide comprehensive healthcare to the UK population. This was seen as an advancement of the already evolving post war health service to a universal healthcare system with a few exceptions of dental and ophthalmology. The white paper proposed that the responsibility of healthcare provision should be handled by an organisation with accountability to the public by both central and local authorities. The Minister would have central responsibility and major local authorities would have local responsibility. The white paper also led to the creation of special new consultative and professional bodies to give guidance for important executive functions regarding general medical

practice in the NHS (A National Health Service 1944). Soon after, the NHS Act was published in 1946 where chapter 81, part 1 of the Act conferred powers upon the Minister of Health to establish a comprehensive and almost free health service in England and Wales.

The period between 1964 and 1974 was an era of greatest buoyancy in the NHS history (Webster, 2002). The NHS Reorganisation Act was published in 1973 to make amendments to the NHS Act 1946. The Reorganisation Act saw the rise of Regional and Area Health Authorities, Family Practitioner Committees, Special Health Authorities, Local Advisory Committees, and Community Health Councils. The Act also led to the abolishment of all Regional Hospital Boards, Hospital Management Committees and Executive Councils. Additionally, all boards of governors of local health authorities were abolished. However, some boards of governors for some teaching hospitals pursuant to schedule 2 of the Act were preserved (The NHS Reorganisation Act 1973). Meanwhile, the National Health Service order 1981, saw the establishment of District Health Authorities that would subsume duties of the Area Health Authorities. The District Health Authorities were established for local administration of the National Health Service under guidance of the Regional Health Authorities (The National Health Service England and Wales, The National Health Service (constitution of district health authorities) order 1981). Overall, the healthcare system was not radically altered by the first Margaret Thatcher administration between 1979 and 1983 except for the abolishment of the Area Health Authorities and the elevation of district management teams to statutory district health authorities (Oliver, 2005). Although, the second administration from 1983 to 1987 brought along the new public management reforms to counter the consensus-style management teams introduced in the NHS in 1974 (Oliver, 2005).

The 1980's was the period when the British public sector was characterised by changes that were politically motivated with top-down pressure (Pettigrew, Ferlie and McKee, 1992). Based on proposals from the publication, Working for Patients 1989, the National Health Service and Community Care Act 1990 was issued. This 1990 Act gave powers to the Secretary of State to establish bodies known as the NHS trusts. The Act also saw the devolution of ownership, management, and discharged liability from the Regional, District or Special Health Authority to the NHS trusts. Family Practitioner Committee and Family Health Services Authority were replaced by the 1990 Act and medical practitioners who were providing general medical services as fund holding practices were recognised with the requirement that they applied to the relevant Regional Health Authority and fulfilled all requisite conditions (The National Health Service and Community Care Act 1990). The internal market system which was characterised by purchasers

and providers who induced efficiency and responsiveness through competition was introduced by the second administration of Margaret Thatcher between 1991 and 1994 (Oliver, 2005). The major administration which was the final of Conservative governments from 1992 to 1997 mainly focused on the consolidation of the early 1990s reforms with a few additional initiatives such as the abolition of Regional Health Authorities to cut bureaucracies, establishment of a departmental committee on health variations and the Private Finance Initiative for capital investment (Oliver, 2005).

The main theme of the proposed reforms by the Labour government elected in 1997 was modernisation (Addicott, 2008), and the structure, composition and statutory functions of the boards in the NHS were not impacted in this period (Veronesi and Keasey, 2011). Health care policy was an important concern for the successive Labour governments (Oliver, 2005). The First Blair administration between 1997 to 2001 proposed to abolish GP fundholding and introduce Primary Care Groups which were later replaced by the Primary Care Trusts (PCTs), which all GPs were required to join in order to encourage cooperation as opposed to competition (Oliver, 2005). The administration also abolished District Health Authorities which were replaced by Strategic Health Authorities with the responsibility of monitoring performance of the NHS trusts and PCTs (Firth, Fung and Rui, 2006). The National Institute for Clinical Excellence (NICE) and National Service Frameworks were established to set standards and the Commission for Health Improvement (later Healthcare Commission and known as the Care Quality Commission today) was established to monitor these standards (Oliver, 2005). The Commission for Health Improvement also took over the star rating system where the NHS trusts were rated based on a number of set indicators which could result in the well performing trusts attaining foundation trust status and effectively, greater autonomy (Oliver, 2005). The administration also proposed to commission private sector capacity in order to extend patient choice and the hospital star rating system (Oliver, 2005) .

In addition, the Labour government proposed the NHS Reform and Health Care Professionals Act 2002 which saw the abolition of the Health Authorities in England. The Secretary of state was empowered to establish Strategic Health Authorities (SHA) with a performance management role. The SHAs also took over some functions of the abolished Health Authorities while other functions were taken on by the Primary Care Trusts (PCT). The Act also strengthened independence of the Commission for Health Improvement who later on appointed its own Chief executive. The Act made provisions for inspection and reporting on health care services in an annual report on the quality of NHS services. A provision was further made for the establishment of a patient's forum

for every NHS trust and PCT to provide oversight on behalf of the public. In addition, a Commission for patient and public Involvement in health responsible for setting standards for the patient forums and also reporting on the effectiveness of the patient and public involvement to the Secretary of state, was established. A Council for the Regulation of Health Care Professionals was created for oversight of the different healthcare regulatory bodies and the coordination of good practice guidance.

The second Blair administration introduced foundation trusts through the enactment of the Health and Social Care (Community Health and Standards) Act 2003. Foundation trusts were established in chapter 43 of the 2003 Act and were defined as public benefit corporations authorised to provide goods and services for the purposes of the health service in England. With the creation and introduction of the foundation trusts, the NHS structure and processes were altered to a more patient centric system focused on improving healthcare quality and outcomes (Your duties: a brief guide for NHS Foundation Trust governors, 2014). The 2003 Act also led to the establishment of Monitor as the new regulator for the foundation trusts, as well as the new Commission of the Healthcare Audit and Inspection and the Commission for Social Care Inspection. The Act abolished the National Care Standards Commission and the Commission for Health Improvement. Subsequently, the 2006 and 2008 Acts were enacted although they did not make significant structural changes to the overall NHS structure. Chapter 29, part 1 of the Health Act 2009 provisioned for providers and NHS Services Commissioners to regard the NHS constitution published by the Secretary of State on 21 January 2009 and to publish quality accounts. The Act also saw the introduction of direct payments for health services. Part 2 of the Act established new powers for the de-authorisation of NHS foundation trusts and the creation of a special administration process where a Trust Special Administrator could be appointed by the powers vested in the Secretary of State to take control of an NHS organisation that was performing poorly.

The Coalition government enacted the Health and Social Care Act 2012 which is perceived to have brought about fundamental change to the NHS as a whole (Speed and Gabe, 2013). They argue that the Act was highly contentious because of the proposed reforms which undermined the funding of the NHS, subsequently challenging the underlying conceptual principal of free universal healthcare provision. Among the modifications provided by the 2012 Act was the establishment of the NHS Commissioning Board which had accountability to the Secretary of State. Clinical Commissioning Groups (CCGs) were also established as statutory boards responsible for commissioning of the majority of health services. The Act appointed Monitor as the regulator with

authority to license all providers of NHS services and revised duties of the Board of governors of the foundation trusts. Amendments were also made to the framework for governance of the NHS trusts and foundation trusts and amended the failure regime for NHS foundation trusts where de-authorisation provisions were repealed, and Monitor was allowed to appoint and oversee the work of a Trust Special Administrator to take control of a failing foundation trust. Furthermore, an objective for the Trust Special Administrator to secure continued provision of NHS services was stated in the 2012 Act. The Act also abolished the General Social Care Council and transferred some of the functions to the Health and Care Professional Council. The National Institute for Health and Care Excellence (NICE) was re-established as a non-departmental body with more independence and a new role in the development of quality standards and the provision of guidance and advise. The Act re-established the Health and Social Care Information Centre Special Health Authority as a non-departmental public body and outlined its power and general duties (Health and Social Care Act 2012)

Subsequently, the Care Act 2014, chapter 23 gave powers to the Care Quality Commission (CQC) to conduct periodic reviews, assess performance and publish reports. This function had previously been removed by the Health and Social Care Act 2012 with regards to the NHS bodies. The powers allowed the CQC to introduce performance ratings for providers. A new offense was created where furnishing of false or misleading information by health care providers could result in criminal sanctions. The Act also required the Secretary of State to indicate a new duty of candour for providers of healthcare and adult social services registered with the CQC. The powers of the CQC were amended to include issuance of warning notices to trusts requiring significant improvement with specific time periods for remediation. Monitor was also empowered to impose license conditions on a foundation trust that received a warning notice from the CQC provider. Previously, Monitor was only able to make use of such powers where there had been governance and not quality failings. More recently, the Health and Social Care (Safety and Quality) Act 2015 addressed affairs affecting health and social care professionals while the 2018 Act emphasised the significance and steps to be followed in data processing of health and adult social care in England.

2.4 Structure of the National Health Service in England

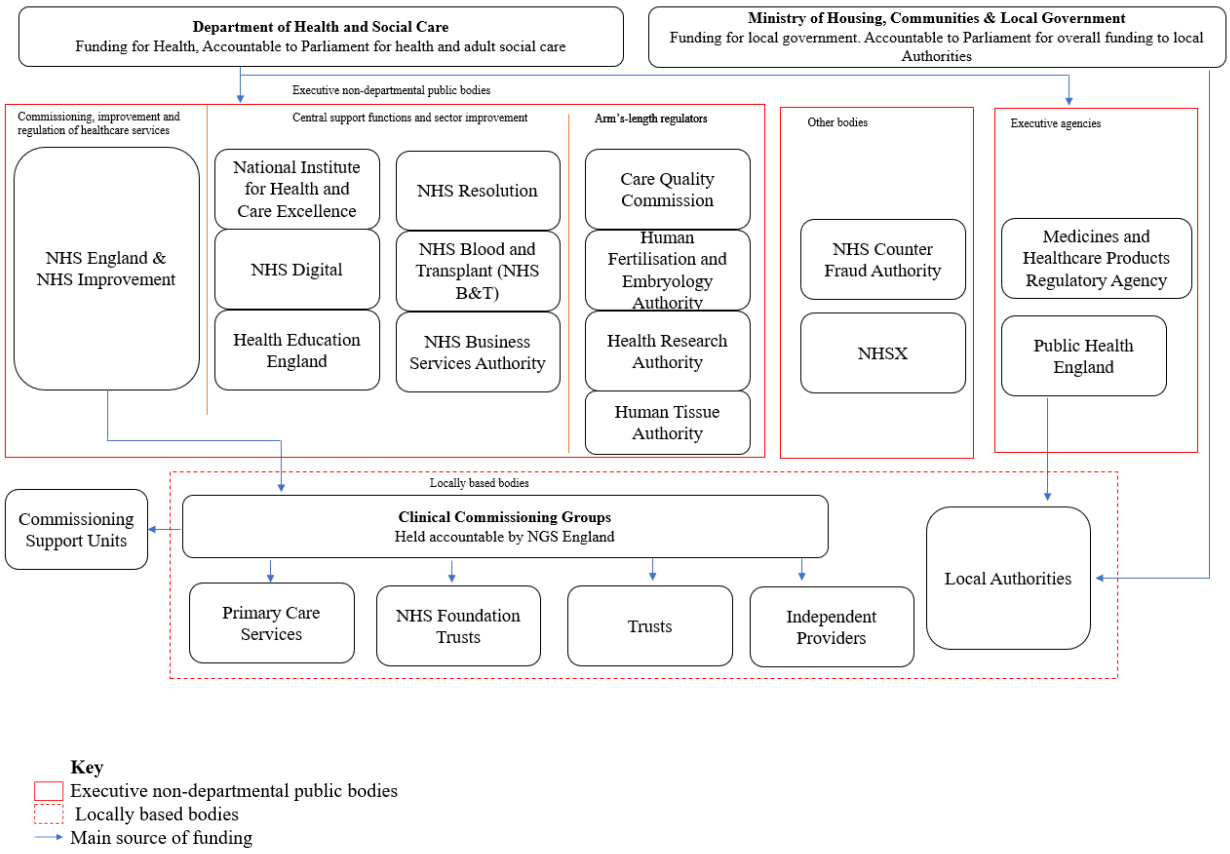
Structurally, the NHS comprises of a multifaceted hierarchy and network of separate and legally distinct sub-organisations that have varying responsibilities and diverse inter-organisational contractual and reporting arrangements (Mannion *et al.*, 2019). The sub-organisations withing the NHS operate collectively to achieve the shared goal of ensuring quality healthcare services are

accessible to people in line with the principles and values of the NHS constitution (A brief guide for NHS foundation trust governors, 2014). These sub-organisations include regulators and oversight agencies responsible for assessing and ensuring high quality care (Mannion *et al.*, 2019), commissioning groups, health care providers, support providers and executive agencies. There are also professional bodies for doctors, nurses, midwives and allied professionals (Mannion *et al.*, 2019).

The NHS' formal line of accountability is directly to the Secretary of State who is accountable to Parliament for how the public funds are spent, and although central government control is challenging, successive governments have adopted a range of mechanisms to ensure enhanced accountability by the NHS (The King's Fund; A high Performing NHS A review of progress 1997–2010, Mannion *et al.*, 2019). The Treasury is responsible for determining resource allocation to healthcare in a tax funded system in the UK (Kuhlmann and Allsop, 2008). Policy setting and prescriptions for service development for the NHS is undertaken by the Department of Health through which annual resource allocations to healthcare trusts are made (Kuhlmann and Allsop, 2008). A large proportion of operational management of the NHS is overseen by NHS England (NHSE) and NHS Improvement (NHSI) who are responsible for setting the commissioning framework for healthcare services in England. The two bodies aligned under the joint management of the NHS Executive Group, fund and monitor clinical commissioning groups (CCGs) as well oversee the NHS foundation trusts, trusts and independent providers. Clinical Commissioning Groups have the overall role of commissioning hospital and community care for the population. On the provider side, NHS services are provided by General Practitioners, dentists, pharmacists, and other professionals for primary care services, and by hospitals and specialists for secondary care. The NHS trusts and foundation trusts, collectively termed as the 'providers' are the primary deliverers of hospital and specialist care (Department of Health and Social Care 2018 – 19). The categorisation of the NHS trusts and foundation trusts is done through the services they provide such as acute specialist and non-specialist services, ambulance, community, and mental health care providers.

From the regulatory angle, overall responsibility lies with Monitor for health services in England. Monitor is responsible for assessing and authorising NHS trusts and foundation trust status. The independent body also oversees compliance of the foundation trusts with the conditions of the license. Meanwhile, the Care Quality Commission (CQC) has the duty of registering all providers of health and social care in England and ensuring that they meet standards of quality and safety on a continuing basis (Governor's guide 2013).

Figure 1 Structure of the National Health Service in England 2018-19



Source: Department of Health and Social Care 2018 – 19

2.5 Governance of the National Health Service Trusts and Foundation Trusts in England

Political and community leaders endeavour to ensure that the hospitals are accountable for their responsibilities to the community (Alexander and Lee, 2006). The health sector is facing increasing pressure to deliver on a number of performance indicators, making it important to specify the governance mechanisms that are associated with improving viability and performance of organisations (Alexander and Lee, 2006). The challenges facing the healthcare sector in the delivery of health care include technological improvement, emergence of new diseases and treatments, increase in healthcare expenditure, increasing market demands, low staff morale, decrease in customer dissatisfaction rates, insufficient public awareness and lower financial performance (Afriyie et al., 2020). These recent developments have highlighted the significance of

effective governance configurations for not-for-profit hospitals (Alexander and Lee, 2006). According to Afriyie *et al.* (2020), involving board of directors improves hospital financial management and performance. One of the main functions of the board is the provision of strategic leadership and policy direction for the organisation which the managers and chief executives subsequently implement (Farrell, 2005). There is a distinctiveness for non-profit boards in their role and overall governance functions as they are required to meet various stakeholder needs in delivering on the mission of the organisation (Parker, 2003; Alexander and Lee, 2006). Particularly, the complexity of health care institutions requires them to cater to several competing stakeholders by implementing effective governance systems (Afriyie *et al*., 2020). This makes the focus of the managers of non-profit organisations unclear as they have varying objectives in contrast to for-profit firms that focus on profit making (Eldenburg *et al*., 2004). The governing boards of not-for-profit hospitals therefore have the fiduciary duty to ensure that an organisation stays true to its core mission (Alexander and Lee, 2006). The pressure from external regulation of the practices of non-profit boards and market performance expectations forces the hospital boards to deliver results although there is a concern about the ability of the boards to deliver on the increased responsibilities of improving the performance of not-for-profit hospitals (Alexander and Lee, 2006). Chelliah, Boersma and Klettner (2015) also suggest that the degree of efficiency of the governance mechanisms of not-for-profit organisations are impacted by both internal and externalities that they face, for example the differences in board roles, demands of stakeholders and membership, funding configurations board skills and recruitment processes.

Particularly, boards are striving to uphold standards in addition to the expectation to assess the performance of their hospitals in achieving the qualitative tasks regarding service quality, accessibility, social equity, costs reduction and exclusive value-based services given their impact on financial performance (Afriyie *et al*., 2020). There is increasing pressure for the not-for-profit institutions including hospitals to adopt more business-like management and governance practices of the private and for-profit sector in the face of the mounting financial and competitive pressures in order for them to survive (Alexander and Weiner, 1998). Notably, for the public institutions in the UK, in line with the new public management reforms introduced in the 1980's and 1990's, the NHS adopted organisation and governance approaches typically associated with private institutions (Clatworthy, Mellett and Peel, 2000; Farrell, 2005). The boards that conform to the viewpoints of NPM are responsible for the oversight of the operations of the organisations to drive improved performance in terms of financial viability, efficient resource management, meeting set performance targets, amongst others (Veronesi and Keasey, 2011). The gains of NPM reformed boards are therefore closely related to efficiency gains and output improvements

(Veronesi and Keasey, 2011). Similarly, Alexander and Lee (2006) predict that governing boards that conformed to the corporate model were consistently associated with enhanced operational efficiency, higher volume of adjusted admissions and larger market share. Therefore, determining the appropriate roles and focus of the executive and non-executive directors remains indistinct and not disposed to unitary answers (Herzlinger, 1994). Overall, corporate model boards are more likely to focus on the competitive position of the hospital and influencing changes to improve hospital's operational efficiency, market standing and financial viability (Alexander and Lee, 2006). Non-profit hospitals are therefore expected to adopt a more active, critical role in strategy formulation, environmental adaptation and monitoring of hospital management as the current operating environment does not support passive stewardship (Alexander and Weiner, 1998).

Notwithstanding, some health care experts argue that the traditional methods of governance in hospitals have become obsolete in the middle of the increased competition, tighter cost control and greater regulatory uncertainty (Afriyie et al., 2020). Notably, most hospitals exhibit a combination of both corporate and philanthropic governance models in an attempt to create a balance between the competing market, regulation and community demands (Alexander and Weiner, 1998). According to Herzlinger (1994), funding the mission of a non-profit organisation and exercising corporate governance poses a challenge of an unavoidable degree of ambiguity for the board in its engagement in PPF split and the multifaceted range of stakeholders including staff, patients, the public, regulators and funders. The stakeholders of the NHS trusts and foundations trusts are predominantly social and not economic, for example, the main concern of the public and patients are accessibility and quality of services, for staff is to provide the best possible healthcare to patients, although they also have secondary focus on financial performance as this can impact their contractual circumstances and continuity of services, and other stakeholders such as local authorities, universities are concerned about quality of service (Ellwood and Garcia-Lacalle, 2015).

Alexander and Weiner (1998) highlighted that the philanthropic model prioritises community participation, due process and stewardship while the corporate model focuses on strategy development values, risk taking and competitive positioning. The philanthropic models are characterised by large size, diverse membership and absence of term limits which support the inclusion of a broad range of perspectives and continuity of institutional values and traditions, while the corporate model is characterised by small size, lean membership and presence of term limits and supports focused and strategic decision making (Alexander and Weiner, 1998). Different organisational form hospitals exhibit significant differences in their board of directors

(Eldenburg *et al*., 2004) and these differences in board configuration result in variations in the performance of NFP hospitals (Alexander and Lee, 2006). However, regardless of whether the executive directors are the drivers of the organisational strategy, the non-executive directors still have influence over corporate governance in their criticism and challenge of proposals, monitoring implementation of strategy, and applying organisational philosophy to strategy discussions and setting limits to action (Herzlinger, 1994). Additionally, the consumers' influence on governance has a potential effect on the board's composition and size (Eldenburg *et al*., 2004). For instance, church owned hospitals tend to have larger sized boards, community hospital boards are composed of prominent community members, physician owned boards are composed of more physicians and teaching hospital boards are large in size and are comprised of university's board of representatives (Eldenburg et al., 2004). Particularly, the new public management reforms advanced the drive to appoint clinicians into management of services (Veronesi, Kirkpatrick and Altanlar, 2015). Organisational and clinical leadership that entails oversight by a designated senior clinician is one of the features of clinical governance (Zahir, 2001). Clinical governance is the form of governance in health care institutions whereby the hospitals are held accountable for improving quality of service and standards of patient care by facilitating an environment where good clinical care is upheld (Afriyie et al., 2020).

Structural changes of corporate governance in the NHS were a result of the NHS and Community Care Act 1990 which was an enactment of the proposals presented in the 1989 White Paper Working for Patients (Ferlie, FitzGerald and Ashburner, 1996). Importantly, the Act steered the NHS away from the representation model to a private sector Board of directors' arrangement (Ferlie, FitzGerald and Ashburner, 1996). Today, there is an element of weakened political involvement in the public institutions as they transitioned from government to governance with a governing board (Farrell, 2005). Trust management is undertaken by the boards which became powerful as top decision makers and were comprised of executives and non-executives instead of managers, led by a chief executive whose assessment is linked to the performance of the trusts (Clatworthy, Mellett and Peel, 2000; Addicott, 2008). There are arguments that responsible board practices are pivotal for improvements in financial performance, patient care, safety and quality in health care institutions (Afriyie et al., 2020). However, some hospital boards place greater priority on service delivery rather than profits and the younger hospitals attract patients by improving physical structures and goodwill (Afriyie et al., 2020). Nonetheless, there is a dearth of empirical evidence on the components of effective governance practices to provide a foundation for NFPs to improve their governance practices (Alexander and Lee, 2006).

2.5.1 Trusts

Healthcare provision within the NHS has been segmented into a number of quasi-autonomous entities called trusts (Clatworthy, Mellett and Peel, 2000). The NHS trusts are statutory bodies created by the NHS and Community Care Act 1990 to provide healthcare services to the population. Hodges, Macniven and Mellett (2004) describe the conception of NHS trusts as the reinforcement of the reforms made to the NHS at the start of the 1990s. NHS trusts provide hospital and community healthcare for millions of patients. Previously, the trusts were driven by market style incentives where they were required to compete in order to expand their businesses while focusing on statutory financial duties. This model undermined the contribution of the trusts to both national and local health strategies and the inapt incentives were reversed through the New NHS white paper which redirected focus towards providing improved health services to patients. The improvements in quality and efficacy of health care services were driven by tough performance management measures. The changes enabled the trusts to retain full responsibility for operational management where resources are utilised for patient care within a local service framework that they participated in creating. The trust boards have accountability to patients, public, regulators, Clinical Commissioning Groups for services commissioned, and to the NHS Executive for their statutory duties. There is a requirement for the NHS trusts to operate in partnership with other NHS organisations and related health care providers through information sharing in order to develop a Health Improvement Programme under the leadership of the Health Authority. The Health Improvement Programme sets the framework for services provided by the trusts and the agreements they make with the Clinical Commissioning Groups. All strategic decisions are required to be consistent with this framework (Department of Health, 1997).

NHS trusts are allowed to enter into NHS contracts, undertake and commission research, provide training for employees, and make facilities available for university or health service-related trainings. The Secretary of State has the statutory power to dissolve an NHS trust in cases where the trust applies for dissolution or where it is considered appropriate in the interests of the health service. The trusts are generally allowed to borrow up to a specific limit for the purposes of carrying out its functions from the Secretary of State or any other person. In consultation with the trust and approval from the Treasury to the Secretary of State, any surplus funds to a trust's foreseeable requirements are paid back into the consolidated fund. Where a trust has serious financial problems, failures in quality of care and is performing poorly, NHS Improvement can place it in financial special measures (Department of Health and Social Care 2018 – 2019).

For accountability purposes, trusts are required to prepare annual accounts and any other requisite reports for presentation to the Secretary of State (The National Health Service and Community Care Act 1990). With regards to funding operations, the NHS trusts receive most of their income from commissioners of health care and aim to deliver improved healthcare outcomes with increased efficiency and effectiveness within available resources. The NHS trusts have five main duties including breaking even on their income and expenditure annually, absorbing the cost of capital at a rate of 3.5% of average relevant net assets, breaking even annually under resource accounting and budgeting, and remaining within the capital resource limit and external financing set for each trust by the Department of Health. The government proposed that all the well performing NHS trusts could apply to attain NHS foundation trust status by 2008 (Department of Health, 2005).

2.5.1.1 Governance in the NHS Trusts

Hodges, Macniven and Mellett (2004) refer to NHS trusts as self-governing entities each with a board of directors comprising executive and non-executive directors. The Health and social care Act 1990 set out the requirements for membership of the NHS trusts where they are required to have a unitary board comprising of a chairman appointed by the Secretary of State, executive and non-executive directors who respectively, are and are not employees of the trust. The executive directors comprise of a finance director, a director who is a registered doctor, a director who is a registered nurse or registered midwife and are led by the chief executive. They have the responsibility of day-to-day operational management and oversight of the trust. In addition, the NHS managers are responsible for the oversight of the actions of management. Meanwhile the non-executive directors who are not employees are responsible for challenging the decisions and propositions of the executive directors. The chair, also a non-executive director has the leadership role of the board, that comprises of a deputy chair and a senior independent director (Your duties: a brief guide for NHS foundation trust governors). The non-executive directors are responsible to the board Chair in accordance with the UK Corporate Governance code 2018. Primarily, each trust board was created in accordance with central guidance requiring separate chairmen and chief executives (Hodges, Macniven and Mellett, 2004). The composition of the board of directors of trust hospitals comprises of nine to eleven directors with up to five executive directors proportional to the number of non-executive directors including the non-executive chairperson (Hodges, Macniven and Mellett, 2004). The executive directors and chairs were appointed by the NHS Appointments Commission from the 1st of April 2001 (Hodges, Macniven and Mellett, 2004). The chairs and non-executive directors are appointed by the NHS

Improvement with delegated powers by the Secretary of State and assume office under the National Health Service Act 2006. The appointment of the Chief Executive is the responsibility of the chairman and non-executive directors, as well as approval of appointment of other executive directors (Hodges, Macniven and Mellett, 2004). These executive directors' tenure is set by the appointing authority while the tenure of the chairman and non-executive director is for a period not more than four years (Hodges, Macniven and Mellett, 2004). The governance structure of the trusts is similar to that of listed companies given that the recommendations are underpinned by the Cadbury Report 1992 (Clatworthy, Mellett and Peel, 2000). According to the Cadbury Report 1992, leadership and control of every public company should be undertaken by an effective board. Within the context of a UK unitary board system, the board is comprised of a combination of executive directors who have firm specific knowledge, and non-executive directors who convey a broader perspective to the activities of the company (The Cadbury Report 1992). The Cadbury Report 1992 further stipulates that non-executive directors are under a chairman who undertakes the requisite duties and responsibilities that the role entails.

The Act specifies that renumeration to the chairman and non-executive directors are determined by the Secretary of State and approved by the Treasury. The executive directors of the trust should include the Chief officer and the Chief finance officer of the trust as well as a medical or dental practitioner and a registered nurse or registered midwife. This requirement is in line with the new public management reforms that support co-opting of professionals in the leadership and management of organisations. This practice ensures that quality is enforced by empowering practitioners to take responsibility for developing and maintaining standards within their local NHS organisations (Department of Health, 1997). Trusts that do not provide services to patients and whose principal function is the provision of ambulance or patient transport services are exempt from co-opting a medical professional to the board (National Health Service Trust (Membership and Procedure) Regulations 1990). In addition, the 1990 Act stipulates that an individual who is not an employee of the trust but holds a post in a university with a medical or dental school and also works for the trust or is seconded to work for the trust by the employees is regarded as an executive director.

2.5.2 Foundation Trusts

The creation of foundation trusts marks a profound transition in the management and provision of hospital services. They are at the forefront of the government's commitment to decentralise public services and create a patient-led NHS. It also represents the devolution of decision making

from central government to the local organisations and communities which effectively makes the health care providers more responsive to patient needs (Department of Health 2005). The basis for the creation of foundation trusts originated from England experimenting with increasing autonomy of public hospitals (Allen *et al.*, 2012). They were established under the Health and Social Care Act 2003 as a key element of the government's intention for foundation trusts to be controlled and run locally (Wright *et al.*, 2012). The Health and Social Care (Community Health and Standards) Act 2003, chapter 43 part 1 that created the foundation trusts defines them as a public benefit corporation authorised to provide health services in England. They were established as the new NHS provider to replace the older NHS trusts and have increased financial and management freedoms (Wright *et al.*, 2012).

The transformation of the NHS into a 21st century healthcare system required investment and reform measures inspired by the local people as opposed to central control from Whitehall. In order to tailor services that best meet the local health inequalities, staff and local communities needed to have greater control and ownership of the change process. With national standards, inspection and regulation in place, local ownership and accountability moved to the local people. Where the trusts were performing well, the government stepped back, and this incentivised the improvement of performance and empowered the healthcare professionals to develop services that best suit patient needs. The NHS foundation trusts are therefore a result of high performing organisations (Department of Health, 2002). The existing arrangement where foundation trusts are legally independent organisations with greater local ownership and involvement from the patients, public and staff means that power is devolved to the local community. This structure solidified the government's plan to transform the NHS into a more patient centric health care service.

The first foundation trusts came into operation in 2004 (Allen *et al.*, 2012) and unlike the NHS trusts, do not have direct accountability to the Secretary of State for Health (Allen, 2006). Through a system of reformed governance configurations, accountability of the foundation trusts is upward to formal regulatory bodies such as Monitor and Care Quality Commission and downward to the local communities, staff and other stakeholders (Wright *et al.*, 2012). The foundation trusts are still a part of the NHS and are subject to performance ratings and systems of inspection with accountability to the local communities, Clinical Commissioning Groups and parliament. They are regulated by Monitor who ensures compliance with terms of authorisation conditions and statutory obligations. They have more autonomy in spending their income and are not obliged to breakeven year on year (Allen, 2006). They also have freedom to retain operating surpluses and

access a wide range of capital funding options to invest in delivery of new services in order to improve responsiveness to patients (Department of Health, 2005). However, where a foundation trust is performing poorly with serious financial problems and failures in quality of care, NHS Improvement can place it in financial special measures (Department of Health and Social Care 2018 – 2019).

2.5.2.1 Governance in the NHS Foundation Trusts

As detailed in the Health and Social Care Act 2003, foundation trusts are required to have a membership body, board of governors, a chairman and a board of directors in place (Wright *et al.*, 2012). The Health and Social Care (Community Health and Standards) Act 2003 specifies that the board of directors should assume the responsibility for the day-to-day management of the foundation trust. The board of directors comprises of executive directors such as Accounting officer, a registered doctor and a registered nurse or a registered midwife, led by a chief executive, as well as non-executive directors where at least one is the board chair (Health and Social Care (Community Health and Standards) Act 2003).The board also has a deputy chair and a senior independent director (Your duties: a brief guide for NHS foundation trust governors). The 2003 Act stipulates that medical professionals should be appointed to the board in different capacities whereby one of the executive directors must be a registered medical practitioner or registered dentist and another as a registered nurse or registered midwife. The requirement for involving professionals in management in public institutions ties back to the doctrines of the new public management reforms in order to improve delivery of public services (Hood, 1991). The Act gives powers to the non-executive directors to appoint and remove the Chief Executive Officer and to the board of governors to appoint and remove the chairman and other non-executive directors. The chair of the board of directors and the non-executive are appointed by the board of governors, who are required to work in partnership with the board of governors in setting strategic goals for the foundation trust (Allen, 2006). This arrangement differs from that of the NHS trusts whereby the foundation trusts have greater autonomy, less accountability to the central NHS and have members and governors who are a new class of stakeholders for NHS hospitals (Allen et al., 2012). While the executive directors on the board are responsible for the day-to-day management of the foundation trust, the non-executive directors are responsible for challenging decisions and proposals presented by the executive directors (Your duties: a brief guide for NHS foundation trust governors). This structure allows the foundation trusts to have increased flexibility in innovating and tailoring services to the needs of the local communities. Notwithstanding, this flexibility is balanced by proper safeguards to ensure that patients are

treated according to NHS principles and standards (Department of Health, 2005). The eligibility criteria for appointment as a non-executive director includes being a member of the public or patients' constituencies and being a representative of a university for hospitals of foundation trusts that include a medical or dental school. The board of directors have the duty of accountability to the board of governors, regulators and key stakeholders like the commissioners (Your duties: a brief guide for NHS foundation trust governors).

The board of governors is a requirement of the Health and Social Care (Community Health and Standards) Act 2003 for foundation trusts. The board of governors are the body that collectively binds a trust to its patients, service users, staff, and stakeholders, essentially acting as a conduit through which the foundation trusts achieve local accountability. The board of governors is comprised of elected members and appointed individuals who are representative of the members and other stakeholder organisations (Governor's guide August 2013, Updated November 2013). It comprises of patients, staff, stakeholder representatives such as local NHS organisations, local authorities and universities who are either nominated or elected (Wright *et al.*, 2012). The members of the public must elect the majority of the board of governors and at least three governors must represent the foundation trust staff members and one representative from any local university medical school (Allen, 2006). Legally, the chair of the board of directors' doubles as the chair of the board of governors and provisions must be made in the constitution in case the chair is absent. The chair is responsible for ensuring that the board of directors and the board of governors are working together effectively and ensuring that information is promptly distributed to enable the parties to perform their duties accordingly (Your duties: a brief guide for NHS foundation trust governors). The board of governors are generally tasked with the appointment and removal of the chair and non-executive directors as well as setting the renumeration for the chair and non-executive directors. They are also held responsible for holding the non-executive directors accountable for the performance of the board of directors (Governor's guide August 2013, Updated November 2013). The board of governors also have the formal authority to elect the chair and non-executive directors and provide approval for appointing the chief executive (Wright *et al.*, 2012). The board of governors also have the responsibility of relaying information to the constituents about how the foundation trust is performing and also notify the regulator in case of any concerns relating to the board of directors that cannot be resolved locally (Allen, 2006). In summary, the chain of accountability in the foundation trusts is that the NHS foundation trust members and the public hold the board of governors accountable, and the board of governors in turn hold the non-executive directors led by the board chair accountable, who hold the executive directors led by the Chief executive officer accountable and overall, are answerable

to the NHS trust unitary board accordingly (Your duties: a brief guide for NHS foundation trust governors). The Health and Social Care (Community Health and Standards) Act 2003 requires the foundation trusts to have a constitution which can have further provisions in line with schedule 1 of the Act.

2.6 Performance Measurement and Accountability in the National Health Service England

2.6.1 Performance Measurement

Compared to other public services in the UK, the health sector has gone through the most extensive new public management reform with the introduction of business-like practices such as appraisal, performance management and recruitment of private sector managers (Addicott, 2008). One of the principles of the new public management for driving improved performance in public institutions is the adoption of explicit standards and performance measures with clearly defined goals, targets and indicators of success expressed in quantitative terms (Hood, 1991). Moreover, the government, taxpayers and patients require greater accountability from healthcare organisations and therefore, managers and service users need better measures of organisational performance that can be used to streamline their efforts to improve performance (Baker and Pink, 1995).

Monitoring of performance was introduced in the 1990's across government in an attempt to measure the processes and outcomes of public services and as a driver of efficiency and effectiveness (Bird *et al.*, 2005). Performance monitoring delivers clearer accountability to Parliament as well as to the public for the government's stewardship of public services (Bird *et al.*, 2005). It is also used to check performance against set targets, form a basis for rewards and seek scope for improvement by professionals and those responsible for delivering public services (Bird *et al.*, 2005). Additionally, data from performance monitoring is important for the non-executive members of public services to hold managers accountable, for members of the public to check the performance of their local services to inform their choices for voting purposes or selecting of public service provider, and national and local governments to make decisions and take political actions (Bird *et al.*, 2005). The target systems represent a homeostatic control where desired quantifiable results are defined in advance with monitoring systems put in place to track performance against stipulated results and feedback mechanisms are linked to measured performance (Bevan and Hood, 2006). Boards of not-for-profit institutions should avoid

disproportionately focusing on one strategic or organisational performance parameter such as revenue sources (Herzlinger, 1994).

With this, the government adapted the Kaplan and Norton (1992) balanced scorecard to formulate the NHS Performance Assessment Framework (Chang, Lin and Northcott, 2002). The Performance Assessment Framework was first introduced by the Labour government in 1997 to tackle variable quality standards. Principally, the Performance Assessment Framework allowed the evaluation of the performance of the NHS in delivering health services and enhance accountability to both the public and Parliament (Chang, Lin and Northcott, 2002). Performance is benchmarked against a wider scope of targets aimed at achieving improved health and healthcare outcomes, quality, efficacy of service and access (Department of Health, 1997). The Performance Assessment Framework was introduced to cover six key areas of NHS performance such as health improvement, fair access to services, effective and appropriate delivery of health care, outcomes from health care, efficient use of resources and high-quality experience for patients and carers. These six dimensions take into consideration the various stakeholder needs, outcome and process measures, and long and short-term targets (Chang, Lin and Northcott, 2002). Goddard, Mannion, and Smith (1999) also describe the new national performance framework as focused on aspects of fair access, outcomes and patient/carer experience, efficiency, and traditional financial performance measures. They also demonstrate the government's intention to assess the performance of the NHS according to their efficiency in spending financial resources, clinical outcomes, reducing health disparities and improving service users' satisfaction (Chang, 2007). Although the Performance Assessment Framework is consistent with the concept of a balanced scorecard, it has variations because it is used in the context of a public sector institution that focuses on different performance drivers, outcome and process indicators, various needs of different internal and external stakeholders, and financial and non-financial measures compared to those of a private sector institution (Chang, Lin and Northcott, 2002). Information on patients' views, quality of care, the workforce and efficiency were incorporated in the framework therefore, some of the stakeholder needs might intersect reflecting a variety of interests (Chang, Lin and Northcott, 2002). The annual publication of the results from the framework were audited by the then Commission for Health Improvement (now Care Quality Commission) who work with the Audit Commission to demonstrate authenticity of the results of the performance of the NHS trusts (Department of Health, 2000). Overall, the Performance Assessment Framework considers the requirements of various stakeholders such as patients, clinicians, managers and politicians and is reflective of both outcome and process measures which are aimed at achieving long term NHS performance (Chang, Lin and Northcott, 2002).

Compared to the for-profit boards, the not-for-profit boards characteristically have a more direct impact over their service activities and therefore are able to exert greater influence on the indicators of operational performance than financial performance indicators (Herzlinger, 1994). However, in measuring performance of the NHS trusts and foundation trusts, it is important that both financial and non-financial indicators are considered in assessing the overall performance. This ensures that both financial sustainability and health outcomes of the hospitals are closely monitored. Financial viability and efficient resource management are key to boards that conform to principles of NPM, however, as is the first level objective of every organisation in the NHS including the trusts and foundation trusts, provision of high quality health care services should be prioritised, and business-type concerns despite their significance, should be subordinated (Veronesi and Keasey, 2011). Distinctive to non-profit boards of institutions in a complex, dynamic and ambiguous environment, the philosophical and strategic level of decision making may generate a level of ambiguity that is resistant to being reduced by mechanistic accounting structures and processes (Herzlinger, 1994).

The Performance Assessment Framework enabled the Government to create a linkage between local healthcare activities and national strategies (Chang, Lin and Northcott, 2002). Therefore, when assessing non-financial performance of the NHS providers, consideration is made to the domains used to measure service performance that include operational standards and targets like national waiting times, quality and safety such as CQC registration requirements, clinical outcomes; performance metrics and data collection; declaration of compliance with core standards, targeted audit/assessments of compliance; clinical indicators for example survival rates, annual health check scores and user experience that covers patient satisfaction and reported outcomes (Department of Health, 2009).

2.6.1.1 Financial performance

According to a study by Herzlinger (1994), there is consistency and cohesiveness in the concern of executive and non-executive, financial and welfare directors towards financial strategy attention and means of addressing it. The ability of NHS providers to meet their financial duties and a sound financial position are perceived as prerequisites for doing well on other aspects of performance while also acting as indicators of potential problems worth further investigation (Goddard *et al.*, 1999). The NHS oversight framework details financial performance metrics in three categories of financial sustainability, financial efficiency and financial controls (NHS Oversight Framework 2019/20 annex 2: Provider oversight: metrics). Under financial efficiency, the capital service capacity and the liquidity (days) are assessed, while for financial efficiency, the Income &

Expenditure (I&E) margin is measured while for the financial controls, Distance from financial plan and agency spend are assessed (NHS Oversight Framework 2019/20 annex 2: Provider oversight: metrics). NHS trusts are majorly held accountable for their financial performance using measures such as the ability to break even on income and expenditure (Goddard, Mannion, and Smith, 1999). In addition, there is a requirement for the trusts to attain a 6% return on net assets, and to remain within the set annual external financing limit put in place by the NS Executive (Goddard, Mannion, and Smith, 1999).

Statutorily, the NHS trusts have a breakeven duty, and the trust board is responsible for overseeing that the trust achieves a balanced position on income and expenditure (NHS Improvement, 2018). However, the breakeven duty does not apply to foundation trusts because they are financially autonomous. When the NHS trusts are able to attain set performance standards and criteria, especially with financial viability, they can apply for and are assigned foundation trust status (Veronesi, Kirkpatrick and Vallascas, 2014). For the NHS trust hospitals, attaining foundation trust status allows them to have financial and operational autonomy from central control (Nagendran et al., 2019). Likewise, foundation trusts enjoy other benefits such as not relying on capital allocations, with freedom to reinvest all the surplus revenue generated through their operations and borrowing from other sources to fund required investments (Department of Health, 2005).

2.6.1.2 Non-financial performance

According to the NHS Oversight Framework 2019/20 annex 2: Provider oversight: metrics, the non-financial performance indicators for the NHS providers range from the A&E maximum waiting time of four hours from arrival to admission/transfer/ discharge to the CQC rating, Staff Friends and Family Test, to the maximum 62-day wait for first treatment from an urgent GP referral for suspected cancer and NHS cancer screening service referrals. Non-financial performance of the NHS trusts is largely assessed through the 1992 Patient's charter initiative that focuses on various process measures from the quality of hospital food to volume of complaints received annually (Goddard, Mannion, and Smith, 1999). Furthermore, the national and local targets were set for certain indicators that had received a lot of attention, for example, indicators relating to waiting times for percentage of cancer in-patients admitted within three and twelve months of being put on the waiting list and targets for activity in accident and emergency (A&E) departments (Goddard, Mannion, and Smith, 1999). Overtime, targets have been introduced in the Performance Assessment Framework ranging from commitments to investing in equipment and infrastructure to establishing maximum treatment waiting times (The King's Fund; A high

Performing NHS A review of progress 1997–2010). As set targets such as the 18 weeks from referral to treatment, halved infections rates and a maximum wait of 4 hours in A&E have been achieved, these targets have now been established as minimum standards for all NHS organisations and will form a national standard for all patients (Department of Health, 2009).

In addition to the targets, the 1998 Comprehensive Spending Review (CSR) made significant progression in delivering improvements in services with objectives that were set out in the Public Service Agreements that encompass the targets of the NHS. Some of the objectives included reducing incidences of avoidable illnesses, disease, injury in the population, for instance deaths from cancer, heart disease and accidents. Other objectives involved improving health outcomes for everyone, improving service standards, for example by reducing waiting times from arrival to admission, transfer or discharge in the A&E to a maximum target of 4 hours, improving health and social care outcomes and improving patient and carer experience of the NHS and social services (Department of Health, 2005).

The annual system of publishing 'star' ratings for public healthcare institutions was introduced in the 2000's by the Department of Health (Bevan and Hood, 2006). There is notable progression in the use of the ratings system for NHS providers based on their performance against a number of key targets and wider set of balanced scorecard performance indicators. The ratings system initially started from the use of three stars awarded and published by the Department of Health in 2000 – 2002. This responsibility was then taken over by the independent health regulator, the Commission for Health Improvement, which was replaced by the Healthcare Commission in 2004. This star system changed in 2005/6 where the new system measured performance against the new healthcare standards on safety, clinical and cost effectiveness, governance, patient focus, care environment and amenities, accessibility and responsive care, and public health set by the Department of Health. In addition to these set standards, the Healthcare Commission also considered the use of resources, national targets, developmental standards, and other regulators' views (Department of Health, 2005).

There is a lot of pressure for the Trust Chief Executives to meet these performance targets as the star ratings are made public (The King's Fund; A high Performing NHS A review of progress 1997–2010). With the enactment of the Health and Social Care Act 2008, a body called the Care Quality Commission (CQC) was established to replace the Commission for Healthcare Audit and Inspection, also formerly known as the Healthcare Commission and the Commission for Social Care Inspection (Health and Social Care Act 2008). The responsibility for inspection of health and social care services in England now falls within the domain of the CQC. A rating is awarded after

the inspection of the services for safety, efficacy, caring, responsiveness and leadership, management, and governance of the providers of healthcare. The ratings range from 'outstanding' to 'good' to 'requires improvement' to 'inadequate' and are made public to inform patient choices (Care Quality Commission website).

Furthermore, the NHS constitution, values and pledges recognise that the NHS cannot deliver high quality services without high quality staff and high-quality workplaces. To inform continuous improvement and allow the Department to track progress, the 2008 NHS staff survey was amended to be better aligned to the pledges. The inclusion of certain leading questions was designed to enable the NHS employers to understand how well they are performing in those areas that matter most to staff. Acting in these areas should have a positive impact on staff motivation and morale with direct benefits for the quality of patient care. The results of staff satisfaction from the staff survey are reported in the annual reports of the NHS providers (Department of Health, 2009).

Public inquiries into unacceptable and poor performance should be followed by intervention, where in extreme scenarios, the trust board should be removed and foundation trusts possibly lose their status (Clatworthy, Mellett and Peel, 2000; Oliver, 2005). An example of unacceptable performance of the trust against non-financial indicators is highlighted in the Mid Staffordshire NHS foundation trust scandal that occurred in the late 2000's. According to the Francis (2013) report on the public inquiry, it was found that the foundation trust failed to deliver on its primary role of providing acceptable basic care elements and standards. This greatly impacted the quality of patient experience between January 2005 and March 2009. The high mortality rates at the Mid Staffordshire NHS foundation trust were the main cause for concern in 2007 by the Healthcare Commission, the hospital regulator at the time. In comparison with other trusts, the mortality rates at the foundation trust and the multiple complaints raised by affected families triggered an inquiry. The inquiry criticised the hospital's lack of basic care, unconducive culture for staff support, low morale, lack of openness, fear of adverse repercussions, complacence to poor standards, disproportionate focus on achieving financial targets at the expense of quality of care, disassociation of the consultant body from management and management's tunnel focus on financial pressures (Alghrani *et al.*, 2011; Francis, 2013; Mannion *et al.*, 2015). More so, management was focused on achieving foundation trust status, while failing to resolve staff and governance deficiencies like enforcing clinical governance (Francis, 2013). The board had a slow approach to resolving governance problems and focused excessively on statistics and reports compared to patient experience data (Francis, 2013). There was also a lack of transparency on

problems that plagued the foundation trust (Francis, 2013). These are among the issues that were cited in the inquiry report as prevalent at the hospital. The inquiry also implicated the trust board's failure to deliver acceptable standards of healthcare, while also highlighting the failings of the wider system of regulators and supervisors (Francis, 2013). It was found that the board failed to get a grip on its accountability and governance structure especially highlighted by a lack of clinical governance (Francis, 2013). The report also questioned the resourcing and support of the foundation trust governors. Issues of poor standards of care highlighted in the staff and patient survey, audit reports, loss of stars from a three rated to zero rated, did not get an appropriate reaction from management and the trust board (Francis, 2013) indicating the existence of weak governance systems.

2.6.2 Accountability

Directors of non-profit institutions are able to manage in uncertain environments through the strategic integration of financial relationships, accountability and disclosure management (Herzlinger, 1994). The NHS constitution provides an opportunity to clarify and strengthen both national and local accountability, where the NHS is nationally held accountable through the parliament. Accountability is strengthened through national standards for patients and local freedoms to deliver (High Quality Care for All, 2008). Constitutional accountability is to the NHS Executive whereas the trusts are accountable to the local health authorities and Clinical Commissioning Groups for the services they are commissioned to undertake through detailed reports (Clatworthy, Mellett and Peel, 2000). On the other hand, NHS foundation trusts are accountable to the public through the board of governors who represent the interests of the public and members of the trust. This way, transparency of performance of the outcomes of healthcare services provided is available to the public, fostering accountability to the taxpayers. Overall, the existence of strong governance mechanisms as found in a study by Mihir and Yetman (2005) serves to enhance the inclination of not-for-profits to intertemporally regulate their activities in the midst of favourable or worsening local economic conditions. Therefore, for the NHS trusts and foundation trusts, even with the constrained financial environment, the strong governance configurations help to align the activities of the managers.

When it comes to transparency and accountability, according to the guidance provided in the National Health Service and Community Care Act 1990, Chapter 19, part 1, NHS trusts are required to produce annual reports on an annual basis for presentation to the Secretary of State and have an Annual General Meeting to present their annual reports and audited accounts to the

public. The accounts should comply with Generally Accepted Accounting Practices (Clatworthy, Mellett and Peel, 2000; Hodges, Macniven and Mellett, 2004). To ensure uniformity in the reporting standards required in the annual reports, the annual reporting manual provides guidance for what disclosures are mandatory and which aspects are eligible for a comply or explain provision. With this, the trusts are easily held accountable by Parliament, the regulators, and the public. Accounting information in organisations gains its power from its institutionalisation as the most significant, authoritative and revealing avenue for providing visibility for an activity (Roberts, 1991). As the new NHS achieves greater freedom, new and enhanced accountability has to be enforced. The new approach to accountability is through openness on the quality of outcomes achieved for patients. Giving decision making authority to clinicians on service delivery will lead to better outcomes for patients. In this way, clinicians, and the organisations they work in will be held accountable by their patients, their peers, and the public (High Quality Care for All, 2008).

According to the NHS foundation trust annual reporting manual 2019/2020, referencing schedules A to E of the Corporate governance code, the NHS foundation trusts are required to make several disclosures in their annual report to meet the requirements of the Code of governance. The foundation trusts are required to disclose a clear statement detailing roles and responsibilities of the board of governors and how disagreements between the two parties are resolved. Disclosures are required of the composition of the board, nomination, audit and renumeration committees, and the number of meetings held in a year including individual attendance by directors. The board of governors should also be disclosed in addition to whom they represent and the duration of appointment. They are also required to disclose the board skills, expertise, and experience as well as the other commitments of the Chairperson. In addition, the board should disclose or explain why they have not disclosed matters concerning the adequacy of systems and processes for measuring the quality of healthcare delivery, their approach to clinical governance, and how the views of the governors and members are communicated to the board as a whole. They are also required to discuss their policy on diversity and inclusion used by the renumeration committee and how these policies are implemented and progress on achieving the policy objectives. The disclosures cover necessary parameters that contribute to a successful governance structure.

2.7 Conclusion

The National Health Service (NHS) is the nationally recognised institution for providing comprehensive healthcare services to the population of the UK. The institution has undergone

major transformations that have impacted the governance structures and accountability framework of the sub-organisations including trusts and foundation trusts, collectively known as healthcare providers under the NHS umbrella. Structurally, the reporting lines for the NHS trusts and foundation trusts differ where the trusts have accountability to the NHS Executive while the foundation trusts are accountable to the local community through the Board of governors. From the regulatory angle, overall responsibility lies with Monitor for health services in England. Monitor is responsible for assessing and authoring NHS trusts and foundation trust status. The independent body also oversees compliance of the foundation trusts with the conditions of the license. Meanwhile, the Care Quality Commission has the duty of registering all providers of health and social care in England and ensuring that they meet standards of quality and safety on a continuing basis (Governor's guide 2013).

Although the system has gone through several transformations, these changes were collectively aimed at improving the delivery of health care services to the patients and public, and ensure accountability for the use of taxes, which are the main source of financing. The reforms were also used to streamline priorities of the public health services in delivering on their objectives. Notwithstanding, the NHS continues to evolve as the system adapts to the changes in society that impact the healthcare needs of the evolving demography of the UK population.

Chapter 3 Literature Review

3.1 Introduction

The main aim of this chapter is to provide an synopsis of existing studies on the impact of corporate governance on firm performance (Afrifa and Tauringana, 2015; Abdulsamad, Yusoff and Lasyoud, 2018; Aggarwal, Jindal and Seth, 2019; Daniliuc, Li and Wee, 2020). In order to conduct a comprehensive review of the extant literature on corporate governance and performance of institutions, a systematic literature search is carried out to identify existing empirical evidence that fits within a set inclusion criteria to address specific research questions and hypothesis (Snyder, 2019). A number of related key words for corporate governance and performance were used to identify empirical studies published in various academic journals. Some studies focused on corporate governance and performance while other studies focused on a specific indicator of corporate governance. Therefore, the search words used included corporate governance, board of directors, board size, board independence, board composition, board expertise, board meetings, board diversity, women on boards, CEO gender, academic directors, multiple directorships, busy directors, CEO background, CEO education, board characteristics, physician or clinician participation or involvement, board structure and performance or firm value. The search was limited to 5 databases which included DelphiS, Web of Science, SAGE, Google Scholar and Jstor. The complete search while taking the 1st 500 articles from each of the above databases yielded 2,216 published and unpublished articles related to corporate governance and performance.

After initial screening of article titles and deleting duplicated papers, 538 papers were left to be screened against the pre-set eligibility criteria which considered the period of study (from 1996 to 2020) excluding articles in hospital settings for which all time periods were considered given the dearth of studies in the hospital context, population type (excluding financial institutions and service sectors), study design and language of the article. Only articles that investigated the relationship between corporate governance, its related mechanisms, indicators and the impact on performance were selected. Also, studies published in other languages besides English were excluded. Only articles that had empirical contributions to academic journals and books as well as relevant reports published by private and public journal were added to the final literature for review. The selected studies had to have a quantitative or qualitative design with a sample size greater than 50. The eligibility criteria did not limit the geographical scope of the studies therefore

all relevant studies from emerging or developing and developed countries were considered to achieve a broader perspective. The selected studies had to have a quantitative or qualitative design with a sample size greater than 50. Journal rankings were not taken into consideration because that would limit the study scope. After eliminating 397 articles from the articles identified for screening, the final database of studies for the literature review comprised of 141 articles. The review of the selected articles captured the study focus of the articles, firm type, governance indicators and measures of performance used. Performance measures were categorised as accounting measures, for example, ROA, ROE, Profit Margin, EPS and market-based measures such as Tobin's Q and Market to Book ratios. The most common non-financial performance measures in hospital settings included Quality ratings by the Care Quality Commission and mortality rates.

The existing literature on corporate governance are categorised in two main streams. Firstly, there is a stream of literature that focuses on internal corporate governance mechanisms depicted by the attributes of the board of directors (Assenga, Aly and Hussainey, 2018; Kagzi and Guha, 2018; Livnat *et al.*, 2021). The second stream of corporate governance literature uses the elements of external governance mechanisms which highlight the ownership and capital structure of firms (Gillan, 2006). Majority of studies identified have focused on internal governance mechanisms using the board of directors as the proxy for corporate governance. Although the thesis is limited to a public institution, this review of existing literature attempts to evaluate and summarise numerous empirical studies that explored the impact of the corporate governance indicators on performance of different types of firms in different countries across different time periods. The review is also aimed at identifying the gaps in the existing literature in order to provide fundamental empirical evidence to support the need for the current study. While there are numerous studies on corporate governance and performance, only those studies relevant to the current topic are explored. Restricting the literature review to only the relevant studies to this topic means that only a part of the extant empirical studies on corporate governance and performance are discussed herein.

This chapter is arranged as follows: Section 3.2 entails a discussion of the findings from relevant studies on the impact of the different corporate governance mechanisms on firm performance. Section 3.3 addresses the limitations of the existing studies and scope for future research. The chapter is summarised and concluded in Section 3.4.

3.2 Prior Studies

3.2.1 Board size

According to studies by Pearce and Zahra (1992) and Cheng (2008), board size is defined as the total number of directors on the board. Larmou and Vafeas (2010) studied the impact of board size on the performance of firms considered as poor performers between 1994 and 2000. They found that board size is positively related with firm value and annual stock returns. The findings indicate that when a small board size is being increased, the relationship with performance is positive, whereas when the size of the board grows beyond a certain level, the relationship becomes negative. The study further shows that the market responds favourably to increase in board size as opposed to a decrease in board size. In another study by Merendino and Melville (2019), the relationship between the board of directors and firm performance was explored using a sample of 65 listed Italian companies in the period from 2003 to 2015. It is found that a small board has a positive impact on performance while a large board negatively impacts performance. The results indicate that an optimal board size should be achieved to avoid problems associated with large boards that are detrimental to performance. Additionally, firm performance is adversely impacted when directors engage in external commitments and this is common especially with directors on large boards. Blank and Van Hulst (2011) examined the effects of the corporate governance structure on the efficiency of Dutch hospitals using the Data Envelopment Analysis (DEA) method with bootstrapping. Several measures of governance were measured including board size. Findings show that board size has a significant positive relationship with efficiency of Dutch hospitals. The study suggests that because the board and supervisory board make the decisions in an organisation, the governance quality has an effect on performance. The policy implication of the study is that monitoring governance, continuous search for best practices and stimulating governance structures contributes to improved performance.

Naseem *et al.* (2017) considered listed companies in Pakistan from 2009 to 2015 in their study of the impact of board attributes on financial performance. Regression results indicate a positive relationship between board size and the financial performance of firms. It is also noted that much as there are benefits that are realised from having large boards, they are principally dependent on firm resources. The study also suggests that the age and size of the firm determine the size of the board. Using a sample of Indian manufacturing companies, Arora and Sharma (2016) explored the impact of corporate governance on performance of 1,922 listed firms in India from 2001 to 2010. They found that larger boards are positively related with performance. The findings suggest that

large boards benefit from superior intellectual capacity which improves the decision-making process and subsequently improves performance. Additionally, large boards have higher access to various resources, in line with the resource dependence theory, and this in turn improves firm performance. Gaur, Bathula and Singh (2015) sampled 169 listed firms on the New Zealand stock exchange from 2004 to 2007 and found a positive relationship between board size and firm performance. It is also found that the firms benefit from the perks of large boards such as gaining access to a variety of resources, having different firm stakeholders on the board as well as reaping the benefits of enhanced resource and expertise from the qualified board members.

Using data from firms in Turkey between 1995 and 2006, Arslan, Karan and Eksi (2010) found that board size has a positive impact on both accounting and stock market performance of firms but a negative impact during a crisis period. The results suggest that the boards increase the efficacy of advisory to the firm through the wide range of experiences and knowledge of board members which boosts decision-making. Also, a reduction in managerial monitoring costs is realised as the board size increases. However, board size is detrimental to the firm in crisis period possibly due to the breakdown in communication which results in the costs of board size superseding its benefits. Furthermore, in a study conducted in Pakistani by Singh *et al.* (2018), using data collected from annual reports of all listed companies between 2005 and 2015, a positive relationship is found between board size and performance as measured using Tobin's Q. The findings provide evidence of the benefits of large boards such as better perspectives and improved decision making as a result of more discussions especially in crisis or expansionary phases. Basing on a study by Afriyie *et al.* (2020) on 125 hospitals in Ghana for the period 2010 to 2017, board size is found to have a negative relationship with financial performance of hospitals as measured by ROA and net profit margin. This is as a result of reduced board cohesiveness, poor coordination and decision-making challenges that are associated with larger boards as organising meetings and reaching agreement on decisions takes longer. This thus results in inefficient and slower administration.

In an investigation on the relationship between board structure and performance, Berezinets, Ilina and Cherkasskaya (2017) employed a sample of 207 public companies in Russia from 2007 to 2011. They provide evidence for a non-lineal relationship where smaller and large sized boards have a positive relationship with firm performance. It can be surmised from the study that the efficiency of monitoring, control and resolving free rider problems is more superior in smaller boards, while larger boards are beneficial for their resource dependence role of accessibility to valuable resources, as well as social and relationship capital. More so, it is suggested that larger firms need large boards to enhance monitoring and control, as well as decision making

accessibility to resources in order to boost shareholder benefit. Additionally, using regression models to analyse a balanced data set from 90 listed Colombian firms in 2008 to 2014, Gómez, Cortés and Betancourt (2017) found that board size and firm profitability have a non-lineal relationship, where an increase in board members results in positive results until a certain point where the results become reversed. The optimal board size is found to be between 6 and 10 members. Appointing more directors to boards brings benefits of improved supervision, counselling, governance, and economic results. Nevertheless, beyond a proposed limit of 10 members, the problems of coordination, communication, control, and decision-making outweigh the benefits.

Data was collected on 30 listed firms in Malaysia by Jakpar, Tinggi, and Hui (2019) for the period 2011 to 2015 to analyse the relationship between board characteristics and firm performance. Empirical results highlight a negative relationship between board size and financial performance of firms. Using a sample of 2,746 UK listed firms from 1981 to 2002, Guest (2009) found that board size negatively impacts firm performance. This negative impact is attributed to the problems faced by large boards such as poor communication and decision-making which have adverse effects on performance. The results also propose an optimal board size of less than 10 members. The negative relationship between board size and performance is in line with results from studies by Huther (1997), Eisenberg, Sundgren and Wells (1998), De Andres, Azofra and Lopez (2005), Mak and Kusnadi (2005), O'Connell and Cramer (2010), Ujunwa (2012) and Aswathy Mohan and Chandramohan (2018). Similarly, Dang *et al.* (2018) explored the impact of corporate governance structures on firm performance as measured by ROA. Using a sample of 478 non-financial companies listed in Vietnam, no relationship is found between board size and performance (Kaymak and Bektas, 2008; Assenga, Aly and Hussainey, 2018). Using non-financial firms listed in Thailand from 2001 to 2014, Detthamrong, Chancharat and Vithessonthi (2017) found that the size of the board does not affect performance. In both the American and European context, Augusto, Pascoal, and Reis (2019) analysed the relationship between board size and performance and produced mixed results. The sample used for this analysis comprised of 858 American and 560 European firms in 2016. The information was collected from Datastream. ROA and Tobin's Q were the measures of performance used while the governance indicator in focus was board size. A systematic influence of board size on ROA was found for firms in Europe but not in America.

3.2.2 Board independence

Pearce and Zahra (1992) defined board independence as a part of overall board composition where directors are classified as insiders and outsiders. They suggest that inside directors are current members of top management team and employees of the company or its subsidiaries while outside directors have no existing relationship with the company and are recruited for their expertise, accolades and skills. Cheng (2008) further states that independent directors are the directors who are not employees, former executives or related to current corporate executive of the company and have no substantial business relations with the company either on personal or business contacts. Pearce and Zahra (1992) found evidence that the environment, corporate strategy, and past performance determine board composition. They note that the efforts of firms to safeguard corporate survival through reducing environmental uncertainty, meeting corporate strategy requirements, and reversing poor financial performance is observed in the proportion of outside directors on the board. In addition, Gómez, Cortés and Betancourt (2017) suggest that board independence is recognised for its contribution towards enhancing board effectiveness. Also, Afriyie et al. (2020) found in a study on 125 hospitals in Ghana from 2010 to 2017 that board independence positively impacts financial performance of hospitals as measured by ROA and net profit margin.

Reguera-Alvarado and Bravo (2017) used data from 694 listed firms on the New York Stock Exchange from 2008 to 2012. They found that the independence of the board has a positive impact on performance, although this only exists under certain values of the director's tenure and external directorships. The positive result is construed to be influenced by the increased pressure and responsibilities that the recent Sarbanes Oxley regulations subject the directors to, compelling them to increase their engagement with the firms. In addition, using an unbalanced panel of listed firms in Taiwan from 1997 to 2015, Kao, Hodgkinson and Jaafar (2019) found that a higher proportion of independent directors has a positive effect on the firm's performance. The result implies that the significance of the monitoring role undertaken by the independent directors is more substantial in markets with weaker corporate governance mechanisms such as in Taiwan. Furthermore, according to Zubaidah, Nurmala and Kamaruzaman (2009), board composition has a positive impact on firm performance of 75 listed companies in Malaysia. The diverse background, attributes, characteristics, and expertise that the independent directors are perceived to possess improve their decision-making abilities, thus improving firm performance. Similarly, Bonn (2004) undertook an empirical study on the influence of board structure on performance of firms in Australia. The empirical results indicate that the ratio of outsiders have a

positive relationship with performance, implying that board independence is a significant indicator of a firm's efficiency levels and also plays a pivotal role in enhancing performance. The positive impact of board independence on firm performance is consistent with previous studies by Weisbach (1988), Barnhart, Marr and Rosenstein (1994) and Rwakihembo, Kamukama and Nsambu Kijjambu (2020).

Basing on a sample of top listed companies in India in 2006, Jackling and Johl (2009) found that greater proportion of outside directors on the board is positively related with firm performance. However, it is noted that the relationship between board independence and performance is weaker in the context of Indian companies when compared to prior studies due to the possibility that the outside directors in India are not fully independent as a result of strong family ownership ties. In addition, concerns are raised about the independence of the outside directors as it is perceived that they are working for those who appointed them to the board, an observation unique to emerging economies. Vintilă and Gherghina (2013) also attributed the negative impact of outside directors on performance on their lack of independence whereby the CEO is involved in the nomination process of these directors. This lack of independence impacts their efficacy in carrying out the monitoring role. In addition, the entrenchment of management is also cited as a factor that impacts the contribution of outside directors to performance. Using a sample of 135 non-financial listed firms in Bangladesh from 2006 to 2011, Rashid (2018) conducted a study to explore the relationship between board independence and firm performance. The results of the study show a negative relationship between board independence and firm performance as measured by ROA and Tobin's Q. This negative effect on financial performance contests the application of similar corporate governance practices adopted in developed and developing countries. Consideration has to be made for the underlying institutional differences when adopting the wide-ranging 'one size fits all' corporate governance practices in order to achieve the desired result.

Other studies argue that the negative impact of board independence on firm performance is as a result of the lack of firm-specific knowledge on operational firm activities which subsequently undermines the contribution of the outside directors on the boards they serve (Zhou, Owusu-Ansah and Maggina, 2018). Moreover, Arosa, Iturralde and Maseda (2013) argue that firms with a higher proportion of inside directors perform better as they are perceived to have greater firm knowledge and a substantive positive impact on strategic planning decisions. This shows that inside directors are accorded more trust than the outside directors. Farhan, Obaid and Azlan (2017) also found that board independence is negatively related to firm performance and

attributed this result to the lack of motivation and the multiple directorships held by the outside directors combined with the weak financial markets that limit the monitoring of the director's actions by the shareholders. Yasser, Mamun, and Rodrigs (2017) suggests that the independent directors having no supervisory role on the board especially given the one-tier board structures in Pakistan as well as there being no legislation requiring these directors to have a certain level of qualification and expertise results in the negative impact on performance. The appointed independent directors may therefore lack the competence to carry out their director roles. Also, information asymmetry plays a big role in the contribution of independent directors as they lack both information and support from inside directors to effectively perform their directorial duties. Furthermore, Mangena, Tauringana and Chamisa (2012) attributed the negative relationship between board independence and firm performance to the mechanisms adopted to effectively manage firms in a crisis period such as reduction in monitoring and empowering executive directors especially in the post-presidential election period. Horváth and Spirollari (2012) also found that independent directors worsen firm performance, and this is particularly observed during a crisis period. This is possibly due to the reduced efficacy of the monitoring role of the independent directors as they become less dependent on the CEO. In addition, their preference for conservative business strategies that protect shareholder interests at the cost of firm performance is also criticised. This negative relationship is consistent with prior studies such as Agrawal and Knoeber (1996), Yermack (1996), Klein (2002), Judge, Naoumova and Koutzevol (2003), Erickson et al. (2005), Christensen, Kent and Stewart (2010), Shukeri, Shin and Shaari (2012), Emile, Ragab and Kyaw (2014) and Malagila et al. (2021).

Assenga, Aly and Hussainey (2018) conducted a study in the context of selected listed firms in Tanzania from 2006 to 2013 and found that outside directors exert an insignificant impact on performance. This insignificant result is in line with arguments of the interviewed subjects that the outside directors are neither independent nor competent. The non-transparent appointment process for some of these outside directors causes them to lose their independence, subsequently, undermining their contribution to performance. Likewise, in a study on the effect of board composition on financial performance of listed firms in South Africa from 2006 to 2012, Muchemwa, Padia, and Callaghan (2016) found that proportion of non-executive directors has no significant association with Tobin's Q and ROA. The findings contradict the predictions of both agency and resource dependence theories which assume that board composition can be positively related to firm performance. The plausible explanations for this result include the lack of independence of the outside directors, insufficient firm-specific knowledge about the business operations, well known but busy directors with limited experience, loss of valuable knowledge

through frequent change of outside directors and their non-participation in appropriate board committees. Similarly, Srivastava (2015) examined the effect that board structure has on the performance of 164 non-financial listed firms in India from 2008 to 2009, a period of financial crisis in India. It is found that outside directors have no significant impact on financial performance of firms during the crisis period while the grey directors reveal a significant negative impact on financial performance. The lack of elaborate firm participation, and insight into company operations by the grey and outside directors impacts their contribution to performance. Conversely, the inside directors are found to significantly impact financial performance of firms during crisis period given that they are a vital source of information and thus speed up the decision-making process at the board level. Other studies by Hermalin and Weisbach (1991), Klein (1998), Vafeas and Theodorou (1998); Laing and Weir (1999), Bhagat and Black (2002), Haniffa and Hudaib (2006), Ponnu and Karthigeyan (2010), Fuzi, Halim and Julizaerma, (2016), Allam (2018) and Wang *et al.* (2019) also found board independence to have no impact on performance of firms.

3.2.3 Board expertise

Harris (2014) describes board expertise as the directors who are employed and are familiar with the firm's industry making them better able to monitor the obstacles and governance weaknesses that the firm might encounter. There is a widespread assumption that participation of clinicians in governance and management would be beneficial for the efficiency and effectiveness of healthcare organisations (Sarto and Veronesi, 2016). This deduction comes from the review of 19 quantitative empirical studies on the impact of clinician involvement on healthcare performance outcomes within the acute hospital sector. The findings support the assumption of the positive impact of clinical leadership on the different outcome measures, with only a few studies reporting a negative influence of clinician participation in governance and management roles on financial and social performance. Veronesi, Kirkpatrick and Vallascas (2013) focused their study on exploring the impact of clinicians on the boards on hospital performance measured by the quality-of-service rating. The study was conducted on English NHS hospitals over a 3-year period. It is found that despite the limited progress in enlisting clinicians on boards, the impact of their contribution is considerable whereby increasing clinicians on the board by 10% has a substantial impact on hospital level outputs and outcomes. The results indicate that the involvement of clinicians on the board has a positive influence on the performance of hospitals. The result is attributed to better understanding, credibility, and communication. Involving clinicians on the board enhances strategic decision making and innovations in service design given their vantage

point of having requisite information. Additionally, the clinicians are in a favourable position for influencing their colleagues to accept new policies thus easing implementation. The clinicians on the board are also essential for improving communication and engagement with the wider team thus enhancing teamwork. Furthermore, using a sample of 240 trusts in the English NHS from 2006 to 2009, Veronesi, Kirkpatrick and Vallascas (2014) found that the quality of financial resource management and clinical involvement on boards as a measure of governance were positively related. Despite the low representation of clinicians on boards, their participation and specifically doctors in board activities was found to have a positive impact on the financial performance of the hospitals. The improved financial performance is as a result of the specialist clinical expertise, knowledge, and political capital that clinicians employ in the strategic decision-making process. More so, prior studies associate clinicians with costs of opportunism and mismatch between medical and financial knowledge, but these appear to be overshadowed by the benefits that ensue from co-opting them to the board.

Using regression analysis, Bai and Krishnan (2015) found that clinician participation in hospital governance has a positive impact on quality of care. This result was based on an investigation of non-profit hospitals in California from 2004 to 2008. The study results provide evidence that a decline of 3 to 5% in 3 out of 4 measures of quality of care was observed in hospitals that had no clinicians on the board. The clinicians are valuable to hospitals because of their emphasis on care quality and efficacy in oversight of quality using their medical expertise, clinical training and experience. Additionally, Molinari *et al.* (1993) used a cross-sectional study to investigate the relationship between board composition and hospital financial viability. They used data from the California Health Facilities Commission financial disclosure data set and the American Hospital Association survey for 1985 which was distributed to hospital CEOs of short-term general hospitals. Profitability, liquidity, capital structure, capital intensity, and occupancy were employed as measures of hospital financial performance. They found that expert board members are pivotal for effective governance activities. The empirical findings suggest that hospital boards should include medical staff and a hospital CEO as they are significantly related with improved financial performance of hospitals. Insiders on the board are valuable for their knowledge, expertise, information, enhanced medical staff support and compliance with board policies which collectively improve hospital performance. Notably, the benefits of insider participation overshadow the costs of potential opportunism which are suggested to be caused by the manipulation of insider information to favour their own interests. Prybil (2006) also used 49 private, non-profit general hospitals in the US between 1999 and 2003 and found that clinician involvement was crucial as they had a positive relationship with the high performing hospitals.

Particularly, they point out that the deliberations and decision-making capabilities of highly experienced and respectable nurses would greatly benefit the boards especially on matters of patient care quality and costs. In addition, Molinari *et al.* (1995) also found that boards that had inside clinicians had significantly better performance than those that have no clinicians on the boards. The results indicate that the commitment and compliance with hospital policies is further enhanced by involving medical staff on the board rather than by financial exchanges. This enhanced commitment and compliance to policies boosts performance as costs are reduced and quality assurance standards are adhered to.

In a study by Goes and Zhan (1995) that used secondary data over a 10-year period on approximately 300 short term acute US hospitals, it is found that clinician involvement on the board has a greater influence on health outcomes. Hospital performance was measured using three parameters of operational profitability, occupancy, and costs. The results reveal that clinician participation on boards is related to higher operating margins and occupancy rates but not cost reduction. This result implies that the clinicians on the board contribute to reducing agency costs and increasing operating margins through aligning hospital and clinician goals. Also, involvement of clinicians on the board has a greater influence on the patterns of admitting patients, shown by an increase in occupancy rates and not on cost reduction as the clinicians use expensive practices, technologies or procedures. Using data on California hospitals for the period 2000 to 2005, Bai (2013) found support for appointing clinicians on the boards of for-profit hospitals but found that clinicians on the boards of non-profit hospitals had no significant relationship with social performance. The results indicate that clinician representation has a different effect on social performance basing on the ownership structure and hospital objectives.

Succi and Alexander (1999) gathered data from a survey conducted on hospital-physician relationships in short-term acute care US hospitals in 1993 and found that the involvement of clinicians in management and governance results in hospital inefficiencies. This is in line with prior studies that indicate that clinician involvement results in higher hospital costs and lower operating margins. This association is as a result of the conflicts between hospitals and clinicians which leads to a divergence in their interests. Similarly, in a study based on 3,037 general community hospitals in the US, Alexander and Morrisey (1988) gathered data from the 1982 American Hospital Association survey and found that clinician involvement in hospital management adversely affects hospital costs. The results suggest that the main priority of clinicians is to treat patients using the requisite capital equipment to facilitate treatment and care. Moreover, combining the professional and managerial norms and objectives into close

integrative structures may result in increased tensions with the hospital, subsequently reducing the efficacy of hospitals observed by the increase in costs incurred. Abor (2015) also found that clinician participation on the board is found to have a negative impact on hospital occupancy rates of hospitals in Ghana. The study argues that although clinician participation improves hospital efficiency, it comes at a cost because they are associated with high expenses.

In a study exploring the relationship between management involvement on the board of directors and hospital financial performance, Collum *et al.* (2014) used a sample of 637 not-for-profit hospitals in the US in 2011. Results of the regression analysis show a negative relationship between management involvement on the board of directors and financial performance of hospitals as measured by total margin, operating margin and ROA. This is because involving management on the board weakens the board's ability to effectively perform their monitoring role over manager actions. Also, the board begins making opportunistic decisions that benefit them instead of the stakeholders of the hospital which ultimately affects financial performance. Nonetheless, Goodall (2011) found no empirical evidence to support the notion that clinician leaders outperform non-clinician leaders in a study that used data from 50 of the top U.S hospitals in 2009 as identified by their hospital rankings of quality. However, the findings show a strong positive relationship between top ranked hospitals and clinicians in the CEO position. Van Ness, Miesing and Kang (2010) used a sample of 200 randomly selected S&P500 firms in 2007 for their study and found that the board expertise has a significant impact on financial performance of firms whereby the percentage of directors with finance expertise on the board has a negative impact on growth of revenues. The probable explanation is that the finance expert directors are more analytical and more sensitive to risks borne by the shareholders. This makes them more conservative in their approach to entrepreneurial initiatives resulting in reduced opportunities for revenue growth.

3.2.4 Board meetings

As suggested by Vafeas (1999), board activity is a value-relevant board attribute that is measured by the frequency of board meetings. He argues that directors who meet frequently are likely to perform their duties effectively in accordance with shareholder interests while critics argue that the frequent meetings with outside directors do not necessarily entail meaningful discussions amongst themselves or with management. Puni and Anlesinya (2020) found that having frequent board meetings has a positive impact on financial performance of listed firms in Ghana from 2006 to 2018. They suggest that the meetings give the board of directors an opportunity to mitigate

conflicts of interests and agency costs thus the benefits of frequent meetings outweigh the related costs such as managerial time and travel expenses. Furthermore, Freihat, Farhan and Shanikat (2019) demonstrate that board meetings have a significant positive relationship with financial performance measured by Tobin's Q. The study was conducted using a sample of listed firms in Jordan from 2011 to 2014. The results suggest that boards that meet frequently have an active monitoring role which subsequently motivates the managers to increase their efforts in driving benefits for the investors and improving firm performance. Findings from a study by Afriyie *et al.* (2020) and Arora and Sharma (2016) also provide supporting evidence that board meetings have a positive impact on performance.

Meanwhile, Ntim and Osei (2011) found evidence of a significant positive relationship between board meetings and performance of 169 listed firms in South Africa. Using data from 2002 to 2007, they provided evidence that supports the agency theory which argues that frequent meetings increase capacity of corporate boards to perform their advisory and monitoring roles effectively thus subsequently enhancing financial performance of firms. Findings from a study by Mishra and Kapil (2018) also indicate that board meetings are positively related with market-based performance measures suggesting that the increased frequency of meetings sends a positive market signal which boosts firm value. Furthermore, Brick and Chidambaran (2010) also found that increased board activity positively impacts firm value measured by Tobin's Q. This result reveals that monitoring by the entire board increases firm value, although the results indicate that ROA is not impacted by board monitoring. This finding indicates that the efficacy of board monitoring is more elaborate in identifying investment opportunities rather than in boosting operating performance. In addition, evidence that prior performance and corporate events such as acquisitions, mergers or restatement of financial statements act as determinants for increased board activity. Additionally, pressure from regulations, particularly, the Sarbanes-Oxley Act which was enacted in 2002 drives board activity. Several other studies by García-Ramos and García-Olalla (2011), Abor (2015) and Naimah and Hamidah (2017) also reveal a positive relationship between board meetings and firm performance.

On the other hand, results from a study by Alsartawi (2019) reveal a negative relationship between board meetings and financial performance of 46 listed Islamic banks in Gulf Cooperation Council from 2013 to 2016. The negative relationship is attributed to the increased costs of strict monitoring adopted by the banks through frequent meetings. Likewise, Culica and Prezio (2009) gathered data from the American Hospital Association annual survey from 2003 to 2005 and found that the marginal profit realised by boards that met less than 6 times a year are higher than

that of boards that met 12 times per year. The results suggest that board meetings should be less frequent to allow for adequate time in between meetings for the build-up of performance indicators for discussion and preparation of detailed and informative reports. Also, adequate time in between meetings gives the directors an opportunity to prepare sufficiently for meetings. Abdulsamad, Yusoff and Lasyoud (2018) used a population of 341 listed companies in Malaysia from 2003 to 2013 in their study. From their results, it is revealed that frequent board meetings have a weak negative impact on financial performance of firms. The results contradict the notion that performance of directors is enhanced by having frequent meetings. Instead, they argue that board meetings should only be convened when there is a vital issue relating to financial performance that needs to be discussed. Rodriguez-Fernandez, Fernandez-Alonso and Rodriguez-Rodriguez (2014) found that board meetings have a negative impact on financial performance of listed Spanish firms in 2009. They suggest that frequent meetings by the board do not necessarily boost firm profitability probably because of the high costs incurred in organising frequent meetings that have no associated benefits. This negative result is supported by findings by Ullah and Kamal (2020).

Using ROA and Tobin's Q to measure performance, Makhlouf *et al.* (2017) found evidence of a mixed relationship between board meetings and financial performance of 120 non-financial listed firms in Jordan from 2009 to 2013. It is found that board meetings and ROA are positively related while board meetings and Tobin's Q have a negative relationship. The positive relationship is suggested to be backed by the arguments of the agency theory where enhanced monitoring of management and heightened characteristics of board of directors influence positive performance. Meanwhile the increased costs related to frequent meetings are among the plausible reasons suggested for negative firm performance. Interestingly, investigating the impact of corporate governance practices on the financial performance of 372 Fortune Global companies from 2005 to 2012, Malik and Makhdoom (2016) suggest that an inverse relationship exists between board meetings and financial performance. They back it up with the argument that the frequency of board meetings was observed to increase between 2007 and 2009, the period when the global financial crisis was at its peak in the USA. This reveals that increased board meetings are reflective of the crisis periods faced by firms. More so, Vafeas (1999) found that board meeting frequency has an inverse relationship with firm value. He argues that the meeting frequencies increase following years of poor performance and this effectively improves firm performance in the

subsequent years. Vafeas (1999) suggests that the boards increase frequency of meetings as a response mechanism to tough years of operation.

3.2.5 Board diversity

According to Carter, Simkins and Simpson (2003), gender, racial and cultural board composition are vital governance issues faced by management, board of directors and shareholders of a modern corporation. Board diversity is defined as the percentage of women or minorities on the board of directors (Carter, Simkins and Simpson, 2003) or variety in board composition (Kang, Cheng and Gray, 2007). Duppati *et al.* (2020) explored the relationship between gender diversity and financial performance of non-financial listed companies in Singapore and India between 2005 and 2015 and found a positive and significant relationship. The results show that female directors on the boards improve market perception of the companies thus enhancing shareholder value especially when they are professional directors who have no family relation with the male directors as this mitigates any effects of tokenism. Examining the influence of board diversity on performance, Scholtz and Kieviet (2018) used a sample of 315 South African listed companies for the period 2013 to 2015 and found that board gender diversity has a positive relationship with performance. In line with prior studies, this finding is qualified by the benefits that female directors bring to the board such as a knowledge base, creativity, advanced competitive advantage and their cautionary nature when making decisions results in increased firm value. The findings from a study by Moreno-Gómez, Lafuente, and Vaillant (2018) show a positive association between gender diversity and subsequent business performance. Gender diversity brings benefits of enhanced knowledge-intensive strategy and decision making, which outweigh the perceived costs of diversity. These benefits can only be realised with an organisational structure which enables the use of gender diverse human capital and different perspectives of the female management styles which creates value for the business. Other studies such as Erhardt, Werbel and Shrader (2003), Smith, Smith and Verner (2006) and Campbell and Mínguez-Vera (2008) provided empirical evidence to support the positive relationship.

In studying the relationship between firm performance and gender diversity in the boardroom, the results by Conyon and He (2017) indicate a positive relationship for 3,000 publicly traded US firms from 2007 to 2014. They find that female directors have a significantly larger positive impact in high performing firms relative to low performing firms. The reduced efficacy of low performing firms in utilising and capitalising on the human and social capital associated with female directors and their minimal ability to attract highly qualified female directors impacts their contribution to

firm performance. Furthermore, Green and Homroy (2018) found that female representation on the board and on board committees has a positive impact on performance based on a sample of Euro Top 100 firms for the period 2004 to 2015. The findings support the notion that the benefits of female directors are realised when they are integrated into the governance mechanism. In a study by Gyapong, Monem and Hu (2016) using a sample of 245 listed firms in South Africa between 2008 and 2013, it is found that board gender diversity has a positive significant impact on firm value especially when 3 or more females are on the board. This finding is supportive of the predictions of token status and critical mass theory. The positive result is accredited to the weaker external corporate regulatory environment predominantly observed in developing countries that calls for enhanced monitoring by all firms. Female directors on boards was also found by Terjesen, Couto and Francisco (2016) to have a positive influence on firm performance. Additionally, results reveal that gender diversity enhances board independence and efficacy, positively influences financial performance of firms and sends a positive signal concerning a firm's ethical behaviour and board efficacy to the public. Other studies by Bennouri *et al*. (2018) found that female directors have a positive relationship with ROA and ROE but not with Tobin's Q. Meanwhile Li and Chen (2018) found that board gender diversity has a positive impact on Tobin's Q if and only when the value of the firm size is less than some critical value. Aggarwal, Jindal and Seth (2019) also suggests a positive association between board gender diversity and financial performance measured using Tobin's Q. From the resource dependence and agency perspectives, gender diversity increases the likelihood for superior advisory and monitoring capabilities which positively influences performance of firms. However, Joecks, Pull, and Vetter (2013) makes a suggestion based on annual reports of 151 German listed companies from 2000 to 2005 that when a board reaches critical mass of 30% or more of female board representation, gender diversity will have a greater positive impact on performance compared to male-dominated boards. However, also boards with 10% and more female representation will have a positive impact on performance. It is therefore suggested that contrary to tokenism on boards, a critical mass should be reached in order to realise benefits of a more diverse board. On the other hand, Mahadeo, Soobaroyen and Hanuman (2012) highlight that the representation of females on boards is relatively low in Mauritius, attributed to the underlying effects of tokenism in female director appointments. Nonetheless, they found a positive relationship between board gender diversity and firm performance which they ascribed to the effects of symbolism being sufficient enough to influence a change in board level perspectives thus effectively improving performance. Dezsö and Ross (2012) found that firm performance is improved when females are represented in top management, especially for firms focused on innovation. They argue that females in top

management of the S&P1500 firms investigated over 15 years bring benefits of information and social diversity which subsequently improves managerial behaviours and motivates women in middle management. This results in an improvement in performance of managerial tasks and overall firm performance. Hafsi and Turgut (2013) studied the effect of boardroom diversity on social performance and found a significant relationship between diversity in boards and social performance moderated by diversity of boards is found. In particular, gender has a significant effect on corporate social performance. However, diversity is more responsive to agency theory arguments where female directors are vital for controlling manager discretion effectively minimising agency costs and indirectly influencing performance. shows a positive relationship between nationality and educational diversity on the board and the corporate social performance of 874 firms in the US studied from 2000 to 2013. In addition, Lückerath-Rovers (2013), Peni (2014), Low, Roberts and Whiting (2015), Darko, Aribi and Uzonwanne (2016), Kılıç and Kuzey (2016), Berezinets, Ilina and Cherkasskaya (2017), Delis *et al.* (2017), McGuire and Taylor (2017), Harjoto, Laksmana and Yang (2019) and Ullah and Kamal (2020) all find evidence of a positive relationship between board gender diversity and firm performance.

Using a database of all listed firms in Taiwan, Wang (2020) found that increased board gender diversity has a negative effect on financial and governance performance. The proportion of female directors with a high educational background and seniority has a negative influence on financial and governance performance, but the ratio of female independent directors is found to have a significant positive association with a firm's performance. The results support the arguments of the agency theory that only female directors with greater independence have the ability to effectively carry out their monitoring duties and influence positive performance. However, in a study by Malagila *et al.* (2021), it is revealed that board gender diversity has a negative impact on non-financial performance of football clubs in the UK. This relationship is attributed to the effects of tokenism where women are appointed to meet social pressures and may be unable to challenge pressure from other directors or mentor effectively. Results from a study by Kweh *et al.* (2019) depict the impact of board gender diversity on firm performance as negative. The result is attributed to the inability of the female directors to transfer their expertise, knowledge, skills or influences to the maximisation of shareholder wealth. Also, Ahmad *et al.* (2019) found a negative correlation between women directors on the board and performance. Although, they suggest that the academic background of women directors on the board adds value towards generating better firm performance. The results demonstrate that quality rather than number of the female directors is vital for improving firm performance. They also suggest that board gender diversity should not be enforced just to meet gender quotas set by the

government, but qualified and experienced female directors should be appointed to the boards in order to impact performance. Other studies that reported a negative relationship between gender diversity and performance include Ujunwa (2012). Siciliano (1996) found mixed evidence of a significant positive impact on social performance and a negative impact on level of donations. The negative impact is ascribed to the limited access that women might have to economic, social, and political resources that affects their ability to fundraise substantial resources. These results are in the context of 240 YMCA non-profit organisations in the US.

Adams and Ferreira (2009) explored the impact that women in the board room have on governance and performance of S&P firms from 1996 to 2003 and found an unclear relationship. Nevertheless, the involvement of women in firms with weak governance structures has a positive impact on performance given that women have a greater ability to resist takeovers. Several arguments are put forth in this study. Firstly, the meeting attendance by female directors is better than that of their male counterparts. Female directors also have a higher likelihood to join monitoring committees than the male directors meaning monitoring effort is higher in gender-diverse boards. Also, equity-based compensation is more prevalent in firms with more gender-diverse boards. Essentially, these results demonstrate that gender-diverse boards are perceived to be tougher monitors. However, because over monitoring is generally associated with a decrease in firm value, the value addition of gender-diverse boards is nullified, except for firms with weaker governance measured by their ability to resist takeovers. Similarly, Rose (2007) found that gender diversity has no influence on firm performance. The explanation provided for this result is that female board members adapt to the traditional 'old boys club' by taking on the conventional behaviours and norms of male directors while suppressing their own inherent features. This might be the only way through which the female directors are perceived as qualified by the decision makers for high societal positions. This assimilation diminishes any positive gains that female representation might have and their contribution to performance is not realised. Similar to Marinova, Plantenga and Remery (2016), Carter *et al.* (2010) also found no relationship between gender diversity and performance and argued that the benefits of females on boards such as innovation and creativity are invalidated by group conflict. Their study was also based on S&P firms from 1998 to 2002. Wagana and Nzulwa (2016) reviewed existing literature and found evidence of a relationship between board gender diversity and financial performance, with majority of studies focused on the financial performance and not on non-financial performance of firms.

3.2.6 CEO tenure

Tejerina-Gaite and Fernández-Temprano (2020) explored a sample of 87 non-financial Spanish firms from 2005 to 2015 and found that long tenure has a positive impact on financial performance of firms. Directors with long tenures are able to perform their role efficiently because of the knowledge gained over the years about the firm. However, long tenured boards tend to become more conformist, and their independence diminishes. This is because there is an overall increase in their firm-specific knowledge which in turn diminishes any chances of a potential decrease in their independence thus enabling them to perform their role effectively. For the outsiders, their ability to carry out supervisory tasks and expertise improves with longer tenures, which is not the case for executive directors where the effect of board tenure is nullified. The results are null of evidence that the rigidity to change and implement new ideas increases with longer tenures. In a study by Livnat *et al.* (2016), longer board tenure has a positive impact on future stock returns and future firm value with the impact reversing after about nine years on average given that monitoring and advisory declines after sometime. The negative effect of tenure is stronger for high growth firms, consistent with the deterioration of the board members' ability to perform their advisory functions. The finding suggests that although board tenure has positive effects on firm value, it becomes a drag on firm valuation after a certain point. Van Ness, Miesing and Kang (2010) also found evidence of a positive relationship between board tenure and performance as measured by ROA. They argue that longer tenure enhances the directors' understanding of firm processes, routine and strategy while also improving their familiarity with their roles and responsibilities. The long tenured directors are then able to make better decisions on maximising firm assets for increased returns. Additionally, it is found that diverse tenures positively influence a firm's free cash flow. This is because longer tenures allow an elaborate collection of ideas that may lead to delayed action on particular capital investments while maximising operating funds to improve returns.

Basing on a sample of listed small and medium-sized enterprises in the UK, Afrifa and Tauringana (2015) found that CEO tenure has a significant positive impact on performance of the SMEs. This is credited to the firm specific knowledge accumulated by long tenured CEOs that culminates into better performance. Chen, Zhou, and Zhu (2019) found that CSR performance of the firm is significantly higher in the early years of a CEO's tenure compared to later. They also found that the CSR performance tends to be stronger in relation to CEO tenure when the board is more independent, and the CEOs have a longer expected employment period. This suggests that the

CEOs use CSR performance to mitigate career concerns, send a signal of their capabilities and reap the benefits by investing more in the starting years of their tenure.

Meanwhile, using a sample of S&P 1500 firms in the United States, Huang and Hilary (2018) show evidence of an inverted U-shaped relationship between average board tenure and firm performance, which is also the case of the relationship between board tenure and a firm's M&A performance. The result reflects the marginal effect of board learning which dominates the effects of entrenchment for short tenured boards and for the long tenured boards, the learning effect is dominated by the entrenchment effect. Kagzi and Guha (2018) found that tenure has no significant impact on performance because the ability of board members to take the lead in decision-making is undermined rendering them followers instead. On one hand, the close proximity of long tenured directors to other managers causes them to avoid controversy by agreeing with the managers while on the other hand, the directors with short tenures are too diffident to voice their opinions. Additionally, CEOs with a long tenure are also found by Kaur and Singh (2019) to have a negative effect on performance of firms in India. This is because the long tenured CEOs are traditional and prefer to preserve existing practices. Long tenures lead to entrenchment as the CEOs develop personal relationships with board members which impacts their evaluation of the CEO to the extent that poor performance is tolerated. Furthermore, Ahmadi, Nakaa, and Bouri (2018) found that CEO tenure has a significant negative effect on firm performance. They suggest that short tenures enhance functional efficacy and monitoring capacity of the board of directors because short tenures allow the variation of different perspectives and attitudes in different situations. However, Vafeas (2003) found inconclusive results of the impact of tenure on financial performance of the selected 483 listed firms on the 1994 Forbes list. Nonetheless, it is observed that longer board tenures are related to increased participation on committees and board directorships compared to early on in the director tenures. Increased tenures are found to have no association with interlocking directorships or consulting agreements. This means that directors with external engagements have longer tenures thus impacting their monitoring capabilities. In addition to the above, Culica and Prezio (2009) in their investigation of the role of governance in financial performance of hospitals, found among other results that limitless board tenure has no association with hospital financial performance. It is therefore recommended that the directors should hold non-tenured directorships, but the number of terms served should have a limit.

3.2.7 CEO gender

Khan and Vieito (2013) explored the relationship between CEO gender and firm performance and found that female-led firms report an improvement in performance compared to firms led by male CEOs. The results also reveal that female-led firms have a smaller risk level compared to firms led by male CEOs. Notably, the differences in risk taking are not considered when designing compensation packages for female or male CEOs possibly to induce female CEOs to take risks. Using ROA and Tobin's Q as the measures of financial performance, Peni (2014) found that female CEOs or chairs have a positive relationship with firm performance. These results are supported by the prevailing gender-based differences reported in psychology and management literature on issues such as risk-aversion, decision making and over confidence. Ullah, Fang and Jebran (2019) also found that female directors and CEOs enhance firm value driven by the female CEO's ability to reduce managerial opportunism which subsequently increases firm value. Dezső and Ross (2008) conducted a study on the impact of female participation in top management on performance of firms and failed to find evidence of a positive relationship between a female CEO and financial performance. Although they found that the management style of females enhances teamwork and innovation which subsequently improves firm performance, this strategy is nullified by the leadership attributes of the CEO position.

In a study by Jadiyappa *et al.* (2019), female CEOs are found to exert a negative impact on financial performance of firms in India over the period 1999 to 2015. The study used the theories of social capital and tokenism combined with the consequences of the low social status of females in India to justify the negative relationship. The results suggest that female leadership is significantly influenced by the social status of women in the Indian society. Secondly, the negative effect is attributed to the significantly higher levels of agency costs that are associated with female CEOs compared to their male counterparts. The increased agency costs can be partly explained by the substandard financial and investment decisions made by female CEOs as well as the drawbacks that they face as a result of gender-based views that prevail in Indian business community. In addition to this, Kaur and Singh (2019) also found similar evidence supporting the notion that firms led by female CEOs have a significant negative impact on performance of firms in India. They attribute this negative result to the lesser start-up investments, limited human capital and experience as well as the association of female CEOs with younger and smaller firms. However, Lam, McGuinness and Vieito (2013) found a mixed and inconclusive relationship between CEO gender and performance of Chinese listed firms from 2000 to 2008. It is observed that the number of female CEOs is rising especially in privately controlled firms with high visibility,

given the gender-neutral hiring policies in the country. Firms with lower levels of state ownership attract women and female CEOs are commonly observed in firms with at least one or more female directors.

3.2.8 Academic directors

Academic directors are professors or academics in institutions of higher education. Harris (2014) argues that the expertise of board members who work in institutions of higher education is expected to be superior to that of other board members without specific industry knowledge. Academic directors bring increased board demographic diversity to the firm (Peterson and Philpot, 2009). White *et al.* (2014) argue that small and mid-cap firms tend to appoint academic directors to enhance their boards particularly benefiting from their expertise and networks while also achieving a positive reaction from the market. The findings from a study by Francis, Hasan and Wu (2015) reveal that firms that have academic directors are associated with higher performance, suggesting that they perform their advisory and monitoring role effectively. Also, the director roles of monitoring, advisory and diversity are essential for effective board and firm performance. Likewise, Liu (2020) found that academic directors are associated with better firm performance, stronger monitoring effects, enhanced innovation and easier access to finance. More specifically, Eldenburg *et al.* (2004) argues that academic directors have significant influence on teaching hospital boards.

In a study by Cho *et al.* (2017) on S&P 1500 firms from 2003 to 2011, it is found that higher corporate social responsibility performance ratings prevailed in firms with academic directors compared to those without. The significant relationship only holds when the academic background of the directors is specialised and weakens when the academic directors hold administrative roles at the university. This can be attributed to business professors overlooking the vital role of corporate accountability in education and the failure to train accountable managers. Furthermore, the administrative directors are seen to have limited opportunities to exercise their ethical influence on the CSR activities of a firm because they generally apply less effect in CSR firm activities despite them having more directorships in other firms compared to their non-administrative counterparts. Van Ness, Miesing and Kang (2010) reveal that boards comprised of educators have a negative impact on revenue growth possibly because they lack the requisite business exposure and are apprehensive when it comes to making decisions. They thus approach firm revenue growth at a slower, more conservative pace.

3.2.9 Multiple directorships

Ferris, Jagannathan and Pritchard (2003) termed multiple directorships as the busyness hypothesis. Board busyness represents the number of other director roles that the board members hold (Falato, Kadyrzhanova and Lel, 2014; Tan *et al.*, 2020). Basing on S&P1500 index from 1996 to 2014, Hauser (2018) found that reductions of board appointments were associated with higher profitability and market-to-book ratios. In addition, less busy directors are more willing to join committees because of their workloads and CEOs with reduced board appointments are linked to performance gains. Similarly, Daniliuc, Li and Wee (2020) measured firm performance by the changes in ROA and Tobin's Q of large Australian and US firms. It is found that reducing director appointments has a positive impact on performance of only the top 500 firms as firm performance is perceived to be affected by the director workload. Using evidence from 500 large private manufacturing firms listed in India, Sarkar and Sarkar (2009) found that independent directors with multiple board directorships have a positive impact on firm performance. Evidently, this finding demonstrates that quality and more capable directors attract opportunities to hold multiple directorships as a reflection of their abilities. The results of this study lend support to the arguments of the resource dependence theory that directors with multiple board roles are highly networked, bring a breadth of knowledge, experience, and linkages to the external environment and are able to perform their multiple director duties without compromising on firm value. Directors with multiple board roles are better at their oversight role and are more committed to their governance duties and meeting attendance. However, for inside directorships, multiple board roles are detrimental to firm value. Furthermore, Pandey, Sehgal and Mittal (2019) reported an insignificant positive relationship between board busyness and firm performance for financial firms and no relationship between board busyness and performance of non-financial firms. Notably, CEO busyness negatively impacts corporate performance, based on the arguments that multiple board roles held by the CEO impacts the amount of time spent on strategic decision making and driving firm performance.

Basing on an unbalanced panel of non-financial firms listed in India from 2004 to 2012, Hundal (2017) found a negative relationship between number of directorships before reaching the maximum legislative threshold and financial performance in the local private firms. On the contrary, the relationship for foreign and government firms is positive for the entire number of directorships. This is indicative of directors in local private firms failing to effectively carry out their assigned tasks. More so, the results deduce that when other board appointments reach above 4, the performance of directors is impacted with regards to time, effort and specialised skill

required to undertake their roles in other firm committees. However, board busyness in foreign and government firms enhances firm performance. Particularly for government firms, the result can perhaps be explained by the fact that directors in public institutions are appointed based on merit thus reducing the CEO's power to select directors. This is in line with the arguments of the resource dependence theory that directors with multiple board roles possess a high level of reputational capital which positively influences firm performance.

The findings of a study by Jackling and Johl (2009) revealed that busy independent/ outside directors have a negative impact on financial performance of listed Indian firms in 2006. Holding multiple directorships impacts the efficacy of the outside directors in performing their monitoring role resulting in poor firm performance. Particularly in the context of Indian firms examined, the results infer that the quality of service and value provided by directors with multiple board appointments is insufficient. Also, Gray and Nowland (2018) used a sample of 1,500 non-financial firms in Australia from 2004 to 2007 and found that the percentage of meeting attendance declines as directors are required to attend more board meetings. This means that higher director workloads are associated with increased director busyness and lower attendance which is subsequently associated with lower firm performance. Additionally, Falato, Kadyrzhanova and Lel (2014) found that the increased demand for independent director's time has a negative impact on firm value. Evidence from the study shows that when there are additional demands on the director's time, both the firm value and the quality of board monitoring are adversely affected. López Iturriaga and Morrós Rodríguez (2014) also indicates that the relationship between multiple directorships and firm performance is non-linear. When multiple directorships are still below a threshold of at least 4 board members, the reputation effect prevails such that the benefits that accrue from multiple directorships like skills and incentives to perform directorial duties increase and this positively impacts firm performance. However, when the threshold is passed, the dedication effect takes on and the directors are overwhelmed with the duties and workloads of having multiple board appointments. The director's ability to work for several firms at the same time is therefore questioned. Moreover, Cashman, Gillan and Jun (2012) found a negative relationship between busy directors and financial performance of firms. A director is considered busy if they hold three or more board seats. The results indicate that busy directors negatively impact firm performance.

3.2.10 CEO background/ experience/education

In a study by Shahrier, Ho, and Gaur (2020) that investigated a sample of 200 Shariah-compliant Malaysian listed firms from 2014 to 2017, findings show that independent board members with an education above a bachelor's degree have a positive effect on firm performance. Also, the results indicate a positive impact on firm performance when the board members have greater knowledge demonstrated by having qualifications of a bachelors and master's degree, among others. With regards to board competency, the results infer that directors need to have a high education as it is associated with critical thinking, problem solving, innovation and creative capabilities. Ritchie and Eastwood (2006) provided empirical evidence that executive experience has a positive impact on performance measured using public support indicators. Precisely, the results reveal that the CEO's prior experience in fields of accounting, production, and marketing are strongly and positively related to financial performance of firms. The findings also show support for the predictions of the resource dependence theory that evidence that organisational change and firm performance are influenced by the strategic choices made by top managers. Likewise, Amran (2011) investigated a sample of 424 Malaysian listed companies from 2003 to 2007 .The findings show that the director's qualifications have a positive relationship with firm performance suggesting that human capital should be used for the benefit of the firm. However, it is observed that the number of companies with professional directors on the board is still low as a result of challenges in finding competent candidates as the academics are cautious of taking on director roles. Additionally, Harris (2014) examined a survey of non-profit US boards in higher education in 2007 and found that the directors working in the higher education industry are positively related to the university's performance as measured by total contributions and student retention rates. This finding suggests that industry experts have higher institutional knowledge and are familiar with the operations thus making them better able to drive performance.

More so, Saidu (2019) explored 37 listed Nigerian firms in the financial sector from 2011 to 2016 and revealed that CEO education has a positive impact on profitability while the CEO's prior experience with the firm before being appointed improves stock performance. The CEOs improve their networks and are equipped with higher decision making and implementation capabilities which ultimately contribute to improved performance. Ujunwa (2012) also found that the number of directors with a PhD qualification positively affects financial performance of firms. Given the context of this study as Nigeria where boards are more advisory oriented than monitoring, the variation of skills ranging from directors with higher education qualifications, business expertise, requisite support, and community specialists, is important. Similarly, findings from a study by Rao

et al. (2002) on large US firms show that educational background has explanatory power on firm performance as proxied by ROA and Tobin's Q. Attaining a CEO position requires one to possess a graduate degree, although the impact on compensation is minimal.

Meanwhile, Kagzi and Guha (2018) found that education diversity is found to have a negative impact on performance of knowledge intensive listed firms in India from 2012 to 2014.. These results indicate that the market negatively perceives a board with varying levels of education, seeing them as a threat with a high likelihood of conflicts. Also, using data from S&P 500 firms in 2005, Hamori and Koyuncu (2015) found a negative impact of prior experience as a CEO on the post-succession financial performance of firms in the United States. The results suggest that there is no difference in the post-succession performance of CEO's with no prior experience and those with prior experience in a related or unrelated industry and firm size. These results support the notion that negative learning transfer where performance in the current job is adversely impacted by prior experience. In order to thrive in a new environment, previous knowledge and skills need to be unlearned.

Other studies by Bhagat, Bolton and Subramanian (2010) on a sample of the largest S&P 1500 firms in the United States for the period 1992 to 2007 found no evidence of a relationship between CEO education and long-term firm performance. This finding shows that the education background of the CEO is not an appropriate proxy for CEO ability. However, because of the limited amount of observable managerial characteristics, CEO education, functional experience and past credentials are vital in selecting and recruiting the CEO. Gottesman and Morey (2006) also found no difference in the performance of firms led by CEOs with graduate degrees and those without, meaning that CEO education is not related to financial performance of firms. Plausible explanations for this result are that the skills or networks gained are inconsequential because of the amount of time that has elapsed by the time the CEO is recruited. In addition, the skills or training gained from education background might not be relevant to the CEO role. Moreover, regardless of education background, the CEO has other desirable attributes gained over time that make them suitable to take on the role. They note that the firm's condition is an important factor in appointing a CEO. Findings from Kaur and Singh (2019) also showed evidence of an insignificant relationship between the level of CEO education and financial performance of firms. This is attributed to the amount of time that has elapsed between education and appointment. The skills gained from the educational background would have significantly reduced and thus diminishing the impact. Therefore, other factors such as the environment and business are considered in selecting the CEO.

3.2.11 Ownership structure

Fan and Wong (2002) suggested that an ultimate owner is a shareholder with determining voting rights of the company and is not controlled by anyone else. They also noted that for companies with more than one ultimate owner, the largest ultimate owner should be the focal point. Eldenburg *et al.* (2004) explored the hypothesis that proposes that different organisational types with different objectives have different governance configurations. Hospitals were used as the context for study with different ownership types as for-profit hospitals owned by shareholders, others are non-profit managed by various group types like religious organisations, physician groups, governments and municipalities. Findings show that the influence of consumers on governance has potential impact on board composition and size. For instance, church owned hospitals and teaching hospitals have relatively large boards, community hospital boards are comprised of important community members and physician hospitals have more physicians. Furthermore, non-profit hospitals are categorised as those influenced by consumers (the community) while others are influenced by producers (the physicians). It therefore makes it difficult to specify the objectives concerning charity care when the hospital's financial performance is good. Physicians have a preference for investing in technology as opposed to charity care. The study therefore concludes that board composition varies in accordance with different hospital ownership types. In a study by Alexander and Lee (2006), data was collected from two hospital governance surveys conducted by American Hospital Association's (AHA) Hospital Research and Educational Trust in 1985 and 1989. The data comprised of not-for-profit community hospitals. The findings of this study show that corporate governance arrangements have a significant and positive relationship with performance indicators of efficiency, adjusted admissions and cashflow. Moreover, the study found that hospitals whose governing boards were more conforming to the corporate model had a consistent relationship with enhanced operational efficiency, higher volume of adjusted admissions and larger market share. However, no significant relationship was found between governance arrangements and improved financial performance measured by cashflow. The results generally demonstrate that the relationship between not-for-profit governance arrangements and hospital performance depends on the hospital type whereby the possibility of public and freestanding not-for-profit hospitals to show the effects of governance configuration on performance is higher than for private or hospitals affiliated with multihospital systems. Pervaiz, Essam and Jarjoura (2008) examined the differences in the financial and non-financial performance of 125 government, for-profit and not-for-profit hospitals in the State of Washington from 1980 to 2003. Using five factors of hospital performance of profitability, capital structure, fixed assets efficiency, liquidity and non-financial

measures, findings show that compared to for-profit and government hospitals, not-for-profit hospitals are more profitable.

3.3 Limitations of existing studies and scope for future research

A number of prior studies on corporate governance have been reviewed and summarised in this chapter. The analysis of the prior studies presents diverse perspectives on different aspects of corporate governance examined. There are two main streams of how corporate governance is measured. One stream of literature focuses on internal corporate governance mechanisms using the board of directors as the main proxy for corporate governance by the attributes of the board of directors (Hundal, 2017; Aggarwal, Jindal and Seth, 2019; Saidu, 2019). Secondly, the other stream of corporate governance literature focuses on the external governance mechanisms exploring the ownership and capital structure of firms (Bhagat and Bolton, 2019). Other studies have explored both internal and external corporate governance mechanisms using board of directors and ownership/capital structure (Gaur, Bathula and Singh, 2015; Kao, Hodgkinson and Jaafar, 2019; Shahrier, Ho and Gaur, 2020) as proxies for corporate governance in firms. The board of directors are perceived as the cornerstone of corporate governance (Gillan, 2006) ultimately responsible for internal control and the operations of a firm (Jensen, 1993). Ownership structure on the other hand, is regarded as a vital corporate governance variable for their proposed connection with firm performance (Demsetz and Villalonga, 2001; Zattoni, 2011). Notwithstanding the extensive scope of existing studies on corporate governance, there are a number of gaps that have been identified. These gaps/ limitations provide sufficient direction for further research in the corporate governance and performance arena.

Firstly, public listed firms have been the main context of study for majority of corporate governance studies identified. The use of public listed firms is perceived as a deliberate choice given that the separation between providers of capital and managers of capital in public traded firms calls for corporate governance structures (Gillan, 2006). Moreover, observing and application of the listing rules concerning corporate governance for premium listed firms irrespective of where they are incorporated is mandatory. Therefore, numerous studies have attempted to investigate the impact of corporate governance on the performance of listed firms (Malik and Makhdoom, 2016; Elsayed and Elbardan, 2018; Kaur and Singh, 2019). However, the findings from studies in the context of listed firms cannot be generalised to public institutions because of the apparent disparities between public listed firms and public sector institutions with regards to ownership concentration, regulatory framework, and firm specific objectives.

Relatedly, there is an apparent dearth of corporate governance studies in the context of particularly hospitals, with only a few studies identified in such a context (Molinari *et al.*, 1993; Goes and Zhan, 1995; Jha and Epstein, 2010; Goodall, 2011). Notably, the identified studies in the context of hospitals have largely focused on private healthcare providers. The private health care providers are categorised as not-for-profit (Brickley, Bhagat and Lease, 1985; Bai and Krishnan, 2015) or for-profit; (Goes and Zhan, 1995; Bai, 2013). Only a few of the identified studies have investigated the impact of corporate governance in public hospitals (C. Molinari *et al.*, 1993; Jiang *et al.*, 2009) who examined public, private not-for-profit and for-profit hospitals in their respective studies.

However, it is also ostensible that the studies investigating the relationship between corporate governance and performance in hospitals are largely in the context of the US with only a handful on hospitals outside the US. This explains why majority of studies identified are based on private hospitals, as healthcare in the US is predominantly accessed through private providers and the government (Kumar, Ghildayal and Shah, 2011). Only a few studies used other developed countries such as the United Kingdom (Veronesi, Kirkpatrick and Vallascas, 2013, 2014) or Germany (Kuntz and Scholtes, 2013) as a basis of study. Both the UK and Germany provide an almost free healthcare service to their populations. An investigation into public hospitals in the UK for example, vis-à-vis the US would highlight the differences between a private health system and a public health system based on their primary objectives and regulatory framework. For example, according to Lipton and Lorsch (1992), the corporate board styles are different for the two countries where non-CEO duality works better in Europe than in the US because it is strongly resisted by top management of most US firms. Further backing this assertion is the UK Corporate Governance Code (2018) which recommends that UK companies adopt non-duality leadership structure for their board structure. The corporate governance structures and practices are therefore expected to an extent differ between the two countries.

In addition to highlighted structural differences, healthcare in the UK is provided under a universal system commonly referred to as the National Health Service (NHS), with the providers of healthcare categorised as trusts and foundation trusts. The studies identified in the UK have measured the impact of clinical involvement on the hospital board on performance of hospitals (Veronesi, Kirkpatrick and Vallascas, 2013, 2014), but have not differentiated the analysis between the two types of hospitals namely, trusts and foundation trusts. The trusts and foundation trusts have different corporate governance structures and accountability. For example, the foundation trusts have more autonomy over their financial and operational

decisions compared to the trusts. Also, the foundation trusts have a two-tier governance structure with a board of directors and a board of governors, while the trusts are governed by a unitary board. Therefore, investigating the impact of corporate governance on the performance of the hospitals, categorised as trusts and foundation trusts is essential for understanding what effect the different governance structures may have on the performance of the different types of hospitals.

In addition, the measurement of corporate governance in hospitals has been fixated on board composition, with particular attention to the impact of having clinicians on hospital boards. A large proportion of hospital studies have considered the clinicians on the board as the main proxy for corporate governance and their effect on hospital performance. Needless to say, there are further aspects to board of directors as the foundation of corporate governance, other than board composition. Zahra and Pearce (1989) proposes an integrative model that links board attributes of composition, characteristics, structure, and process to the critical roles of the board such as service, strategy, and control. Application of the integrative model in the studies that have investigated corporate governance and performance is currently lacking in the identified hospital studies. In order to understand the impact of corporate governance from a more wholistic view, the participation of clinicians on the hospital board should not be examined in isolation of other board attributes such as board size, board independence, etc.

Furthermore, the performance of hospitals in the corporate governance literature on hospitals is mainly related to financial measures. Most of the reviewed studies used accounting measures of performance such as ROA (Collum *et al.*, 2014) and operating margin (Molinari *et al.* 1995; Culica and Prezio, 2009). The use of financial performance measures is linked to the observation that most hospital studies are in the context of private healthcare providers in the US. Notwithstanding, there are other studies that used non-financial performance (Jha and Epstein, 2010; Goodall, 2011; Veronesi, Kirkpatrick and Vallascas, 2014) as a basis for measuring hospital performance with a focus on hospital processes and outcomes. Only one study (Prybil, 2006) is identified to have considered both financial and non-financial performance of hospitals in their investigation of corporate governance and performance. It is imperative that non-financial indicators are incorporated in the assessment of performance of public institutions like hospitals. Although, a sound financial position is perceived as a pre-condition for the hospital's overall performance (Goddard, Mannion and Smith, 1999), non-financial performance such as health outcomes are equally critical (Goddard, Mannion and Smith, 1999; Kludacz-Alessandri, 2016). Public hospitals are held accountable for financial sustainability, particularly financial resource

management given that they are funded by taxes, but are also expected, in line with their main objective, to provide quality healthcare services to the patients. Balancing both financial and non-financial performance is therefore of utmost importance because assessing performance from only one perspective is inadequate and often misleading. It is therefore necessary to understand the impact of corporate governance on both the financial and non-financial performance of hospitals.

Moreover, most of the prior studies on corporate governance and hospital performance adopted a cross sectional approach (Goldstein and Ward, 2004; Jiang *et al.*, 2009; Bai, 2013) with only Goes and Zhan (1995) identified to have adopted a longitudinal approach. According to Gujarati and Porter (2009), a longitudinal approach better allows for the dynamics of change and effects that cannot be detected in cross-sectional data to be captured, and enables the bias common in cross sectional studies to be minimised.

Lastly, the literature review presents an overall picture of how corporate governance influences performance in different firms in different countries. However, the findings are inconclusive making it difficult to propose conclusions on an optimal corporate governance structure for public hospitals. Further studies are therefore necessary to identify the different corporate governance mechanisms that work for different firms. As it is now, one single corporate governance structure cannot be taken as the ideal framework for all firms based on existing institutional differences. For instance, in the context of hospitals, the corporate governance structure adopted by private hospitals may not necessarily be optimal for public hospitals.

3.4 Summary and Conclusion

This chapter was purposed to review the extant literature on the impact of corporate governance on firm performance. There are numerous empirical studies on the topic, however, the review was limited to only studies relevant to the current topic of study as seen in Table 12 in the Appendix of this thesis. There is an element of commonality in the independent and dependent variables of the studies reviewed in this chapter although the contexts and time periods are different, resulting in a wide range of findings and discussions.

From the review of the literature, the findings are inconclusive. This can be attributed to several reasons that could be linked to the different contexts from which the different authors gathered data, for example, listed firms versus family-owned firms, differences in countries where the corporate governance regimes differ in implementation and adoption, for example developing

countries versus developed countries. The varying time periods selected for the different studies also play a role in the mixed results. Similarly, most of the studies identified are cross-sectional in nature meaning that trends in corporate governance and performance are not explicitly captured. Another reason for conflicting results could be the methodology used to analyse the data where insufficient tests could generate insignificant or misleading results. The data used could possibly be a factor affecting the outcome of the analysis where small samples, biased or incomplete dataset could lead to insignificant results. In summary, Lawal (2011) conducted a critical review of existing literature on the board dynamic and performance relationship and noted that the existence of conflicting results prevails for the relationship on board size, composition, CEO duality and diversity amongst others.

However, this review lays a firm foundation for developing hypotheses in the next chapter. Particularly, the theories commonly used to explain the relationship between corporate governance and performance have been highlighted. These have been adopted in the discussion of the theoretical framework in the next chapter. Basing on the limitations and propositions for further research that have been identified through the literature review, appropriate consideration is made when selecting the sample space and country of context, time period, and variables for the study. The dearth of corporate governance studies in the hospital sector presents a clear direction for the proposed study. Therefore, investigating the impact of corporate governance on financial and non-financial performance of hospitals, using evidence from the National Health Service in England is essential.

Chapter 4 Theoretical framework

4.1 Introduction

This chapter discusses the theories adopted in the study to explain the relationship between corporate governance mechanisms and firm performance. Corporate governance theories suggest the existence of a relationship between the different board characteristics and firm performance (Kiel and Nicholson, 2003). It is therefore appropriate to use multiple theories in describing effective and good corporate governance practices adopted by organisations (Jackling and Johl, 2009; Fauziah and Alhaji, 2012). This study bases on a multi-theoretical framework to describe the relationship between corporate governance and the financial and non-financial performance of firms using appropriate theoretical backing. The multiple theoretical framework adopted for this study is comprised of the arguments of the stakeholder-agency theory, coupled with other relevant theories of stewardship, resource dependence, upper echelons and critical mass.

This chapter is organised as follows: - Section 4.1 is a discussion of the stakeholder-agency theory while the stewardship theory is discussed in Section 4.2. Section 4.3 covers the resource dependence theory, and the upper echelons theory is presented in Section 4.4. The critical mass theory is discussed in Section 4.5 and the chapter is concluded in Section 4.6 with a brief summary of the theories.

4.2 Theoretical framework

4.2.1 Stakeholder-Agency theory

Stakeholder-Agency theory is a paradigm that explains specific facets of an institution's strategic behaviour including the structure of and processes taken to monitor and enforce management-stakeholder contracts (Hill and Jones, 1992). Hill and Jones (1992) perceive a firm as a nexus of contracts between resource holders, including the implicit and explicit contractual relationships between all stakeholders. The stakeholder-agency theory considers the nature of the implicit and explicit contracts between stakeholders of an institution (Hill and Jones, 1992). In the context of the NHS, the stakeholders are multifaceted including staff, patients, the local community/ public, regulators and funders. Therefore, the explicit and implicit contracts are covered within the stakeholder-agency theory. Essentially, managers have contractual relationships with all the

stakeholders of the firms and have direct control in decision making in the firm (Collier, 2008). They are therefore perceived as the agents of all the other stakeholders (Collier, 2008) as well as the de facto agent for all stakeholder claims against the firm (Zolotoy *et al.*, 2020). Freeman (1984) argues that corporations have stakeholders and the stakes of each stakeholder group are reciprocal and vary from one firm to another. Freeman (1984) defines stakeholders as having a stake or claim on the firm and are therefore entitled to be involved in shaping future direction of the firm. For the NHS trusts and foundation trusts, the managers are responsible for representing the needs and claims of the staff, patients, local community members and the regulators. Given this position therefore, the managers are responsible for making strategic decisions and allocating resources according to stakeholder claims, making the managers agents of other stakeholders (Hill and Jones, 1992). The governance arrangements adopted are therefore to monitor the various stakeholder-agency relationships while evaluating and prioritising the competing stakeholder needs (Collier, 2008). In the NHS context for instance, the governance structures in place such as the unitary board for NHS trusts and the two-tier arrangements of a unitary board and board of governors are composed to represent the multi-layered stakeholder set up. The board of directors of the trusts and foundation trusts comprise of executive directors who are employees, and non-executive directors who are not employees. This allows representation of staff, as well as the public and related stakeholders on the board. In addition, the board of governors found in the governance configurations of the foundation trusts comprises of elected members of the public constituency, staff members, patients/ service users and carers.

The assumption of the stakeholder-agency theory is that although markets are efficient, the existence of short to medium-run inefficiencies in the market dynamics leads to power disparities between stakeholders and managers (Hill and Jones, 1992).The power differentials occur when the principals have the power (Hill and Jones, 1992), such as when medical workers are forced to stick to a contractual relationship because they lack better alternatives or alternatively when the medical workers cannot be discharged from their duties because their demand exceeds supply. Understanding the power shifts between the principal and agent is vital because of the effect it has on the contracts and the corporate governance configurations adopted. As a response to the imbalances and ensuing resource dependencies resulting from managers deliberately pursuing certain strategies to exploit and entrench the power differentials, the structures for incentives, monitoring and enforcing manager-stakeholder contractual relationships continuously evolve (Hill and Jones, 1992).

4.2.1.1 Mechanisms to reduce conflicts in stakeholder-agency relationships in the NHS context

Hill and Jones (1992) posit that conflicts are inherent in management and stakeholder relationships due to divergent interests, for instance, satisfaction of stakeholder claims reduce the amount of resources that management can invest for growth. They argue that although the stakeholder and management claims can converge, there will be a divergence in interests at a certain point. For example, medical staff are likely to be opportunistic by opposing hospital service mix such as contracting inpatient services and advocating for the purchase of costly medical technology which in turn would impact the financial viability of the hospital which conflicts stakeholder interests (Molinari, Alexander, Morlock and Lyles, 1995). The difference in utilities that management gains from acting in the shareholder's best interest and pursuing their own interests is known as utility loss (Hill and Jones, 1992). On one hand, utility loss is reduced by adopting incentives, monitoring, and enforcement structures to align management and stakeholder interests (Hill and Jones, 1992). On the other hand, utility losses are incurred by directing resources to provide incentives, monitoring and enforcement structures instead of investing resources to pursue management utility and any residual utility loss (Hill and Jones, 1992). Hill and Jones (1992) posit that mechanisms to align interests are added to contracting schemes to minimise utility loss. For example, in the NHS, appointing inside clinicians to the board is a greater driver of medical staff commitment and compliance with hospital policies compared to financial exchanges. More so, Hill and Jones (1992) argue that absorption of ex-ante bonding costs by managers at the request of stakeholders shows a sign of management commitment to meet stakeholder interests. Manager-stakeholder interests are aligned through such commitments which result into mutually dependent relationships with symmetrical distribution of power (Hill and Jones, 1992).

Furthermore, Hill and Jones (1992) postulate that institutional structures such as the board of directors have been created to monitor and enforce implicit contracts between stakeholders and managers. Given the issue of information asymmetry between managers and stakeholders, managers as insiders have control over critical information which increases the residual loss borne by the stakeholders (Hill and Jones, 1992). Hill and Jones (1992) suggest that institutional structures can be put in place to minimise costs incurred by the stakeholders in collecting and analysing information. They suggest that these structures can be legislative, for example, through the requirement for public companies to publish their consolidated annual accounts, and for-profit institutions to undertake the role of information gathering and analysis and thereafter sell

the processed information to stakeholders, for example, consumer reports etc. The NHS trusts and foundation trusts appoint insiders such as the CEO and other medical staff members to the board to provide information concerning the hospitals services and health care service delivery issues to reduce instances of information asymmetry (Molinari *et al.*, 1993; Molinari, Alexander, Morlock and Lyles, 1995). The trusts and foundation trusts also have the duty to publish annual reports as a form of accountability for tax funding. In addition, they note that certain non-profit organisations have been established to take on the monitoring role of managerial actions towards the best interests of stakeholders, such as, Consumer watch, Infact, labour unions etc. The NHS for example, has UNISON, which is the biggest union in the NHS. Hill and Jones (1992) argue that such institutional structures effectively reduce utility loss through gaining economies of scale in gathering and analysing information using specialists. Consequently, Hill and Jones (1992) note that as a deterrent for maximising utility at their expense, stakeholders emphasise enforcement mechanisms to management before the exchange of resources. The costs of putting in place enforcements, especially those that lack credibility and are ineffective, outweigh the anticipated benefits of reduced utility loss from opportunism by management (Hill and Jones, 1992).

One of the forms of deterrent include using the law where certain law enforcements mechanisms are put in place as credible deterrents purposed to reduce utility loss (Hill and Jones, 1992). Secondly, exiting the exchange relationship is also considered as a credible deterrent where management is threatened with resources being withheld if stakeholder interests are not satisfied (Hill and Jones, 1992). Of both forms of deterrent, exit is found to be more effective than legal penalties especially when enacted through market mechanisms such as withholding critical resources needed for firm survival or consumers finding alternative sources (Hill and Jones, 1992). However, Hill and Jones (1992) emphasise that the efficacy of exit as a credible deterrent is impacted by diffused stakeholders being unable to enforce collective action and failure of stakeholder groups to collectively impose demands on management. Lastly, they posit that the most effective and least costly enforcement mechanism to adopt is using voice. Through interest groups with legitimate claims, voice has the capacity to cause severe damage to manager reputations and fundamental value of their human capital (Hill and Jones, 1992). They suggest that institutional structures such as labour unions, consumer unions and special interest groups have the platform to articulate stakeholder claims and economise on contracting costs.

4.2.2 Stewardship theory

According to Davis, Schoorman and Donaldson (1997), the model of man in stewardship theory has its foundations based on a steward whose pro-organisational, collectivistic behaviours demonstrate a higher utility which is a contrast to the individualistic, self-serving behaviours. The underlying assumption of the stewardship theory is the convergence of executive behaviour with the principal's interests whereby the steward values co-operation over defection when faced with a situation of divergent principal and steward interests (Davis, Schoorman and Donaldson, 1997). The co-operative behaviour of the stewards is rational and collective because they aim at achieving organisational objectives of profitability, which consequently benefits outside owners and principals (Davis, Schoorman and Donaldson, 1997). Relatedly, the NHS trusts and foundation trusts are required to appoint a director who is a registered doctor, in addition to a director who is a registered nurse or a registered midwife to their boards. The doctors/ nurses are therefore stewards as they are trained to be patient centric, and their ethical beliefs and professional norms are aligned with the values of healthcare ethics for example beneficence. Healthcare ethics requires that the clinicians serve the best interests of the patients even in the absence of financial gain as well as advocate for the publics' wellbeing and society's interests (Bai, 2013). With the altruistic behaviour of stewards, their utility functions are maximised when they protect and maximise shareholder interests through improved firm performance (Davis, Schoorman and Donaldson, 1997; Pearson and Marler, 2010). The organisationally centred conduct of the steward in the face of competing stakeholder interests leads them to pursue decisions that will serve the best interests of the group by improving firm performance and maximising shareholder interests (Davis, Schoorman and Donaldson, 1997). In the NHS setting for example, improved health outcomes would be the priority for the trusts and foundation trusts despite the competing stakeholder needs and interests. In achieving organisational objectives, the steward's personal needs are met since their interests are aligned with organisational objectives (Davis, Schoorman and Donaldson, 1997). Precisely, Muth and Donaldson (1998) perceive the managers as loyal employees and good stewards of corporate assets. Performance of stewards is influenced by the prevailing governance and structural arrangements, for instance, empowering structures and mechanisms are suitable for stewards who fit the model of man as perceived in the stewardship theory (Davis, Schoorman and Donaldson, 1997).

The focus of the stewardship theory therefore is on creating facilitative and empowering structures such as combining the CEO and chair roles rather than separating them (Donaldson and Davis, 1991). This structure results in maximisation of shareholder returns compared to where the

leadership is separated as authority and command is held by the same individual (Donaldson and Davis, 1991). The stewards independence should be enhanced in order to maximise their benefits and reduce monitoring, incentive or bonding costs usually incurred in overseeing individualistic agents (Davis, Schoorman and Donaldson, 1997). In contrast, the CEO and the chair are two separate persons in accordance with the UK Corporate Governance Code 2018. However, for the foundation trusts, the board chair has a dual role as chair of the board of directors and board of governors. There are various non-financial ways to motivate managerial behaviour of stewards such as fulfilling their need for achievement and recognition, inherent gratification from successful performance, respect for authority and work ethic (Muth and Donaldson, 1998). Similarly, employees are not motivated by financial factors therefore inexpensive motivation techniques are adopted given that satisfactory compensation is sufficient (Glinkowska and Kaczmarek, 2015). Notwithstanding, goal conflict may not necessarily be an intrinsic part of separating ownership and control based on the supposition that managers are motivated by various factors and their behaviour is beyond self-serving (Muth and Donaldson, 1998). Glinkowska and Kaczmarek (2015) argue that in stewardship theory, the supervisory board recognises the management board, and their relations are based on trust. They suggest that the basis of the theory lies with the McGregor's Theory Y where the management board is motivated by satisfaction achieved from performing well. There is a high value placed on pro-organisational behaviour with no conflicts between the management board and shareholders (Glinkowska and Kaczmarek, 2015).

4.2.2.1 How stewardship theory influences organisational performance

The stewardship theory posits that instead of monitoring and pressuring performance, a framework for shared values and staff enablers should be put in place by the board using trust as the foundation (Mannion *et al.*, 2015). Likewise, Davis, Schoorman and Donaldson (1997) suggest that the existence of a mutual principal-steward relationship is necessary for the maximisation of performance and a mutual agency relationship minimises potential costs of a firm. Stewardship theorists have presented a model of governance that empowers employee contribution to strategic objectives and decision making and fostering employee behaviour that advances a collective benefit (Hernandez, 2012). The use of insider representation on the board of directors serves to improve performance of an organisation given that the insiders are stewards whose goals are aligned with those of the organisation and therefore their actions will be in favour of achieving organisational goals. In addition, basing on the arguments of the stewardship model, benefits of in-depth knowledge, accessibility to up-to-date operating information, technical

expertise and commitment to the firm accrue to the boards dominated by insiders (Muth and Donaldson, 1998). This strategy is applied in the NHS where medical staff practicing as a registered doctor and a registered nurse or registered midwife are appointed to the board of directors. These clinical directors would be the stewards as they are employees of the hospital and their goals are aligned with the hospital's mission.

Additionally, Hernandez (2012) categorises the structural factors of stewardship governance into control and reward systems. This system is a motivational factor for the stewards to achieve organisational goals and objectives given that management and employees have goals which are aligned to organisational goals, thus leading to improved firm performance (Hernandez, 2012). On one hand, the control systems encourage collaboration towards a common mission for which the individuals exert and receive social pressure to work collectively towards (Hernandez, 2012). On the other hand, the reward systems, through shared mental models allow the employees to derive intrinsic benefits from working collectively to a valued end (Hernandez, 2012). This co-operative participation drives employees to uphold fiduciary and non-fiduciary moral obligations to institutional and stakeholders respectively (Hernandez, 2012). Overall, Muth and Donaldson (1998) suggest that the predictions of stewardship theory posit that organisational structures that enhance effective control by management result in the maximisation of shareholder returns.

The element of accountability is emphasised by Caldwell and Karri (2005) who presents the stewardship theory as ethically superior because it upholds obligations to the society and the duties to all stakeholders. They describe the covenantal approach of the stewardship theory as one that fosters the ability for internal examination both within the individual and the organisation as well as external environment to explore the full context of organisational needs. Barnett and Schubert (2002) define a covenantal relationship as one based on "mutual commitment to the welfare of the other party, as well as allegiance to a set of shared values, which may be expressed in the mission and objectives of the organisation". Therefore, they argue that the stewards in an organisation feel ethically accountable to meet the organisational objectives to serve and meet the needs of the external environment, leading to improved organisational performance and the drive to deliver social welfare to the community. For instance, the clinicians are guided by their professional norms and health ethics to be accountable to the wellbeing of the public and society's needs regardless of the financial benefit (Bai, 2013).

4.2.2.2 Criticisms

Chrisman (2019) posits that in as much as the basis for the assumptions of stewardship theory come from the model of man, the extreme portrayal of the behaviour of human nature is unrealistic. Pure stewards may not exist, and the assumptions based on this model are both unrealistic and irrelevant to organisational governance (Chrisman, 2019). Instead, Chrisman (2019) posits that human behaviour oscillates from selfish and potentially opportunistic agents to other-interested stewards and this variation depends on the situation and time. Similarly, in the NHS, the clinicians may pursue opportunistic decision making for their own interests (Molinari, Alexander, Morlock and Lyles, 1995). Chrisman (2019) also suggests that although stewards may be motivated by intrinsic rewards for their actions, it does not necessitate the alignment of their interests with those of the principal without direction and feedback. The type and use of control systems in the assumptions of the stewardship theory are of least realism and relevance (Chrisman, 2019). Besides, all individuals are motivated by varying degrees of monetary and non-monetary incentives depending on the different individual preferences, which might intersect at some point (Chrisman, 2019).

Furthermore, Chrisman (2019) argues that controls can be used as information systems particularly in measuring performance of the agents. Chrisman (2019) criticises the unclear methods through which the principals in a principal-steward relationship get performance information in the absence of control systems. Contrarywise, stewards receive feedback on how their performance is assessed using monitoring and incentive systems which is impacted by the lack of control systems in the stewardship theory (Chrisman, 2019). According to Molinari, Alexander, Morlock and Lyles (1995), insiders can easily manipulate information for their own interests given that they have control over information related to their performance. The realism and relevance of the stewardship theory can be improved by incorporating problems of bounded rationality and information asymmetry to enable the stewards to understand the goals of principals instead of assuming that the stewards will align with the multiple goals of the principal (Chrisman, 2019).

4.2.3 Resource Dependence theory

Pfeffer and Salancik (2003) posit that resource dependence theory is underpinned by the organisation's need for resources and their reciprocal or indirect dependence on external resources obtained from the environment. The central assumption of the resource dependence theory is fortified by organisational actions which are influenced by their dependence on critical

and vital resources needed for firm survival (Nienhüser, 2008). Essentially, the decisions and actions taken by organisations can be explained by the extent of their dependence on the environment. When organisations successfully obtain requisite resources from their environment, they attain power, influence and long-term stability (Malatesta and Smith, 2014). Power is held by organisations that own the essential resources while those that are dependent on others for requisite resources are susceptible to being controlled (Malatesta and Smith, 2014).

4.2.3.1 Need for organisational interdependencies

Malatesta and Smith (2014) note that the activities and behaviours under the control of an organisation are perceived to be within its boundaries while those outside its control are perceived as being part of the environment. Therefore, a system of interdependencies is established by a number of interdependent organisations (Pfeffer and Salancik, 2003). For instance, the NHS trusts and foundation trusts rely on external organisations for goods and services to support its day-to-day operations. Mainly, goods such as equipment and medicine, services such as IT, cleaning services, facilities management are all sourced from external sources. This forms the basis for the external dependencies that the NHS trusts and foundation trusts rely on. In turn, these organisations that provide the goods and services that the NHS trusts and foundation trusts purchase, also rely on the trusts and foundation trusts for their purchases and healthcare services amongst others. This then forms a web of interdependencies where the organisations rely on each other for their success and survival. According to Pfeffer and Salancik (2003), survival and success of an organisation depends on its efficacy in managing the demands of organisations on whom they are dependent for resources and support. Malatesta and Smith (2014) argue that the environment is characterised by concentration, which is the dispersion of authority and power within the environment, the scarcity of critical resources and the degree of organisational linkages in the overall system. Some organisations are more powerful than others because of the extent of their interdependencies and their location in the environment (Pfeffer and Salancik, 2003). The threats to organisational survival emanate from the inability of an organisation to completely control all the requisite resources for its survival, coupled with the unreliability of the environment that they depend on and the scarcity of resources (Pfeffer and Salancik, 2003).

4.2.3.2 Managing or reducing dependencies

Organisations will attempt to restructure their dependencies by either reducing interest in valued resources, cultivating alternative supply sources, forming coalitions or aiming directly at the constraining party in the relationship (Piskorski and Casciaro, 2005).

4.2.3.3 Co-optation

Co-optation is an approach used in situations where total absorption is legally prohibited, or impossible due to resource constraints or where partial inclusion sufficiently resolves the organisational dependence on the external environment (Pfeffer, 1972). The dependent organisation uses co-optation as a means to stabilise the flow of valuable resources using board of directors as a co-opting vehicle and administrative form (Pfeffer, 1972; Piskorski and Casciaro, 2005). Pfeffer and Salancik (2003) suggest that firms using the board of directors as a co-opting vehicle should ensure that the people appointed to the board have managerial skills to provide expertise, undertake the governing function and gain support for the organisation. The managers role is symbolic, responsive, and discretionary as their actions are directed towards altering systems of constraints and dependencies that the organisation faces (Pfeffer and Salancik, 2003). The organisations are able to obtain resource and social legitimacy from their social settings by socialising members of the constraining organisation or through exchange of other valuable goods such as information (Pfeffer, 1972; Piskorski and Casciaro, 2005). All the NHS trusts and foundation trusts are governed by a board of directors, and an additional governance structure of board of governors is required for the governance of the foundation trusts. The composition of these boards is strategic to enable the trusts and foundation trusts to have access to vital resources such as information, expertise, through their board of directors.

Hillman, Canella and Harris (2002) suggest that the board of directors need to be carefully selected to expand the firm's resource base because of their resource dependence roles in addition to their fiduciary duty to shareholders of monitoring management. Additionally, environmental dependencies can be managed by the board of directors particularly through their associated benefits of advice and counsel, channels of information flow, preferential access to resources, and legitimacy (Hillman, Withers and Collins, 2009). A diverse occupational representation widens the expertise and number of linkages to the external environment that will maximise the firm's resources such as expertise, external linkages, provision of resources and legitimacy (Hillman, Canella and Harris, 2002). The composition of the NHS trust and foundation trust boards for example requires that an Accounting officer, a registered doctor and a registered

nurse or midwife be appointed to the board. This brings a diversity of skills and expertise to the board's capital. Furthermore, boards enhance an organisation's legitimacy, undertake a boundary spanning role, and from an operational perspective, examine and represent the firm in the community (Zahra and Pearce, 1989).

Another form of co-optation is through interlocking directorates. Mizruchi (1996) suggests that directorates are interlocked when an inside or outside director affiliated with one organisation is a board member of another organisation. Organisations use interlocking as an attempt to co-opt sources of environmental uncertainty (Mizruchi, 1996). Additionally, firms might use interlocking among board of directors as a coping strategy especially in situations of increased uncertainty (Lang and Lockhart, 1990), for accessing resources, exchange of information, developing interfirm commitments and establishing legitimacy (Pfeffer and Salancik, 2003). The implementation of interlocking directorates is an easy and flexible form of co-optation as any organisation can create a board of directors and appoint outside directors according to their dependence requirements (Pfeffer and Salancik, 2003). Interlocking directorates is common in the NHS trust and foundation trust boards due to the need for stakeholder representation on the boards.

4.2.3.4 Constraint absorption

Piskorski and Casciaro (2005) suggest constraint absorption as another avenue for managing dependencies where the dependent firm acquires direct control over valued resources. They argue that in constraint absorption, the organisation with more power acquires another valuable resource through sitting on the board of directors of the dependent company while also preserving direct control over the resources critical to the dependent organisation.

4.2.3.5 Mergers

Organisations use strategies such as mergers to cope with interdependence (Pfeffer and Salancik, 2003). Mergers are defined as the acquisition of a firm by another firm (Pfeffer and Salancik, 2003). Mergers that occur within the same industry represent an attempt to gain control over organisations with which they do business, or over competitor organisations to increase dominance over exchange relationships (Pfeffer and Salancik, 2003). However, Pfeffer and Salancik (2003) argue that not many organisations are able to manage their dependencies through acquisition and ownership because of the amount of resources required. There is strong support for mergers and joint ventures although the latter is a dependence minimisation mechanism where only partial absorption occurs between firms that depend on one another (Hillman, Withers and Collins, 2009). In the NHS context, healthcare mergers occur when the

trusts and or the foundation trusts decide to merge in order to improve their operations and service delivery especially in the constrained financial environment.

4.2.3.6 Social co-ordination

Furthermore, social co-ordination can also be adopted as an alternative for managing mutual interdependence where organisations coordinate in several ways including co-optation, trade associations, cartels, reciprocal trade agreements, coordinating councils, advisory boards, boards of directors, joint ventures and social norms (Pfeffer and Salancik, 2003).

4.2.3.7 How the resource dependence theory impacts performance

The theory posits that one of the ways in which an organisation can manage or reduce its dependencies is through the use of a board of directors as a co-opting vehicle (Pfeffer, 1972; Pfeffer and Salancik, 2003; Piskorski and Casciaro, 2005). Director responsibilities are classed according to control, service and resource dependence, whereby management uses the board to facilitate access to critical resources for a firm's success. Board capital, such as expertise, experience, and strategic linkages to valuable organisations, is directly related to monitoring and resource provision (Hillman and Dalziel, 2003). Enhancing board capital through effective board composition positively influences board functions of monitoring and resource provision which subsequently results in improved firm performance. The composition of the board of directors is therefore pivotal in its role of resource provision and as a conduit between the organisation to external resources that they depend on. The size of the board, composition (Johnson, Daily and Ellstrand, 1996), board diversity (Carter, Simkins and Simpson, 2003) and board skill are all important characteristics of the board that are directly linked to their ability to help organisations in managing dependencies. For instance, firms need capital to survive (Burt,1983) and access to this capital can be facilitated by board interlocks (Johnson, Daily and Ellstrand, 1996). The presence of a finance representative on a firm's board positively influences the amount and type of financing that a firm can acquire (Brewster and Mizruchi, 1993). Effective interlocking of boards enables firms to gain access to resources that they need for their success and survival based on the linkages created by the board members, and this subsequently impacts firm performance.

4.2.3.8 Criticisms

Drawing from assertions made by Pfeffer (1981) about resource dependencies being pivotal for the survival of organisations in certain situations, Robert and Neil (1995) acknowledge that the perceptions of interdependence may be as important as the interdependencies themselves.

However, measuring the assumption of the power-dependence outcome that emanates from different interorganisational relationships is difficult (Malatesta and Smith, 2014). The importance of interpreting interdependencies and acting accordingly is essential since it might not be a straightforward task in the practical social settings, particularly with the criticism that there is an element of social construction involved in what constitutes resource dependence (Robert and Neil, 1995).

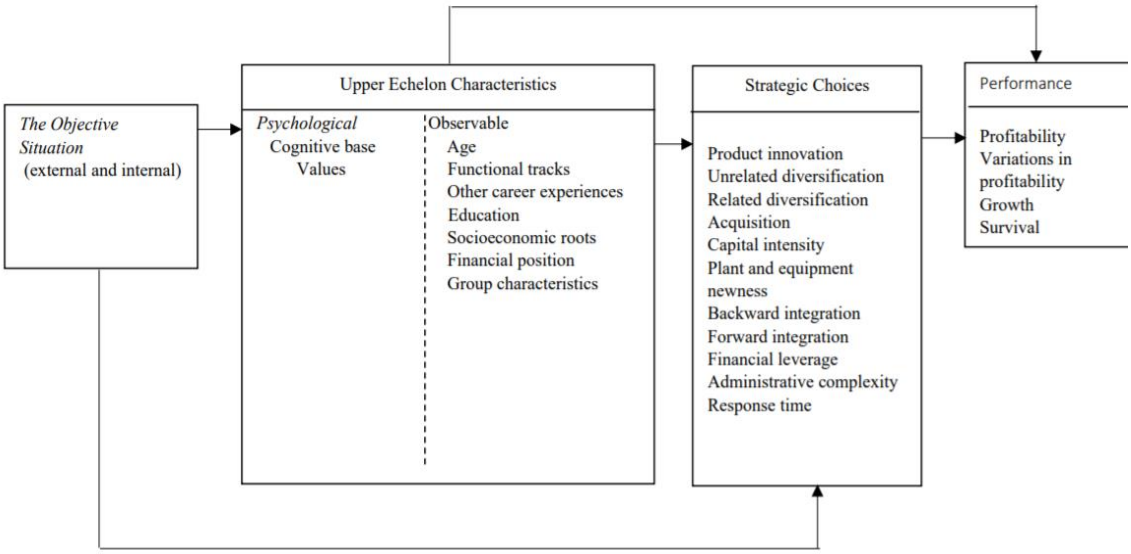
Meanwhile, Piskorski and Casciaro (2005) highlight the ambiguity of the theory's model in relation to constraint absorption that might be caused by the absence of a clear distinction between the dual power constructs from Emerson (1962) exchange theory. They argue that the exchange theory of Emerson (1962) yielded two separate theoretical dimensions of resource dependence; power imbalance or power differential between two organisations and mutual dependence or sum of dependencies; which were combined in the interdependence concept of the original theory. Secondly, they postulate that the theory is both normative and positive where prescriptions and predictions are often confused. The scope of the theory's model conditions are ambiguous and although the theory is dualistic, empirical tests of constraint absorption have focused on one sided dependence while ignoring the reciprocal dependency (Piskorski and Casciaro, 2005).

4.2.4 Upper Echelons theory

Finkelstein and Hambrick (1990) suggest that the upper echelons theory is based on the premise that top managers structure their decisions to fit their view of the world. As a result, a central requirement for understanding organizational behaviour is to identify those factors that direct executive attention (Finkelstein and Hambrick, 1990). Relatedly, the upper echelons theory posits that the outcomes, strategies and performance of an organisation are partly predicted by the background characteristics of the managers (Hambrick and Mason, 1984). Basically, the outcomes in relation to strategies and organisational efficacy are a consequence of the values and intellectual capacity of powerful managers in the organisation (Hambrick and Mason, 1984). Hambrick and Mason (1984) focused on observable characteristics of managers as a proxy of the administrative qualities that a manager possesses such as age, tenure in the organisation, functional and education background, socioeconomic backgrounds, and financial status. Hence, decisions of top managers are guided by their worldviews (Finkelstein and Hambrick, 1990). Hambrick and Mason (1984) further emphasise that observable manager characteristics take precedence over psychological issues in understanding what drives cognitive capabilities of top

managers of the difficulty in measuring psychological traits, for which most managers are reluctant to participate in such psychological tests. More so, some of the important background traits have no psychological resemblances and using them would limit the scope of study (Hambrick and Mason, 1984).

Figure 2 An upper echelons perspective of organisations



Source: Upper Echelons: The Organization as a Reflection of Its Top Managers Author(s): Donald C. Hambrick and Phyllis A. Mason The Academy of Management Review, Apr 1984, Vol. 9, No. 2 (Apr. 1984), pp.198 Published by: Academy of Management.

The model above is adopted from Hambrick and Mason (1984) and is an elaborate depiction of the systematic relationship between the objective state, upper echelon characteristics and strategic choices that determine organisational performance (Hambrick and Mason, 1984). In the process of organising the theoretical propositions and encouraging empirical investigations, using illustrative ideas that include age, functional track, other career experiences, formal education, socioeconomic background, financial position and group heterogeneity is proposed (Hambrick and Mason, 1984). For instance, the likelihood of firms that have young managers being associated with greater growth and profitability given their predisposition to risk taking is higher compared to those with older managers (Hambrick and Mason, 1984). Meanwhile, the level of output-background experience that top managers have is positively associated with the firm's

emphasis on its strategy, growth and profitability (Hambrick and Mason, 1984). Furthermore, Hambrick and Mason (1984) note that the degree of peripheral-function experience of top managers has a positive relationship with the degree of unrelated firm diversification and administrative complexity. Meanwhile, career experiences have mixed results with a negative relation between the years of insider service by top managers and the strategic choices for new business prospects, while a positive relationship is seen for years of inside service and the firm's profitability and growth (Hambrick and Mason, 1984). However, they suggest that years of inside service exerts a negative influence on the profitability and growth of firms facing severe environmental discontinuity.

Additionally, Hambrick and Mason (1984) propose a positive association of the amount and not the type of formal education that the management team has attained and their performance related to innovation. They posit that no relationship exists between the amount of formal education of top managers and average firm performance. Further, the amount of substantial formal management education achieved by top managers of firms leads them to have more complex administrative styles compared to the less trained managers (Hambrick and Mason, 1984). With regards to the socioeconomic background, they posit that firms with managers from lower socioeconomic groups will experience greater growth and profit variability compared to their counterparts from higher socioeconomic groups. Likewise, the percentage of share ownership by top managers and corporate profitability has not relationship, although the percentage of the total income received by the top managers from the firm such as salaries, bonuses, options and dividends is positively associated with profitability (Hambrick and Mason, 1984). Finally, team homogeneity is positively associated with profitability in stable environments and heterogeneity has a positive association with profitability in turbulent and especially discontinuous environments (Hambrick and Mason, 1984). They also emphasise that the demographic data on the entire top management team may be strong predictors of strategies and performance levels.

Bringing a new perspective, Hambrick (2007) proposes that the level of discretion allowed to managers and their job demands are the two moderators that could possibly influence the predictive strength of the upper echelons theory. He notes that if managers are allowed a higher level of discretion, the organisational outcomes will mirror their observable characteristics more. Conversely, Hambrick (2007) argues that when managers are not given any discretion, their managerial characteristics will not be reflected in the organisational outcomes. According to Veronesi and Keasey (2011), the expert model is dominant in the NHS boards where the

relationship between directors with a medical background and those with no medical experience is characterised by conflicts at the board and senior management levels. They continue to argue that a dominant model of professionalism from a medical or financial point of view takes priority in board discussions and the expert view is given prominence. This essentially reduces the managerial discretion allowed to the non-expert in a particular discussion thus affecting their overall contribution. Moreover, Finkelstein (1992) suggests that the moderating role of managerial discretion should be considered when observing the arguments of the upper echelons theory particularly in relation to managerial tenure which is found to have a significant influence on organisational outcomes. Also, Hambrick (2007) makes the assertion that managers with heavy job demands will rely more on past experiences as they are forced to make mental shortcuts due to heavy workloads, meaning their choices will be more reflective of past successes whilst managers who are faced with optimal job demands are able to make more comprehensive analysis and decisions, hence their decisions match the situation at hand.

4.2.4.1 Criticisms

Nonetheless, Hambrick (2007) addresses the two criticisms that question the significance of top managers relative to organisational outcomes and whether the theory results into veneration of the elite. There is empirical evidence from studies that have explored the influence of CEOs on their organisational that show that CEOs have an impact on organisational outcomes (Hambrick, 2007). However, Carpenter, Geletkancz and Sanders (2004) highlights the inconclusive findings that executives influence organisations. In addition, Hambrick (2007) dismisses the assumption that elites are glorified with the argument that decisions made by top executives can either have positive or negative consequences which can either be celebrated or criticised.

4.2.5 Critical mass theory

The representation of different social and cultural orientations of people are a pivotal factor in influencing the dynamics within a group (Kanter, 1977). The types of groups vary based on their composition, for instance, uniform groups have a uniform social and individual representation, while other groups can be skewed, tilted, and balanced (Kanter, 1977). However, Kanter (1977) argues that the skewed groups represent a disproportionate ratio of 85:15 where the majority are known as ‘dominants’ and they tend to control the group and its culture, while the minority are the ‘tokens’ who are perceived as representatives and symbols of a category as opposed to individuals. This group dynamic is observed in the NHS boards, where there is at least one woman on each of the trusts and foundation trust boards. Nevertheless, the representation of women as

a work force in the health sector as a whole is significant (Ellwood and Garcia-Lacalle, 2015). The single tokens in a small, skewed group are referred to as 'solos', and regardless of whether there are two tokens in a skewed group, establishing an alliance to increase their power in the group is difficult (Kanter, 1977). Kristie (2011) suggests that "1 is a token, 2 is a presence and 3 is a voice". Based on this, the concept of critical mass arises where increasing the number of women to a critical mass is beneficial for creating change because the solo woman stereotypes are broken, the communication dynamics of a male dominated group are changed, and the influence and conformity of the women changes in the group dynamic (Konrad, Kramer and Erkut, 2008).

Kanter (1977) posits that because of the minority representation of tokens, they are highly visible with exaggerated differences and are subject to stereotypes. This leads them to assimilate and, in the process, lose their individualism and become more of the general stereotype that they are inducted into by the dominant group (Kanter, 1977). With this level of visibility, the tokens are subjected to performance pressures to which they respond to with either over achievement, or become socially invisible by assimilating with the predominant male culture while diminishing their own attributes, or they tend to avoid attention by keeping a low profile, avoiding risk, conflict and controversy (Kanter, 1977). This act of becoming socially invisible leads the tokens to conceal their achievements and recognition for their participation in solving problems or organisational tasks, resulting in them disappearing in the background with limited acknowledgement of their competence.

Additionally, Kanter (1977) postulates that 20% or less of representation of the minority group is not sufficient to generate an alliance and overcome the challenges that tokens face in their contribution to performance. In line with arguments on tokenism, appointing only one female director to the board results in the director being categorised, stereotyped and ignored by the dominants of the group, and are thus forced to conform to the dynamics of the majority, which impacts their contribution to board discussions (Torchia, Calabrò and Huse, 2011). The relevance of critical mass increases in situations where the representation of women is less than 30% (Dahlerup, 1988). According to Norris and Lovenduski (2005), critical mass posits that size influences the nature of group interactions whereby the minority adapt to their surroundings and conform to the dominants in a group. However, Norris and Lovenduski (2005) argue that a qualitative shift in the nature of group dynamics occurs when the group size increases, and the minority become established and are in a position to alter the institutional culture, norms, and values. It is therefore suggested by Dahlerup (1988) that when women reach a tipping point of 30% representation in an organisation, a substantial shift will occur. There has to be

representation of at least three women on the board for their interactions to be enhanced to the extent that they can influence working styles, processes and tasks of the board (Torchia, Calabrò and Huse, 2011). However, Norris and Lovenduski (2005) suggest that the critical mass theory is dependent on the existence of fundamental disparities in the values, attitudes, and behaviour of parties in a group. For instance in political studies, Childs and Krook (2008) note that reaching 30% representation of women in positions of decision making is encouraged as this is the tipping point at which women achieve critical mass and are able to influence policy changes in their favour. Female directors are associated with enhancing non-financial performance of the firms through customer and employee satisfaction, gender representation and corporate social responsibilities of a firm (Siciliano, 1996; Terjesen, Sealy and Singh, 2009; Hafsi and Turgut, 2013; Harjoto, Laksmana and Lee, 2015). This association is aligned with is aligned with the social objective of hospitals to improve social performance (Ellwood and Garcia-Lacalle, 2015).

4.2.5.1 Criticisms

Childs and Krook (2006) brings to light the criticism of the assumptions of the critical mass theory that female representatives want to pursue actions that are in favour of women and that legislative performance of women is determined by their percentage representation in a group. They argue that with regards to the impact of women in legislative setting, higher representation of women does not necessarily result in favourable actions for women groups, although the introduction of new issues in political discussions might be driven more effectively by a smaller representative women group.

4.3 Conclusion

This chapter is purposed to review the relevant theories that have been identified in prior studies to explain the relationship between corporate governance and performance. The discussion entails the arguments of the various theories, applicability, relationship with firm performance and in the NHS context, and criticisms of the theories. The various corporate governance theories identified inform effective corporate governance practices adopted by firms. The theories are complementary in their description of the characteristics of the board of directors as well as other aspects of corporate governance mechanisms adopted by different firms and their linkages to firm performance. The assumptions of the stakeholder-agency and stewardship theories are focused on the behaviour of man. The stakeholder-agency theory is a paradigm developed based on the arguments of the agency and stakeholder theories. The theory focuses on manager-stakeholder relationships considering market inefficiencies that result in power disparities

between the two parties. Actions taken to reduce utility loss through institutional structures such as the board of directors that oversee the manager-stakeholder relations are proposed by the theory. Meanwhile the stewardship theory proposes an alternative assumption that managers are actually stewards whose goals are aligned with shareholder interests. Despite these differences, both stakeholder-agency and stewardship theories give an insight into how the behaviour of man impacts firm performance and propose ways to manage their actions. On the other hand, the resource dependence theory targets the vital role of board of directors in the provision of resources (Hillman and Dalziel, 2003) and proposes ways in which to enhance directors' contribution by interlocking directorships, recruiting proficient outside directors etc. Following on, the upper echelons theory explains the extent to which the observable managerial characteristics such as tenure, functional experience, amongst others are able to influence firm performance while the critical mass theory provides insights into the level of representation at which minority groups are able to make a quantifiable impact on performance or influence group dynamics. Collectively, the adopted multi-theoretical framework forms an elaborate basis for the development of hypotheses in the next chapter.

Chapter 5 Hypotheses Development

5.1 Introduction

This chapter is purposed to develop testable hypotheses to investigate the impact of corporate governance on the financial and non-financial performance of NHS hospitals in England. The hypotheses proposed in this chapter are underpinned by prior studies and arguments of the theories presented in chapter 3 and 4 respectively. As discussed in the literature review chapter, various prior studies have measured corporate governance using external mechanisms such as the ownership structure and internal mechanisms such as board of directors (Gillan, 2006; Kao, Hodgkinson and Jaafar, 2019). The primary focus of this study is the internal corporate governance mechanisms of the NHS hospitals, particularly the board of directors. The board of directors is the main vehicle for corporate governance with the overall responsibility for safeguarding stakeholder interests through overseeing operations, supporting decision making and determining strategic policies (Naciti, 2019). Therefore, the board characteristics affect the efficacy of the board of directors which has a direct impact on performance of firms (Kanakriyah, 2021). Hypotheses for this study are formulated around the main objective of this study which examines the impact of corporate governance on financial and non-financial performance of the NHS hospitals in England. Corporate governance is the independent variable in this study and is measured by the attributes and processes of the board of directors such as board size, board composition, frequency of meetings, board gender diversity, board expertise, board tenure among others. On the other hand, performance is the dependent variable categorised as financial performance and proxied by accounting performance measures and non-financial performance proxied by hospital processes and outcomes.

The sections are arranged categorically by board attribute or process. The discussions in each section covers the theory or theories which underpin the hypotheses backed by findings from previous studies.

5.2 Hypotheses

5.2.1 Board size

In the modern corporation, board of directors play a vital role in corporate governance and therefore understanding the relationship between board size and firm performance is vital for

understanding corporate governance (Guest, 2009). The size of the board is supported by the logic of the stakeholder-agency and resource dependence theories. The arguments of the stakeholder-agency theory require that the various competing needs of all stakeholders in an exchange relationship with the firm need to be prioritised by the managers to avoid conflicts. Pearce and Zahra (1992) argue that the company's ability to comprehend and respond to diverse stakeholders is enhanced by having a large board meaning that the board's size plays a central role in ensuring that all stakeholder needs are attended to. From the resource dependence perspective, according to Hillman and Dalziel (2003), provision of resources is among the fundamental board roles. The boards are important boundary spanners for creating linkages with the external environment, availing timely information to executives and extracting resources for successful company operations (Zahra and Pearce, 1989; Muth and Donaldson, 1998). Pfeffer (1973) suggests that a larger board is for co-optative purposes and a smaller board is primarily for administrative purposes. The size of the board is therefore directly related to the organisations need for environmental linkage, determined by its capital structure, size and visibility (Pfeffer and Salancik, 2003) and yet is also affected by the relationships with the environment, organisational size and need for access to external capital markets (Pfeffer, 1972). In general, larger board sizes support the arguments of the resource dependence theory (Jackling and Johl, 2009).

The board's ability to perform their roles of service, strategy and control largely depends on the board size, defined as the number of directors serving on the board (Zahra and Pearce, 1989; Pearce and Zahra, 1992). The ideal size of the board has been extensively debated and investigated by several scholars where Beiner *et al*. (2004) argues that the optimum board size is that where the marginal benefit just equals marginal cost. Meanwhile Lipton and Lorsch (1992) suggest that an optimum board should comprise of a maximum of ten directors, because a smaller board provides a platform for carefully selected directors to network and have effective discussions and inclusive decision making. In addition, they argue that contrary to the criticism that smaller boards limit the range of perspectives and ignores diversity, a well selected board provides the breadth of perspectives and diversity required. Notably, smaller boards are more likely to fire a CEO as a result of poor performance (Yermack, 1996), resolve free rider issues and have enhanced monitoring and control (Berezinets, Ilina and Cherkasskaya, 2017). Moreover, firms with small boards are said to attract positive reaction from investors and achieve highest market value (Yermack, 1996) which contributes to improving firm performance (Jensen, 1993). Although there are several other supporters of small boards (Sonnenfeld, 2002 and Lipton and Lorsch, 1992), Allam (2018) found that large boards are able to perform their monitoring and advisory roles at an enhanced level and also benefit from having more experts from different

backgrounds in addition to securing valued resources for the firm. Pearce and Zahra (1992) reason that a larger board is conducive for superior company financial performance because they permit multiple perspectives on corporate strategy and operations and allow for the involvement of diverse directors with varying educational and industrial experience. They also argue that large boards have diverse representation of stakeholders which improves efficacy of response to stakeholder demands and also reduces CEO domination of the board, allowing the directors a level of independence from the CEO to exercise their power in governing the firm. More so, Forbes and Milliken (1999) suggest that larger boards have a wider pool of knowledge, skills and perspectives which enhances cognitive conflict on the board and also helps to link the organisation to its external environment and secure critical resources (Goodstein, Gautam, and Boeker, 1994). The large boards are also found to be effective in reducing agency costs (Dwivedi and Jain, 2005) and have a greater depth of intellectual knowledge which enhances decision making capacity of the board members (Arora and Sharma (2016). However, Jensen (1993) suggests that large boards with more than 7 or 8 people are less effective, difficult to control by the CEO, have high coordination costs, enhance free-rider issues (Lehn, Patro and Zhao, 2009), have communication challenges (Eisenberg, Sundgren and Wells, 1998), and information processing problems (Huther, 1997) which hamper efficacy of management (Conyon and Peck, 1998). The large boards also have challenges with building interpersonal relationships amongst the directors and this affects board cohesion (Forbes and Milliken, 1999). Nevertheless, large, diversified companies require larger boards for several reasons such as improved monitoring, control, and increased access to resources (Berezinets, Ilina and Cherkasskaya, 2017).

Given the arguments for and against small and large boards, mixed findings are expected with regards to the relationship between board size and firm performance. Some studies found a positive relationship between board size and financial performance of firms (Merendino and Melville, 2019; Puni and Anlesinya, 2020; Gaur, Bathula, and Singh, 2015; Kiel and Nicholson, 2003) while others found a negative relationship between board size and financial performance (Arora and Sharma, 2016; Jakpar, Tinggi, and Hui, 2019; De Andres, Azofra, and Lopez, 2005; O'Connell and Cramer, 2010). Meanwhile, there are also studies that found no relationship between board size and financial performance of firms (Assenga, Aly, and Hussainey, 2018; Dang *et al*., 2018; Singh *et al*., 2018). A few studies measured the impact of board size on non-financial performance of firms and found a positive relationship (Naseem *et al*., 2017). Basing on the arguments of the stakeholder-agency and resource dependence theories, the hypotheses favour both a large and small board size for their various benefits depending on factors such a firm size, industry, etc. The first set of hypotheses therefore state that:

H1a. Board size has a significant relationship with financial performance of English NHS hospitals.

H1b. Board size has a significant relationship with non-financial performance of English NHS hospitals.

5.2.2 Board independence

The UK Corporate Governance Code 2018 emphasises the importance of non-executive directors on the board for their roles of hiring and firing executive directors and holding them accountable against set performance standards. From a stakeholder-agency and resource dependence theoretical perspective, independent boards are beneficial to a firm and have a positive contribution to overall performance of boards. The stakeholder-agency theory posits that the managers are the agents of all stakeholders of the firm (Collier, 2008) as well as being de facto agents for stakeholder claims (Zolotoy *et al*., 2020). Hillman and Dalziel (2003) suggest that the board function of resource provision is directly linked to firm performance. Therefore, basing on the qualifications of the resource dependence theory, Pfeffer and Salancik (2003) suggest that with the expectation of increasing environment pressures on the organisation, the need for outside support grows, leading to a higher proportion of outside directors on the board. They also argue that interlocking directorates by appointing outsiders to the board is vital to manage the external environment and provide managerial skills amongst other resources necessary for firm success and survival. The outside directors also contribute to gaining support and legitimacy for the organisation (Pfeffer and Salancik, 2003) given that there is representation from the various stakeholders, including the local community on the board. Interestingly, Pfeffer (1972) notes that organisations operating in regulated industries tend to have a higher proportion of outside directors possibly due to the need for strategic networks with external parties on whom the organisation is reliant such as the regulator and other organisations in the external environment.

Balsmeier, Fleming, and Manso (2017) describe independent directors as having no ties to the company except through their directorship role and increasing their representation on boards is a priority for corporate governance reformers (Duchin, Matsusaka and Ozbas, 2010). It is therefore observed that they tend to hold majority of board seats (Bhagat and Black, 2002) for various reasons. Fama and Jensen (1983) note that the outside directors perform duties such as being arbiters in disagreements among internal managers and the tasks they perform involve serious agency problems between internal managers and residual claimants, for example, setting executive compensation and searching for replacement for top managers. Additionally, outside directors are independent from management (Pearce and Zahra, 1992), are more willing to

monitor the CEO (Hermalin and Weisbach, 1991) and are better at making decisions that protect shareholder interests (Hermalin and Weisbach, 1991b; Duchin, Matsusaka and Ozbas, 2010). They are also better placed to protect shareholder interest due to their detached approach in assessing proposed strategies (Hillman, Cannella and Paetzold, 2000), providing requisite resources and enhancing cognitive conflict on the board as a result of their alternative perspectives to the inside directors (Hillman, Cannella and Paetzold, 2000). Meanwhile, Freeman *et al.* (2010) posits that with the increasing public awareness of business impact on the society and the popularity of social investing, outside directors bring with them networks and opportunities for the firm to gain legitimacy through their corporate social responsibility activities.

However, the contribution of outside directors could possibly be impacted by their lack of independence resulting from the strong family ownership influences in some countries like India (Jackling and Johl, 2009), and by the CEO's involvement in the nomination process (Vintilă and Gherghina, 2013) as well as the non-transparent appointment process (Assenga, Aly and Hussainey, 2018). Their efficacy is therefore questioned because they are perceived to be working for those who appointed them to the board (Jackling and Johl, 2009). Similarly, outside directors are busy because they hold multiple directorships and tend to lack motivation to improve firm performance (Farhan, Obaid and Azlan, 2017). They are also perceived to possess insufficient knowledge and limited experience specific to the firm's operations and the frequent rotation of independent directors on the board leads to loss of valuable information (Muchemwa, Padia and Callaghan, 2016). Their performance is also impacted by their lack of participation on board committees (Srivastava, 2015; Muchemwa, Padia and Callaghan, 2016) and issues of information asymmetry and lack of support from inside directors in performing their board roles (Yasser, Mamun and Rodrigs, 2017). Moreover, outside directors can have adverse impact on firm performance in instances when the cost of the directors getting information about the firm is high (Duchin, Matsusaka and Ozbas, 2010). Adams and Ferreira (2007) argue that overall, because independent directors intensify monitoring of the board, managers are driven to share less information with them and this impacts the ability of independent directors to perform their monitoring role, adversely impacting shareholder value. Moreover, outside directors are likely to reduce board coherence due to the lack of primary affiliations with the board members (Forbes and Milliken, 1999).

From the identified empirical literature, several studies have investigated the influence of independent boards on mostly financial performance of firms. Some studies reveal that an independent board with a higher proportion of outside directors positively impacts financial

performance (Muchemwa, Padia and Callaghan, 2016; Ben Barka and Legendre, 2017; Reguera-Alvarado and Bravo, 2017; Wang *et al*., 2019; Rwakihembo, Kamukama and Kijjambu, 2020) while others found a negative relationship between board independence and firm financial performance (Mangena, Tauringana and Chamisa, 2012; Farhan, Obaid and Azlan, 2017; Rashid, 2018; Zhou, Owusu-Ansah and Maggina, 2018). On the other hand, Klein (1998), Vafeas and Theodorou (1998), Ponnu and Karthigeyan (2010) found an insignificant relationship between board independence and financial performance. Notably, Baysinger and Butler (1985) suggest that board composition is dependent on the organisation and external environmental factors which differ from one firm and industry to another. Considering the stakeholder-agency and resource dependence theories and discussions by prior studies, the board independence hypotheses assume that board independence has adverse effects on firm performance.

H2a. Board independence has a significant impact on financial performance of hospitals in the English NHS.

H2b. Board independence has a significant impact on non-financial performance of hospitals in the English NHS.

5.2.3 Board expertise

For purposes of this study, board expertise signifies co-opting clinicians to the board. Clinicians are perceived as professionals and experts in their respective medical fields. The theories of stakeholder-agency, stewardship and upper echelons support the appointment of insiders with functional experience, knowledge, and expertise to the board of directors. In line with the stakeholder-agency theory, managers and employees are stakeholders of the firm who provide time, skills, and human capital commitments in exchange for fair pay and suitable working conditions (Hill and Jones, 1992). Similarly, Hill and Jones (1992) emphasise that employees with specialised skill sets have high stakes in the firm as their exit would cost the firm substantially. Therefore, the skilled employees require wide-ranging incentives and governance structures to protect their asset specific investments in the firm (Hill and Jones, 1992). In addition, the stewardship theory perceives insider medical staff as stewards whose objectives are aligned with those of the hospital. The stewardship theory supports adopting governance structures that empower the stewards (Donaldson and Davis, 1991). In support of this notion, Molinari *et al*. (1995) argue that appointing inside clinicians to the board is a greater driver of medical staff commitment and compliance with hospital policies compared to financial exchanges. Therefore, appointing skilled employees to the board of directors is a form of an exchange relationship

between the employees and the firm. The insiders are well placed to represent the interests of inside stakeholders according to the arguments of the stakeholder-agency and stewardship theories. Similarly, Fama and Jensen (1983) argue that the most influential members of a board composed of experts are the internal managers because they have valuable specific information about the organisation's activities. They also suggest that the internal managers, using their organisational knowledge, can nominate outsiders with relevant complementary knowledge and expertise. With regards to the upper echelons theory, Hambrick and Mason (1984) posit that functional experience of the managers is one of the observable characteristics of managers that can partly predict organisational outcomes such as strategic choices and performance levels. They argue that the manager's experience in a key functional area shapes their perspectives and this influences their strategic choices.

Several prior studies have recognised that recruitment of clinicians to the board remains limited (Veronesi and Keasey, 2011; Veronesi, Kirkpatrick and Vallascas, 2013, 2014) despite the increasing efforts to reform and strengthen boards by altering board composition to increase level of board expertise (Pearce and Zahra, 1992). Sonnenfeld (2002) emphasises that great boards are composed of members with the training and experience to analyse complex financial issues and understand the risks that the company is taking on. Some of the directors are appointed to the board solely for their specialised knowledge and skills (Dunn, 2012) and the combined knowledge and experience of the board members must match the strategic demands facing the company (Conger, Finegold and Lawler, 1998). They argue that the complexity of issues presented before a board cannot be resolved by the skills and expertise of a single director, and therefore the board of directors should be composed of persons with skills that are diverse and complementary. Therefore, firms gain access to specialised knowledge and skills through co-opting experts to complement their limited resources (Dunn, 2012). It is vital to appoint insiders to the board (Saidu, 2019), as they are beneficial for information purposes, and contribute to a firm's corporate strategy, performance as well as enhance staff support and compliance for board policies (Molinari *et al*., 1993). Golden and Zajac (2001) emphasise that the selection of board executives may result in the firms gaining both functional expertise and general knowledge on how to operate in terms of organisational and external relationships. Having a specific type of expertise or experience is found to be vital in shaping strategies for change as the executives have specific mindsets especially regarding strategic change (Golden and Zajac, 2001).

The rise of new public management steered the drive to co-opt professionals such as clinicians into management positions through delegation of financial responsibilities (Veronesi, Kirkpatrick

and Vallascas, 2014; Veronesi, Kirkpatrick and Altanlar, 2015). The co-optation of clinicians enables the trusts to retain full local responsibility for operational management to make the best use of the resources for patient care (Department for Health report, 1997). Precisely, Meijboom, De Haan and Verheyen (2004) argue that knowledgeable insiders are able to integrate information that they possess with their experience, expertise, and judgement to create new knowledge. The common benefits of appointing clinicians to the board are related to their specialist clinical knowledge, political and human capital that are necessary for strategic decision-making (Veronesi, Kirkpatrick and Vallascas, 2013, 2014). Boards require a high degree of specialised knowledge and skill to function effectively (Forbes and Milliken, 1999) and these individual board members play an instrumental role in organisational effectiveness through provision of advice and expertise (Baysinger *et al.*, 1985). In the same way, Bai and Krishnan (2015) suggest that the medical expertise, clinical training, and experience of the clinicians are important for enhancing hospital performance through increased focus and efficacy of the board in overseeing care quality. Moreover, the expertise, service delivery and operational knowledge of the clinicians presents them as valuable insiders when it comes to making operational decisions and strategy which ultimately improves hospital performance and helps in cost reduction (Molinari *et al*.,1995; Goodall, 2011). For instance, Molinari *et al.* (1993) note that top level managers and medical staff members are necessary to keep the hospital board informed about service and delivery issues as well as to keep the board informed and responsive to health care reform demands, promote efficiency, quality of care and effective governance of hospitals (Molinari *et al*., 1995). In addition, the input from experienced nurses in deliberations and decision making is said to be beneficial to the boards (Molinari *et al*., 1993). Nevertheless, the benefits of having insiders on the hospital board outweigh the costs of opportunism where the clinicians are alleged to lead the boards to make opportunistic and ineffective policies (Molinari *et al*., 1993).

On the other hand, Bai (2013) posits that because the physicians are trained to be patient centric, their ethical beliefs and professional norms may be misaligned with certain objectives such as profit maximisation and instead pressure the hospitals to focus on social performance. Likewise, clinicians may struggle to make a valuable contribution to financial decision making due to the lack of training and skills to effectively participate in such discussions, making their appointment to the board counterproductive (Veronesi, Kirkpatrick and Vallascas, 2014). Similarly, Clay-Williams *et al.* (2017) argue that the clinicians only tend to consult and network mostly with their fellow clinicians and this impacts board cohesion. Much as insiders are perceived to provide the board with requisite information, Molinari *et al.* (1993) note that they may instead increase the

board's vulnerability to making opportunistic, ineffective policies in a bid to pursue their narrow interests at the expense of the hospital's interests. Also, physicians are associated with lower efficiency (Succi and Alexander, 1999) and increased hospital costs (Alexander and Morrisey, 1988; Goes and Zhan, 1995). The difference in objectives and norms of the physicians and managers result in conflicts and further divergence in interests which impacts hospital performance (Alexander and Morrisey, 1988; Succi and Alexander, 1999). Overall, clinicians in managerial positions might struggle to reconcile the two roles (Clay-Williams *et al.*, 2017) eventually affecting their performance.

Some studies have found that board expertise has a positive impact on financial performance (Veronesi, Kirkpatrick and Vallascas, 2013, 2014) and non-financial performance of hospitals (Goodall, 2011; Bai, 2013; Bai and Krishnan, 2015). Prybil (2006) found a positive relationship between clinicians on the board and the financial and non-financial performance of hospitals. Other studies by Alexander and Morrisey (1988), Goes and Zhan (1995) and Succi and Alexander (1999) provide contrasting evidence that integrating physicians in hospital management and governance results in lower efficiencies in terms of higher hospital costs. Based on these arguments and the theoretical support, clinicians contribute positively to financial and non-financial performance. The hypotheses are therefore proposed as below.

H3a. Board expertise has a significant impact on financial performance of English NHS hospitals.

H3b. Board expertise has a significant impact on the non-financial performance of English NHS hospitals.

5.2.4 Board meetings

According to the stakeholder-agency theory, overseeing implicit and explicit contracts between stakeholders and agents is undertaken by institutional structures (Hill and Jones, 1992). Essentially, according to the stakeholder-agency theory perspectives, frequency of board meetings allows the governing structures to have increased oversight of the stakeholder-agent relationships to manage divergent interests. The board of directors are perceived as a major corporate governance structural mechanism responsible for monitoring firm contracts (Donaldson and Davis, 1991). Meetings are considered as an important avenue for the directors to receive important information about firm operations which allows them to carry out their responsibility of monitoring (Johl, Kaur and Cooper, 2015). Lipton and Lorsch (1992) suggest that boards should have regular meetings dedicating more than 100 hours on an annual basis. They argue that

sufficient time has to be allocated by the directors in order to effectively carry out their monitoring role. However, Lipton and Lorsch (1992) note that most directors are faced with the problem of lack of sufficient time to perform their duties. They argue that the more time directors spend on the affairs of a given company and have open exchange of ideas, the more they will develop knowledge base. Jensen (1993) argues that even highly talented board members are inhibited by serious information problems which limits their efficacy and hinders effective contribution to the monitoring and evaluation of the CEO and company strategy. The board therefore needs to have up-to-date information about the firm operations from various stakeholders in order to be effective (Conger, Finegold, and Lawler, 1998). In line with this, Lipton and Lorsch (1992) advocate for boards to meet at least bimonthly with each meeting taking a full day, and an annual strategy meeting taking two to three days so the directors can properly carry out their monitoring function. Minichilli, Zattoni and Zona (2009) emphasise that the fundamentals of board efficacy include careful preparation for meetings with accurate knowledge of firm operational and financial positions combined with the capability of asking discerning questions to effectively influence behavioural and strategic control. Therefore, effective board meetings are an easier and cost-effective channel for achieving better governance of the firm compared to altering board or ownership structure (Vafeas, 1999).

Having frequent board meetings allows the directors to have sufficient time to meet, set strategies and monitor management (Vafeas, 1999). At the same time, frequent meetings enhance the board's ability to advise, monitor and discipline management (Ntim and Osei, 2011; Freihat, Farhan and Shanikat, 2019). Although the frequency of board meetings is vital to board operations, they are costly in terms of managerial time, travel expenses and directors' meeting fees (Vafeas, 1999; Alsartawi, 2019). They also receive a negative market perception leading to a decline in the market value of the firm (Vafeas, 1999). Furthermore, despite the criticism that outside directors only have limited time to perform their monitoring role, empirical evidence shows that board activity rises with the number of outside directorships and usually follows a period of poor performance and corporate events (Vafeas, 1999; Brick and Chidambaran, 2010). Besides, the short period of time that outside directors spend together are not always utilised for meaningful debates amongst themselves and management (Vafeas, 1999). Instead, Vafeas (1999) argues that the meetings are used for performing routine tasks with less time allocated to management. Moreover, the costs of frequent meetings plus low director attendance of meetings erode the potential benefits attained (Gray and Nowland, 2018; Puni and Anlesinya, 2020).

The impact of board meetings on firm performance is inconclusive with some studies finding a positive impact of frequent board meetings on financial performance (Vafeas, 1999; Brick, Palmon and Wald, 2006; Freihat, Farhan and Shanikat, 2019) while others found a negative impact of frequent board meetings on financial performance (Abdulsamad, Yusoff and Lasyoud, 2018; Alsartawi, 2019). Other studies found no significant impact of board meeting frequency on firm financial performance (Gómez, Cortés and Betancourt, 2017; Makhlouf *et al.*, 2017). Basing on the discussion above, an optimum frequency of board meetings appears to be necessary for enhancing board discussions to improve both financial and non-financial performance of the hospitals. The board meeting hypotheses assume the below.

H4a. Board meetings have a significant relationship with financial performance of English NHS hospitals.

H4b. Board meetings have a significant relationship with non-financial performance of English NHS hospitals.

5.2.5 Board gender diversity

This study focuses on gender diversity on the board mainly because it is a focal topic of recent legislation and diversity efforts worldwide (Miller and Triana, 2009). The general concern is on the low representation of women on corporate boards (Singh and Vinnicombe, 2004). Board gender diversity is undergirded by three relevant theories of critical mass, stakeholder-agency, and resource dependence. Board gender diversity has for a long time captured the interest of various parties from scholars, corporations, investors and policy makers. However, this interest has not been replicated in actual female representation on boards as this still remains at low levels. According to the 2019 ISS Global Policy Survey results, 61% of investors and 55% of non-investors unanimously agreed that board gender diversity is an essential attribute of effective board governance regardless of the company or its market. However, an article in The Independent states that female representation on boards of FTSE 250 companies was at 27.5%, below the set target of 33% for the end of 2020 with many of the boards having only one female director. According to Guldiken *et al.* (2019), boards with one female director exhibit effects of tokenism where the female is appointed as a result of institutional pressures, rather than as an attempt to increase board diversity. Such actions do not yield benefits as results can only be achieved when gender diversity is more than one single female director (Guldiken *et al*., 2019). Dahlerup (1988) suggests that critical mass is pertinent to scenarios where minority representation of women is below 30%. The fact that females on boards represent the minority (Zahra and Pearce, 1989) gives

room to investigate the impact of their performance with respect to the critical mass theory. Therefore, in accordance with the critical mass theory, a large minority can attain a qualitative shift when women exceed a proportion of about 30% in an organisation (Dahlerup, 1988). Following on, the predictions of the stakeholder-agency theory also provide justification for increasing female representation on the board as a means of attempting to meet divergent stakeholder interests. Having female representatives on the board enables the managers, as agents of the various firm stakeholders, to make strategic decisions through well informed and diverse discussions. The arguments of the resource dependence theory also apply to board gender diversity in the sense that appointing diverse directors provides different avenues for linkages to valuable firm resources. Pfeffer and Salancik (2003) emphasise that the board of directors should be composed according to the firm dependencies. Similarly, Terjesen, Sealy and Singh (2009) suggest that the complex and uncertain business environment calls for strategic leadership with the requisite linkages to resources such as prestige, legitimacy, financing, knowledge, and diversity. Harjoto, Laksmana and Lee (2015) suggest that board diversity is important when it comes to overseeing corporate social responsibility performance especially for firms that require comprehensive stakeholder management such as highly competitive and consumer product markets. Gender diversity on the boards brings a number of benefits such as improved board independence, executive monitoring, decision making and linkage to critical resources (Ntim, 2015). Also, greater innovation levels (Miller and Triana, 2009; Chen, Leung and Evans, 2018), improved firm reputation (Smith, Smith and Verner, 2006), different perspectives based on knowledge of female customers (Singh and Vinnicombe, 2004), better decision making (Obert and Brighton, 2015), expanded board discussions, enhanced collaboration (Konrad, Kramer and Erkut, 2008) and director efficacy (Terjesen, Couto and Francisco, 2016) is achieved with board diversity. Female directors are also perceived to be more aligned towards enhancing non-financial performance of the firms through customer and employee satisfaction, gender representation and corporate social responsibilities of a firm (Siciliano, 1996; Terjesen, Sealy and Singh, 2009; Hafsi and Turgut, 2013; Harjoto, Laksmana and Lee, 2015). Particularly, boards that have three or more female representatives have better communication amongst themselves and firm stakeholders as well as enhanced accountability (Terjesen, Sealy and Singh, 2009).

However, females are also said to over monitor managers, and this ultimately decreases shareholder value and contributes to reasons why gender quotas in the board room should not be enforced (Adams and Ferreira, 2009). Moreover, despite their contribution of unique skills, knowledge and experience, the feminine qualities of female directors are overshadowed by suppressive board room cultures (Terjesen, Sealy and Singh, 2009). Likewise, Rose (2007) argues

that the process of socialisation where women adopt to the norms of their male counterparts while diminishing their own individuality results in their impact on performance not being realised.

Even so, the findings on the impact of board diversity on the financial and non-financial performance of firms are inconclusive. Several studies that investigated the relationship between board gender diversity and performance found a positive impact of board diversity on financial performance (Conyon and He, 2017; Green and Homroy, 2018; Scholtz and Kieviet, 2018; Duppati *et al*., 2020; Wang, 2020). Siciliano (1996) found a positive relationship between board diversity and non-financial performance measured by social performance, while Harjoto, Laksmana and Lee (2015) found a positive relationship between board diversity and non-financial performance measured by corporate social responsibility. Other studies found a negative relationship between board diversity and financial performance (Adams and Ferreira, 2009; Ahmad *et al.*, 2019; Kweh *et al*., 2019). More so, (Rose, 2007; Carter *et al*., 2010; Fernández-Temprano and Tejerina-Gaite, 2020) found no evidence of a relationship between board diversity and firm financial performance. With the support of the stakeholder-agency, resource dependence and critical mass theories, it is hypothesized that board gender diversity positively contributes to hospital performance.

H5a. Board gender diversity has a significant relationship with financial performance of English NHS hospitals.

H5b.Board gender diversity has a significant relationship with non-financial performance of English NHS hospitals.

5.2.6 CEO tenure

According to Hambrick and Mason (1984), tenure is one of the observable characteristics of managers that can partly predict the performance of an organisation. This assumption is underpinned by the predictions of the upper echelons theory. Hambrick and Mason (1984) note that tenure in the organisation can have both a positive or negative impact on organisational outcomes with regards to performance or strategic choices based on the firm's operating environment. Particularly, Hambrick and Mason (1984) emphasise that long tenured teams are associated with comprehensive industry knowledge and firm working relationships which are beneficial to an organisation particularly in periods of stability. However, the UK Corporate Governance Code 2018 suggests that the chair should not serve for more than nine years from

date of first appointment to the board unless in situations to facilitate effective succession and development of a diverse board. Accordingly, the ISS 20162017 Policy Survey, it is revealed that institutional investors were interested in their boards being refreshed with new skill sets. The policy survey results indicate that 51% of respondents were concerned with an average board tenure of more than 10 or 15 years, while 68% found that high proportion of long-tenured directors of 10 years or more to be problematic. However, other respondents to the survey note that long tenured directors have the confidence and stature to challenge management and offer institutional and historical perspectives to the firm. Kesner (1988) argues that it takes directors 3 to 5 years to sufficiently understand a firm's operations and even more years for them to gain a thorough understanding. Moreover, Huang and Hilary (2018) suggest that firm value reaches a maximum when the average tenure of outside directors is approximately 10 years. Certain directors who are classed as 'grey' directors with more than twenty years of service have high equity investments in the firm and are favoured to serve on the nominating and compensation committees (Vafeas, 2003). To an extent, long tenured boards are beneficial for a firm's overall performance. Peni (2014) posits that CEOs with many years of experience possess knowledge and tasks specific to the firm as well as a higher level of expertise.

Vafeas (2003) argues that the expertise hypothesis is linked to long term directors who have greater experience, commitment, and competence, which provide them with vital knowledge about the firm and its business environment. Similarly, long tenured boards are associated with increased involvement in tasks with fewer additional directorships and enhanced organisational identification by directors (Veltrop *et al*., 2018). They also possess higher firm specific skills (Forbes and Milliken, 1999), are more efficient in aligning interests of the CEO and shareholders (Brown *et al*., 2017), experience better board cohesion (Forbes and Milliken, 1999), and increased participation in corporate social responsibility (Harjoto, Laksmana and Lee, 2015). Likewise, boards with long tenures increase chances of firm survival (Howton, 2006), enhance monitoring and advisory by directors (Carpenter and Westphal, 2001), encourage strategic change (Golden and Zajac, 2001), possess an enhanced ability to evaluate top management proposals (Van Ness and Kang, 2010) and possess a wide network of business contacts that could be of use to the firm (Peni, 2014). With regards to long tenured CEOs, their understanding of the firm and accountability increases (Kaur and Singh, 2019) while the directors with long tenures become more knowledgeable of the firm and this enhances their performance capabilities (Fernández-Temprano and Tejerina-Gaite, 2020).

On the flipside, Hambrick and Mason (1984) suggest that long serving executives in an organisation are perceived to have limited viewpoints especially in the face of unprecedented challenges such as intensive competition, radical technological shift, and deregulation. An increase in tenure does not result in interlocking directorships or increase in consulting agreements (Vafeas, 2003). Instead, longer tenures are associated with governance problems (Berberich and Niu, 2011), deterred corporate innovation (Jia, 2017), monotony in decision making (Fernández-Temprano and Tejerina-Gaite, 2020) and increased inflexibility to changing traditional operational approaches and strategies (Finkelstein and Hambrick, 1990; Golden and Zajac, 2001). This increased resistance to change leads to the firm strategy and performance conforming to the industry standards (Finkelstein and Hambrick, 1990). Vafeas (2003) argues that extreme lengths of board tenure may be detrimental to shareholder interests and thus advocated for term limits to be set to permit the replacement of directors who no longer meet their responsibilities (Lipton and Lorsch, 1992). Likewise, as Forbes and Milliken (1999) suggest, boards with long tenures experience lower levels of cognitive conflict due to their limited perspectives resulting from working together for extended periods of time. In addition, long tenured CEOs tend to reduce the board's independence as the CEO becomes entrenched and difficult to monitor and evaluate (Kaur and Singh, 2019). On the contrary, short tenures lack substantial institutional knowledge which affects their ability to recommend strategic change (Golden and Zajac, 2001). They also tend to make incomplete analysis, uncertain decisions and be influenced by social pressures which impacts decision making (Van Ness and Kang, 2010).

There are some studies that found that board tenure positively impacts financial performance of firms (Van Ness and Kang, 2010; Livnat *et al*., 2021), while others found a negative relationship with firm financial performance (Ahmadi, Nakaa and Bouri, 2018; Kaur and Singh, 2019). More so, (Culica and Prezio, 2009; Afrifa and Tauringana, 2015; Kagzi and Guha, 2018) found no relationship between limitless board tenures and firm financial performance. The NHS is a well-established institution that may favour long tenured boards for their experience, institutional knowledge and stability. Based on this, the hypotheses on CEO board tenure are as follows.

H6a. CEO tenure has a significant relationship with financial performance of English NHS hospitals.

H6b. CEO tenure has a significant relationship with non-financial performance of the English NHS hospitals.

5.2.7 CEO gender

Basing on the arguments of the upper echelons theory by Hambrick and Mason (1984), organisational outcomes are reflective of the values and cognitive foundations of influential actors in the organisation. Influential actors in the organisation comprise of the board directors and members of the top management team. Therefore, the impact that the gender of the CEO has on firm performance can be explained by the assumptions of the upper echelons theory. Singh and Vinnicombe (2004) suggest that successful female directors are not appointed as tokens, but for their strong functional backgrounds and corporate experience. Women leaders are appointed for their specialised skill rather than for their linkages to external resources (Dunn, 2012). There are a number of attributes inherent to female CEOs that shape their cognitive functions, actions as well as decisions. For instance, women are associated with being empathetic, helpful, caring, nurturing, sensitive, accepting of others and responsive to needs and motivations of others (Fondas, 1997).

Prior research indicates that women as leaders can be both beneficial and detrimental to the firm, with the adversity arising from roles being defined as dominated by males (Eagly and Carli, 2003). Eagly and Carli (2003) suggest that access to leadership positions for women is restricted by the prejudicial biased reactions and judgements towards women on their performance. Women therefore tend to conform to expectations concerning appropriate female behaviour and the necessity to exhibit their competence inhibits women from getting recognition for their capabilities and achievements (Eagly and Carli, 2003). Precisely, Eagly and Carli (2003) argue that overall, successful female leaders are hardworking and tend to pursue leadership styles that do not result in resistance of their authority. They are also purported as being more interpersonal and democratic compared to men who are perceived as being more task oriented and autocratic in their approaches (Eagly and Carli, 2003). Such gender differences might have an impact on individual business success (Kaur and Singh, 2019). Female directors are said to be more independent given that they are excluded from the ‘old boys club’ (Brennan and McCafferty, 1997). They contribute to enhancing the efficacy of independent directors while correcting the negative perception of gender imbalances on the board (Terjesen, Couto and Francisco, 2016). Female directors also enhance legitimacy and monitoring of managers, have a long-term outlook, and are effective at implementing corporate strategies (Dunn, 2012). They are often associated with being more capable of recognising and comprehending consumer needs thus creating competitive advantage for the female led firms (Brennan and McCafferty, 1997; Kaur and Singh, 2019). Female leaders also bring a different perspective, social capital and interlocked non-

executive directorships which are beneficial to the board (Singh and Vinnicombe, 2004). They are also good risk managers (Schubert, 2006) and receive a positive market reaction from investors who take their appointment as positive for value addition (Campbell and Mínguez-Vera, 2008). Additionally, Eagly and Carli (2003) describes women as having better social skills which facilitates collaborative and democratic leadership styles that pacifies subordinates and disseminates resistance to the female leaders. They also note that the women leaders tend to engage in transformative leadership and advocate for rewards for performance. Similarly, Fondas (1997) suggests that female leaders are more aligned towards collective interest and integrative goals such as promoting group cohesion and stability, preferring democratic and cooperative relationships with a genuine interest in realising values and relationships of much significance to the community. Certainly, the women directors are concerned with improving non-financial performance indicators such as customer and employee satisfaction (Terjesen, Sealy and Singh, 2009), and tend to endorse qualitative tasks such as corporate social responsibility (Huse, Nielsen and Hagen, 2009). Women contribute creativity and innovation, effective problem solving, enhance efficacy of corporate leadership, increase understanding of environmental complexities, make astute decisions and foster effective global relationships (Carter, Simkins and Simpson, 2003). At the same time, they enhance teamwork, intrinsic motivation, creativity and cognitive resources which all positively impact firm outcomes (Dezső and Ross, 2008). Appointing female directors also improves the overall image of the firm (Ullah, Muttakin and Khan, 2019).

However, the contribution of female directors is limited by their conformance to the dominant group on the board especially when there is a solo female director appointed to the board (Torchia, Calabrò and Huse, 2011). They argue that the only female director on the board is usually categorised, stereotyped and ignored by the dominant group on the board. When female directors are appointed as a response to political and social pressure, they are used merely for show and not for their potential contributions, and this is detrimental to firm performance and efficiency (Dezső and Ross, 2008; Van Ness and Kang, 2010). Besides, Zelechowski and Bilimoria (2004) suggest that despite the increase in insider women representation on the board, women in the top corporate echelons are not accorded the same level of influence, stature, and prestige that their male peers in similar positions enjoy. They suggest that women in top management of firms are considered as tokens and lack personal influence in discussions at board level. Particularly, women leaders are associated with avoiding impression management tactics and strategies such as networking upwards and self-promotion which may impact outcomes (Singh and Vinnicombe, 2004). They argue that this behaviour impacts visibility of women as they also tend to distance themselves from office politics. On top of that, female directors are perceived to

be more cautious and risk averse especially in making financial decisions hence incline to make less risky decisions that have lower returns (Levin, Snyder and Chapman, 1988; Jianakoplos and Bernasek, 1998; Byrnes, Miller and Schafer, 1999; Schubert, 2006; Kaur and Singh, 2019). Likewise, firms with relatively high levels of risk are predisposed to appoint female directors to reduce their risk (Martin, Nishikawa and Williams, 2009). By the same token, Dezső and Ross (2008) argue that there is a tendency for female directors to be less effective in, and abhorrent of competitive environments. They also suggest that the diversity in perspectives is bound to result in internal conflicts which slows down the decision-making process and consequently affects performance. The access to opportunities that shape human and social capital are limited for women compared to men, and as a result, the discernment of women as valued business experts is restricted (Singh, Vinnicombe and Terjesen, 2007).

There are inconclusive results of the relationship between CEO gender and firm performance. Some studies report a positive relationship with firm financial performance (Khan and Vieito, 2013; Peni, 2014; Ullah, Muttakin and Khan, 2019) while (Dezső and Ross, 2008; Jadiyappa *et al.*, 2019; Kaur and Singh, 2019) indicate that the relationship between CEO gender and non-financial performance of firms is negative. Meanwhile Lam, McGuinness and Vieito (2013) indicate mixed findings on the relationship. Given the theoretical discussion and arguments from prior studies, the impact of CEO gender especially in the English NHS is assumed to be positive.

H7a. CEO gender has a significant relationship with financial performance of English NHS hospitals.

H7b. CEO gender has a significant relationship with non-financial performance of English NHS hospitals.

5.2.8 Academic directors

An academic director is defined as a professional with a career and current employment in an institution of higher education or independent research (Peterson and Philpot, 2009). The relationship between academic directors and performance of firms can be explained by the resource dependence theory. Firstly, the resource dependence theory posits that firms can manage external dependencies by appointing external representatives to the board of directors (Pfeffer and Salancik, 2003). According to Hillman, Cannella and Paetzold (2000), linking the organisation to the external environment is a key board function which firms use by altering board composition in response to dependencies on the external environment. Pfeffer and

Salancik (2003) suggest that the process of co-opting external directors to the board is one of the easiest and most flexible firm strategies for accessing resources, exchanging information, developing interfirm commitments, and establishing legitimacy. For instance, Hillman, Cannella and Paetzold (2000) suggest that co-opting an outside director with regulatory expertise serves to provide information and expertise which reduces both uncertainties as well as regulatory related transaction costs.

According to Forbes and Milliken (1999), present-day boards have a diverse array of directors representing academics, bankers etc, which enhances the functional knowledge, skills, and cognitive conflict of the board. Academic directors are appointed to boards for their expertise, which is perceived to be superior to that of directors with no industry knowledge, and to perform an advisory role, oversee management, serve on key board committees, serve as links to networks, social connections and community stakeholders and improve firm reputation (Peterson and Philpot, 2009; Harris, 2014; White *et al*., 2014). Similarly, the attributes of academic directors are unique, and they possess a relatively higher reputation, specialised expertise in particular fields, are independent thinkers, exhibit better meeting attendance rates and participation in monitoring committees compared to other outside directors (Francis, Hasan and Wu, 2015). They also have human capital and the knowledge to contribute to the access and absorption of external knowledge spill overs especially for entrepreneurial firms (Audretsch and Lehmann, 2006). In addition, they serve as visionaries on the boards due to their expertise and creativity (Peterson and Philpot, 2009). Likewise, academic directors are found to enhance board oversight of management, increase innovation capacity through specialised expertise, enhance advisory and monitoring particularly during acquisition decisions, increase board diversity, efficiency and access to finance (Peterson and Philpot, 2009; Francis, Hasan and Wu, 2015; Liu, 2020). Similarly, given their rigorous training and past experience, academic directors bring to the board a range of perspectives in interpreting complex problems and their pre-eminent capacity in making decisions and developing innovative solutions for the complex problems in uncertain environments (Jiang and Murphy, 2007; Van Ness and Kang, 2010). They are also highly competent and provide current knowledge especially when the functional area matches their field of speciality (Jiang and Murphy, 2007; Peterson and Philpot, 2009). According to Tan *et al.* (2020), directors with higher levels of education possess greater cognitive ability and are associated with improved firm performance (Liu, 2020). The market reaction to appointing academic directors to the board is positive except for when an appointed administrative director is not within the geographical proximity (White *et al*., 2014). Notably, Cho *et al.* (2017) indicate that academic directors are associated with higher ratings for corporate social responsibility of a firm.

However, presence of diverse educational and functional backgrounds on the board reduces the level of cohesion on the board and exacerbates communication and coordination problems (Forbes and Milliken, 1999). This results in underutilisation and inadequate applicability of knowledge, skills, and expertise to resolving issues facing the board (Forbes and Milliken, 1999). The academic directors do not enhance board efficacy and firm performance in situations where their expertise does not translate well into real business scenarios and their narrow business exposure limits decision making abilities in a business environment (Francis, Hasan and Wu, 2015). In addition, the academic directors may possibly be biased and less independent due to their director related compensation and potential ties with outside firms through their administrative roles (Francis, Hasan and Wu, 2015). The academic directors are also perceived to have a different perspective on management especially due to their focus on academic rigor as opposed to important factors to improve firm performance (Jiang and Murphy, 2007). The decision making capacity and managerial competence of academic directors is questioned especially given their specialised scholarly backgrounds and limited business exposure (Jiang and Murphy, 2007).

Prior empirical studies by Francis, Hasan and Wu (2015) and Liu (2020) reveal that appointing academic directors to the board has a positive impact on financial performance of firms, whereas Harris (2014) and Cho *et al.* (2017) reveal that the academic directors positively impact non-financial performance of firms. Using this discussion as a basis, we propose the below hypotheses.

H8a. Academic directors have a significant relationship with financial performance of English NHS hospitals.

H8b. Academic directors have a significant relationship with non-financial performance of English NHS hospitals.

5.2.9 Multiple directorships

Multiple directorships or board busyness is a common term used in corporate governance studies to describe directors holding other positions on the boards of other firms. Precisely, Ferris, Jagannathan and Pritchard (2003) illustrate multiple directorships as the busyness hypothesis. The notion of directors holding multiple board seats is consistent with the arguments of the resource dependence theory. Firms may not be in a position to generate resources required for their survival internally, so they attempt to secure these resources through interlocking directorates (Mizruchi and Stearns, 1988). Like Pfeffer and Salancik (2003) postulate, interlocking directorates

is a mechanism through which exchanges between firms are enabled by an affiliated director with an organisation serves on the board of another organisation (Mizruchi, 1996). Boards are interlocked in order to gain access to resources, facilitate information exchange, develop relationships between firms, social networks and establish legitimacy (Hillman, Cannella and Paetzold, 2000; Pfeffer and Salancik, 2003). More so, a firm's survival is dependent on their response to environmental demands (Pfeffer and Salancik, 2003), for instance, capital is a critical resource which firms can access by co-opting representatives from financial institutions (Mizruchi and Stearns, 1988). Also, transmission of information between two firms and the external environment can be achieved through interlocking directorships (Dunn, 2012). Therefore, it is appropriate to suggest that the main indication of inter-organisational ties is board interlocks (Mizruchi, 1996). Holding multiple directorships is perceived to be an indication of a director's reputation (Chen, Lai and Chen, 2015). Ferris, Jagannathan and Pritchard (2003) emphasise that the reputation of a director in the market based on their previous board service and firm performance are key drivers for employability purposes and offers for other board memberships. Based on their competence and wide-ranging expertise, the directors are likely to serve on multiple board committees (Mishra and Kapil, 2018).

There are both benefits and drawbacks of multiple directorships to the firm. Busy directors are perceived as being better and more efficient in their performance (Sarkar and Sarkar, 2009). Particularly, Lee and Lee (2014) suggest that firms that have high advisory needs benefit from multiple directorships as they bring with them the experience, counsel and expertise. Some firms operating in competitive and uncertain environments use interlocking directorates as a coping mechanism (Lang and Lockhart, 1990). Directors with multiple board roles are said to benefit the firms they serve for their part in providing access to vital firm resources such as capital (Kiel and Nicholson, 2006. They are also excellent advisors especially for young firms, (Field, Lowry and Mkrtchyan, 2013) and enhance the strategy and acquisition decisions of a firm based on their information and networks (Chen, Lai and Chen, 2015). Sarkar and Sarkar (2009) indicate that busy directors are better performers, provide better oversight, are more knowledgeable, experienced, networked and more committed in performing their governance duties. They also have better meeting attendance (Sarkar and Sarkar, 2009) and do not shirk on their directorial duties (Ferris, Jagannathan and Pritchard, 2003).

The market reacts positively to the news of appointing a director with multiple board roles (Ferris, Jagannathan and Pritchard, 2003) although, despite the enhanced visibility and status of the outside directors, it is to the detriment of shareholders (Mishra and Kapil, 2018). Iturriaga and

Rodríguez (2014) argue that the performance of the firm is positive when the reputation effect that enhances the skills and performance incentives of the busy directors is dominant. However, the dedication effect takes on when the directors become overwhelmed with duties and cannot perform satisfactorily, hence impacting firm performance (Iturriaga and Rodríguez, 2014). Building on this notion, Daniliuc, Li and Wee (2020) suggest that firm performance improves when directors reduce the number of boards they serve on. This is because busy directors are said to have reduced work efficiency and capacity to govern and provide managerial oversight due to their busyness (Chen, Lai and Chen, 2015). In addition, the busy directors have limited attention capabilities and inadequate time dedicated to undergoing the learning curve to achieve a certain level of competence (Chen, Lai and Chen, 2015). Furthermore, busy directors are detrimental for firm monitoring and shareholder value (Field, Lowry and Mkrtchyan, 2013; Falato, Kadyrzhanova and Lel, 2014). Likewise, busy directors are overcommitted and overburdened resulting into inadequate monitoring, service and value provided to the firm (Jackling and Johl, 2009). In addition, the overburdened directors have limited time and capacity that they are able to dedicate to processing the information given to them (Mishra and Kapil, 2018). Also, the increased workloads affect their meeting attendance rates and this negatively impacts firm performance (Gray and Nowland, 2018).

The positive impact of multiple directorships on firm performance is found by Sarkar and Sarkar (2009) and Pandey, Sehgal and Mittal (2019) while the adverse effect of multiple directors on firm performance is revealed by Jackling and Johl (2009), Cashman, Gillan and Jun (2012), Falato, Kadyrzhanova and Lel (2014), Hundal (2017) and Gray and Nowland (2018). However, Iturriaga and Rodríguez (2014) note that the relationship between multiple directorships and firm performance reverses from positive to negative after a certain threshold is exceeded. Meanwhile, Rohaida *et al*. (2013) indicate that multiple directorships neither benefit nor affect firm performance. Consistent with these arguments, the hypotheses on multiple directorships are as proposed below.

H9a. Multiple directorships have a significant relationship with financial performance of the English NHS hospitals.

H9b. Multiple directorships have a significant relationship with non-financial performance of the English NHS hospitals.

5.2.10 CEO background

The CEO background for purposes of this study refers to the previous education or functional experience of the CEO. Although the relationship between the qualifications of the directors and financial firm performance is not widely investigated (Ujunwa, 2012), the background of the CEO is an observable characteristic of managers that impacts their decision making and strategic choices. The arguments of the upper echelons and resource dependence theories are used to explain the link between the CEO's functional or educational background and firm performance. For instance, Hambrick and Mason (1984) argue that the CEO's background influences the strategies that they pursue, for example, an executive with an operations background tends to prioritise cost reduction strategies. Moreover, they suggest that the observable characteristics of the managers reveal the level of contribution to firm administration based on the influence of their background orientation on their choices. On the other hand, in relation to resource dependence theory, Hillman and Dalziel (2003), suggest that board capital, which comprises of expertise, experience and strategic environmental linkages, has a direct relationship with board monitoring and resource provision. Likewise, Bilimoria and Piderit (2007) suggest that the composition of the board is strategic to the extent that the directors can provide linkages to critical resources such as prestige, legitimacy, financing, relevant market familiarity and diversity. With this, they suggest that appointing people from different occupational backgrounds serves to enlarge the scope for linkages to critical resource such as expertise, experience, networks, information, etc.

The educational background of the CEO is imperative because it is through their education that the CEOs create social connections (Saidu, 2019). Directors with a qualification of a Ph.D. are perceived to have strategic linkages to external critical resources (Ujunwa, 2012; Saidu, 2019). Moreover, directors with a Ph.D. qualification are seen to possess relevant competencies and capabilities (Ujunwa, 2012). Saidu (2019) suggests that education is vital in preparing managers to make and implement better decisions for the firm. Similarly, achieving high education qualifications is connected to a person's cognitive capabilities, innovation, creativity and developing solutions to problems (Shahrier, Ho and Gaur, 2020). However, Bhagat, Bolton and Subramanian (2010) suggest that education level is not a suitable indicator of the abilities of the CEO and thus supports the argument of Gottesman and Morey (2006) that educational background has a limited impact on performance of the CEO.

Although the empirical studies identified on the impact of CEO education/ background on firm performance are few and far apart, the findings are still inconclusive. Saidu (2019) and Shahrier,

Ho and Gaur (2020) report a positive impact of CEO education on financial performance of firms, while Gottesman and Morey (2006) and Bhagat, Bolton and Subramanian (2010) found no impact of CEO education on firm financial performance. In line with the arguments above, the hypotheses on the impact of CEO education on firm performance are assumed to take the direction below.

H10a. CEO background has a significant relationship with financial performance of the English NHS hospitals.

H10b. CEO background has a significant relationship with non-financial performance of the English NHS hospitals.

5.2.11 Honoured directors

The variable on honoured directors defines the directors on the board with titles of honour/merit. These individuals are awarded with honorary titles as a recognition for their service and contribution to society. Today, majority of boards are comprised of honorary directors holding titles such as CBE, OBE, MBE, Dame, amongst others. This study attempts to investigate the impact that these honorary titled directors have on financial and non-financial performance of hospitals. The connection between the directors with titles and performance can be reasoned using the resource dependence theory and upper echelons theory. According to Pfeffer and Salancik (2003), the composition of the board reflects the extent of its external dependencies. Directors are appointed to the board to act as a conduit to vital external resources such as fiscal capital, political influence or stakeholder relations (Hillman and Dalziel, 2003). Appointing directors with honorary titles for their contribution in a particular area is a way of creating linkages to particular vital resources that the firm requires for its success and survival. With regards to the arguments of the upper echelons theory, Hambrick and Mason (1984) suggest that the characteristics of the managers that can be observed can partially predict the performance outcomes of an organisation. For instance, they argue that firms that have top managers from higher socioeconomic groups are associated with greater growth and profit. Meanwhile, firms with top managers from lower socioeconomic groups are more associated with firms that tend to pursue unrelated acquisition and diversification strategies (Hambrick and Mason, 1984). The directors with honorary titles are perceived to be well recognised in their respective fields with a high level of legitimacy and respect accorded to them by their peers. Therefore, their appointment to a board is expected to generate benefits for the firm.

No studies have been identified to investigate this phenomenon despite the prevalence of such titled directors on the boards of a number of corporate institutions, including the NHS. Using the arguments of the two theories of resource dependence and upper echelons, the hypotheses on the impact of directors with honorary titles on financial and non-financial performance of hospitals in the English NHS are as below.

H11a. Honoured directors have a significant relationship with financial performance of the English NHS hospitals.

H11b. Honoured directors have a significant relationship with non-financial performance of the English NHS hospitals.

5.3 Summary and Conclusion

This chapter is aimed at developing testable hypotheses that can be empirically analysed in chapter 7 of this thesis. The hypotheses are underpinned by appropriate and relevant corporate governance theories and are focused on corporate governance indicators that potentially have a relationship with the financial and non-financial performance of hospitals. It is important to note that the impact of CEO duality on performance of the hospitals in the English NHS is not discussed in this study because all the NHS trusts and foundation trusts practice non-duality in accordance with the provisions of the UK Corporate Governance Code 2018. Particularly, the NHS hospitals follow the recommendation on division of responsibilities that recommends that the role of the chair and CEO should not be performed by the same individual. The methodology used for testing the proposed hypotheses is described and discussed in the next chapter.

Chapter 6 Research Methodology

6.1 Introduction

This chapter presents the research methodology adopted to address the research objectives of this study. By definition, research methodology is a systematic process implemented to address the identified research questions using various selected steps and an explanation of the logic that drives the decisions taken (Kothari, 2004). The definition of the research objectives, selection of an appropriate sample, collection and analysis of the data, to communication of the findings occurs within established frameworks and in accordance with existing guidelines. The frameworks and guidelines provide an indication of what to include in the research, how to perform the research, and what types of inferences are credible based on the data collected. Clearly explaining the research methodology enables the findings to be replicated (Kothari, 2004). The ensuing discussion covers the research methodology adopted to examine the impact of corporate governance on financial and non-financial performance of hospitals in the English NHS. The rest of the chapter is organised as follows: - Section 6.1 is a discussion of the research philosophy adopted for this study. Section 6.2 discusses the research strategy and approaches, Section 6.3 is about the research design, sampling, and data collection methods. The selection, definition, and operationalisation of the dependent, independent and control variables are covered in Section 6.4 whereas Section 6.5 is a discussion about the data analysis tools, estimation techniques and robustness checks. Section 6.6 is the summary of the chapter.

6.2 Defining the research paradigm and approach

Burns and Burns (2008) defines a paradigm as “a framework of assumptions that reflect a shared set of philosophic beliefs about the world which places strict guidelines and principles on how research should be conducted.” They state that the two main paradigms are the positivist paradigm, also known as positivism, and the interpretivist/constructivist paradigm, also known as interpretivism. Burns and Burns (2008) suggest that the scientific quantitative research method replicates the positivist paradigm while the qualitative research method replicates the interpretivist paradigm. Firstly, Burns and Burns (2008) describe the positivist paradigm as including elements of an objective world characterised by a set of laws, causality, unbiased settings and relying on the use of explicit, objective measures commonly used with quantitative data. In addition, they state that research guided by a positivist paradigm is rigorous, linear, rigid

and based on hypothesis testing while utilising methods such as experimental studies, re-examining secondary data, structured questionnaires, and interviews. More so, the independence of the researcher and the subjects involved is upheld throughout the process and research implications are made through deductive reasoning (Burns and Burns, 2008). On the other hand, they describe the interpretivist paradigm as having a subjective perspective where personal experiences with the physical and social reality differ because individuals shape their personal experiences through subjective evaluation and relevance. They suggest that the research takes an inductive approach where the researcher and the subjects are fully engaged with each other and following a flexible process, with material collected from participants through methods such as ethnography, participant observation and focus group interviews.

According to Saunders, Lewis and Thornhill (2016), the research paradigms are differentiated by their epistemological, ontological and axiological assumptions. Epistemological assumptions are concerned with human knowledge, ontological assumptions consider the realities encountered in the research process and axiological assumptions embody the influence of personal values on the research process (Saunders, Lewis and Thornhill, 2016). Furthermore, Saunders, Lewis and Thornhill (2016) describe ontological assumptions as those concerning the nature of the reality which informs the researcher's perception of the study objects, such as organisations, management etc. Secondly, epistemological assumptions are about disciplines and how the researcher understands and communicates their opinions as knowledge (Burrell and Morgan, 1979). Burrell and Morgan (1979) suggest that the epistemological assumptions are made up of ideas that can be obtained and categorised as true or false. Finally, axiological assumptions are generally about the importance of values and ethics in the process of conducting research, comprising of questions about how the researcher's personal values and those of research participants are handled (Saunders, Lewis and Thornhill, 2016). According to Saunders, Lewis and Thornhill (2009), research projects take on either a deductive or inductive approach where the deductive approach is consistent with positivism and involves developing a theory and testable hypotheses while an inductive approach is associated with interpretivism where data is collected and analysed with the findings used to develop a theory.

Notably, adopting a calculated and consistent set of assumptions is an antecedent for establishing a research paradigm which forms the foundation of the methodical stance, research strategy and methods of data collection and analysis (Greener, 2008; Saunders, Lewis and Thornhill, 2016). For this study, the positivist paradigm is the appropriate paradigm to guide the research based on the requirements of the research problem. The elements of positivism reflect the nature of this

research study in which the researcher and the subjects are separate and work with an observable social reality, and the research results in law-like generalisations (Saunders, Lewis and Thornhill, 2009). The research also takes a deductive approach which is commonly associated with the positivist paradigm.

6.3 Research Methodology

A research methodology is described by Berg and Lune (2017) as the overall process and strategies undertaken by researchers in selecting a sample, sampling techniques and a research framework from which data is gathered and analysed. The two main research realms commonly observed in existing literature are the quantitative and qualitative research (Adams *et al.*, 2007). Firstly, quantitative research is based on methodological principles of positivism and neo-positivism that are applied in quantitative studies and involve the use of statistical analysis (Adams *et al.*, 2007). On the other hand, qualitative research is based on several methodological approaches based on diverse theoretical ideologies which employ non-quantitative data collection and analysis techniques used in investigating social relations that describe reality according to the experience of the subjects (Adams *et al.*, 2007). In addition to the two common approaches, mixed methods combines elements of qualitative and quantitative research by exploiting the strength of both research approaches (Creswell, 2009). Mixed methods focus on research questions that require contextual considerations of real life, multi-level perspectives and cultural influences that use both rigorous quantitative and qualitative research while integrating diverse methods, philosophical and theoretical perspectives (Creswell and Plano, 2011). By means of different data collection and analysis methods, mixed methods are used to enrich, validate and provide checks on findings from a particular research method (Greener, 2008).

This study adopts quantitative research methods to address the research objectives of this study. The selected research methodology is suitable for this study based on the type of data collected to address the research questions.

6.4 Research design and strategy

Burrell and Morgan (1979) suggest that research design is the process of developing research questions into projects. They argue that the components of research design include purpose of the study, conceptual framework, research questions, methods and sampling procedures adopted for the collection of data. The three types of research design are categorised as fixed, which is

commonly referred to as a quantitative strategy, flexible design, also known as qualitative strategy that changes during the collection of data and a multi-strategy design which is a combination of fundamentals of both fixed and flexible designs (Burrell and Morgan, 1979).

On the other hand, a research strategy is the general plan adopted to attain a goal, particularly, how to address research questions, identify data sources, challenges and ethical issues anticipated in the research process (Saunders, Lewis and Thornhill, 2009, 2016). Likewise, Burrell and Morgan (1979) simply define a research strategy as the overall direction taken in search of answers to the research questions posed. According to Saunders, Lewis and Thornhill (2016), quantitative methods use experimental and survey strategies to collect, analyse and interpret data. Meanwhile the three research methods of qualitative, quantitative and mixed methods employ archival, documentary, case study and ethnographic research, whereas action, grounded theory and narrative inquiry are exclusively used by qualitative research design (Saunders, Lewis and Thornhill, 2016). In addition, Saunders, Lewis and Thornhill (2016) argue that the research strategy follows the direction of the research questions and objectives which are logically connected to the adopted research philosophy, approach, purpose, extent of knowledge, time and resource availability.

Therefore, this research adopts the experiment research strategy which is purposed to investigate the likelihood that a variation in an independent variable can instigate a change in the dependent variable (Saunders, Lewis and Thornhill, 2016). In the experiment strategy, the researcher utilises predictions or hypotheses to anticipate the existence of a relationship between two variables, basing on hypotheses tested using statistical tools (Saunders, Lewis and Thornhill, 2016). This study also adopts the case study research design in addition to the experiment strategy. A case study is defined by Burrell and Morgan (1979) as a research strategy that comprises of an empirical examination of a specific contemporary phenomenon within its actual setting using various sources of evidence. Evidence for this particular study is derived from the National Health Service (NHS) in England. Saunders, Lewis, and Thornhill (2016) argue that research strategies can be combined as they are not mutually exclusive.

6.5 Sampling and data collection

Based on the research questions and objectives, non-probability sampling was adopted to gain insights into the particular case of the hospitals in the NHS in England (Saunders, Lewis and Thornhill, 2016). Data is collected from the NHS hospitals that provide health services in England (Saunders, Lewis and Thornhill, 2016). The NHS is the publicly funded universal system that

provides almost free healthcare services to the population of the UK as a whole. The NHS is present in the four UK countries namely, NHS England, NHS Scotland, NHS Wales and Health and Social Care in Northern Ireland. Although the 4 systems have similarities as a patient-led NHS with patient and public involvement in decisions about care, the evolution towards more coordinated care and reduced waiting times, comparability of performance is limited due to the disparities in definitions and data collection (Bevan *et al.*, 2014). Moreover, according to Bevan *et al.* (2014), comparisons between the 4 systems were limited as a result of the legislation that created devolved governments in Scotland, Wales and Northern Ireland in 1999. The disparities in scale, culture, and history contributed to the different policies, with the English NHS having a larger scale and more complicated operational standards compared to the devolved countries (Bevan *et al.*, 2014). Healthcare policies on patient choice, approach to integration, charges and funding became divergent resulting in less data being collected (Bevan *et al.*, 2014). Furthermore, performance comparability was also impacted by differences caused by the NHS reforms occurring at different times and the governance systems of England differing from the other countries, especially Scotland and Wales (Bevan *et al.*, 2014).

The English NHS as an institution is comprised of various bodies that perform different roles with the unanimous goal of ensuring that the population of England receives quality healthcare services. The institution comprises of regulators, commissioners, healthcare and support providers. However, this study focuses on the NHS trusts and foundation trusts, also collectively known as key providers of NHS health care services. Nagendran *et al.* (2019) note that NHS hospitals in England are categorised into financial and operationally distinct legal entities known as trusts, which deliver health services on behalf of the NHS and can be responsible for one or more hospitals. Likewise, they suggest that the well performing trusts have the ability to gain foundation trust status and attain a degree of financial and operational autonomy from the Department of Health.

6.6 Data types, sources, and collection techniques

A longitudinal study is adopted with data being collected from annual reports of the trusts and foundation trusts for a period of 5 years. The data types available for empirical analysis include times series, cross-section and a combination of time series and cross-section data collectively known as pooled data (Gujarati and Porter, 2009). They describe time series as a set of observations of the values that a variable takes at different times and collected at regular time intervals. They also define cross section data as data collected on one or more variables at the

same point in time. They note that pooled or combined data have elements of both time series and cross section data where panel or longitudinal data is a special type of pooled data in which the same cross-sectional unit is surveyed over time. According to Adams *et al.* (2007), longitudinal studies cover a long period of time and repeatedly follow the sample several times.

Based on the fact that panel data is collected from the same individuals at regular intervals, there is a possibility that the data may either have the same or differing number of observations over the period of data collection. Therefore, panel data can either be balanced or unbalanced. A balanced panel comprises of all observations of the variables for each entity and each time period whereas an unbalanced panel has some missing data for at least one time period or entity (Stock and Watson, 2007). Using panel data in a study has its benefits and limitations. Firstly, Frees (2004) and Larsen (2006) note that panel/longitudinal data permits the observation of many subjects over a period of time which allows for dynamic relationships to be examined and heterogeneity among subjects to be modelled. In addition, other benefits include being able to control for individual heterogeneity, attain more informative and variable data with less collinearity, achieve more degrees of freedom and efficiency, ability to study the dynamics of adjustment and identify and measure effects that can't be detected using pure cross-section or pure-time series data (Baltagi, 2005). Furthermore, Baltagi (2005) argues that more complex behavioural models can be constructed and tested using panel data compared to when purely cross-section or time series data is used. Likewise, bias as a result of firm or individual aggregation is reduced or eliminated given that micro panel data collected on individuals or firms is more accurately measured and macro panel data have a longer time series (Baltagi, 2005). On the other hand, the limitations of panel data stem from design and data collection problems such as coverage and non-response, distortion of measurement errors which may arise as a result of faulty responses to unclear questions and selectivity problems resulting from self-selectivity, non-response and attrition (Baltagi, 2005).

The period of study spans over 5 years from 2014 to 2018. Notably, the study scope represents the period after the enactment of the Health and Social Care Act 2012 which brought about a number of significant changes to the NHS in England. Some of these changes included the empowerment of clinicians to take responsibility of determining health services and placed them at the forefront of commissioning of health services, enabled providers to innovate new ways to deliver healthcare services, enhanced patient involvement in the NHS and increased accountability at the local and national level with ultimate accountability to the Secretary of State (Health and Social Care Act 2012 Factsheet).

The study sample comprises of 130 trusts and foundation trusts in 2014, 129 in 2015 and 128 for 2016 and 2018. Data from the NHS hospitals is collected from their respective annual reports downloaded from their respective websites. The summary of the total number of NHS hospitals with available data is presented in Table 1 below.

Table 1 Summary statistics of NHS trusts and foundation trusts 2014 - 2018

Type of Hospital	**2018**	**2017**	**2016**	**2015**	**2014**
All acute specialist NHS trusts	2	2	2	2	2
All acute specialist foundation trusts	11	11	11	11	11
All acute non-specialist acute NHS trusts	44	44	44	45	45
All acute non-specialist foundation trusts	71	71	71	71	72
Total final sample	128	128	128	129	130
Firm Years	640	512	384	258	130

The above table represents an unbalanced panel data for the period from 2014 to 2018. The unbalanced panel is attributed to organisational changes such as trusts attaining foundation trust status, mergers and acquisitions that took place in the study period, while other hospitals had missing annual reports on their websites.

6.7 Selection and measurement of the main dependent variables

The dependent variable in this study is the financial and non-financial performance of the trusts and foundation trusts measured from two aspects of financial sustainability and health outcomes. The existing empirical studies on the impact of corporate governance on hospital performance have mainly focused on financial performance of hospitals (Goes and Zhan, 1995; Culica and Prezio, 2009; Collum *et al.*, 2014) with a few examining non-financial performance (Bai, 2013; Botje, Klazinga and Wagner, 2013; Bai and Krishnan, 2015). Only Prybil (2006) is identified to have investigated both financial and non-financial performance of hospitals. In a study by Pink *et al.* (2007), a number of financial indicators used in measuring financial viability were provided and included operating margin (OM), Total Margin, Return on Assets (ROA), Return on Equity (ROE), Non-operating revenue, Return on investment. Molinari *et al.* (1993) suggests that net operating margin, Return on Total Assets, Net Return after taxes divided by net patient revenues in line with other studies that investigated financial performance of hospitals in California, net operating margin, Return on Total Assets, Net Return after taxes divided by net patient revenues as the

relevant and appropriate measures for profitability of the hospitals. Therefore, for this study, to measure financial performance of the NHS trusts and foundation trusts, ROA was used in line with Molinari *et al.*, 1993, Collum *et al.*, 2014 and Afriyie *et al.*, 2020, while OM was the alternative measure used in the sensitivity tests to confirm validity of results in line with studies by Molinari *et al.* (1995), Culica and Prezio (2009) and Collum *et al.* (2014). The selected financial performance measures of ROA and OM assess the hospital's ability to generate financial resources that are needed to replace assets, acquire new technology and meet increases in service demand (Pink *et al.*, 2007). Both ROA and OM are profitability ratios that illustrate both the revenues and expenses of a hospital (Collum *et al.*, 2014). In particular, ROA shows how effectively the trusts and foundation trusts are at using the assets to generate a surplus. The trusts have a statutory obligation to break even on their income and expenditure and ROA is a universal measure of income derived from operational and non-operational sources (Molinari *et al.*, 1993). Meanwhile OM is also used because it shows the efficiency with which the hospitals generate income from its core operations and is expected to respond to management's participation on the board (Collum *et al.*, 2014).

For non-financial performance, the proxies used include the 62-day cancer referral and treatment target (Nagendran *et al.*, 2019) and the overall quality ratings of the hospitals as adopted in prior studies by Jha and Epstein (2010), Goodall (2011), Veronesi, Kirkpatrick and Vallascas (2014). The non-financial measures adopted are nationally recognised performance standards in the English NHS. The study considered the waiting times target for cancer treatment as this demonstrates the hospital's commitment to evaluate and treat patients with serious conditions in a timely manner. The measure therefore gives an insight into patient care adopted by the hospitals. Alternatively, the quality ratings were used as a non-financial measure to test the robustness of the results. Quality ratings are awarded by the Care Quality Commission (CQC) to all healthcare providers in the NHS. The CQC is the independent regulator of health and social care services in England and is responsible for carrying out inspections of all health and social care providers. The quality ratings are awarded based on five lines of inquiry namely safety, responsiveness, caring, efficiency, and leadership of the hospitals from a quality and finance perspective. The ratings range from *outstanding* for the best performers, to *good*, *requires improvement* and *inadequate* for the worst performing trusts and foundation trusts. In operationalising these ratings, *outstanding* performance was denoted as 4, while *inadequate* was awarded 1 in line with the approach adopted by Veronesi, Kirkpatrick and Vallascas (2013), (2014). Both the 62-day cancer referral and treatment target and overall quality ratings reflect hospital processes. Process measures such as the 62-day cancer referral and treatment target and quality ratings have a greater scope of

variation amongst the hospitals compared to mortality rates and are not easily affected by external factors to the hospital's control and secondly, are more objective indicators of performance in comparison with data on patient satisfaction (Bai and Krishnan, 2015).

6.8 Selection of main explanatory and control variables

The independent variable in this study is corporate governance. The study aims to explore the impact of corporate governance on financial and non-financial performance of NHS hospitals in England. The board of directors is considered as the main vehicle for corporate governance (Naciti, 2019) and therefore, it is used as the main proxy for measuring corporate governance in this study. It is appropriate to measure all the identifiable attributes in line with the argument by Wahba (2015) that corporate governance mechanisms should be considered and assessed as a whole. Given the differences in the level of disclosure of the different NHS trusts and foundation trusts, the indicators of corporate governance were limited to the observable characteristics of the board of directors that can be identified from the annual reports such as board size, board independence, board expertise, frequency of board meetings, board gender diversity, CEO gender, CEO tenure, academic directors, multiple directorships, CEO background and directors with honours are used. Other variables such as CEO duality are not measured because according to the UK corporate governance code 2018 and guidance for the composition of the board of directors of the trusts and foundation trusts, the role of a CEO and chair should not be performed by the same person. Therefore, all the trusts and foundation trusts have a dual leadership structure with a CEO and a chair.

Furthermore, control variables are also added to the model and are held constant in order to avoid them from influencing the effect that the independent variable might have on the dependent variable (Saunders, Lewis and Thornhill, 2016). The control variables adopted for this study include hospital size measured by the natural logarithm of total assets (Rohaida *et al.*, 2013). Hospital size is controlled because larger hospitals are associated with lower average costs and better clinical outcomes that come about as a result of the economies of scale (Giancotti, Guglielmo and Mauro, 2017) while, they are also expected to be harder to manage (Veronesi, Kirkpatrick and Vallascas, 2013). The age of the hospital (Abor, 2015) is also added to the control variables because the number of years that the trust or foundation trust has been in existence could have a potential influence on the performance of the trust or foundation trust. Consideration is also made for the hospital type, namely, trust or foundation trust as a control variable (Veronesi, Kirkpatrick and Vallascas, 2014; Nagendran *et al.*, 2019). The main differences

between foundation trusts and trusts such as the financial and operational flexibility and autonomy that foundation trusts have compared to the trusts, and the fact that trusts that perform well in relation to the set criteria and standards particularly on financial sustainability are assigned foundation trust status (Veronesi, Kirkpatrick and Vallascas, 2014) make it appropriate to add the type of hospital as a control variable for this study. Lastly, the location of the hospital is also added as a control variable (Molinari *et al.*, 1995; Jha and Epstein, 2010; Collum *et al.*, 2014). The location of the hospital is a significant environmental factor for hospitals because the largest segment of the market share of a hospital is from the area of proximity to the hospital, where hospitals in rural areas might have no immediate competition (Goldstein *et al.*, 2002). Moreover, rural areas have a smaller, more needy population and have lesser ability to attract resident physicians compared to hospitals located in urban areas (Bai, 2013). The number of control variables added to the model is limited by the variability of data provided in the annual reports of the different trusts and foundation trusts.

6.9 Statistical tests

The next step in research methodology is choosing a statistical test to be used in analysing data. Winters, Winters and Amedee (2010) suggest two broad categories of statistical tests namely parametric and non-parametric tests. The requirements for parametric tests include a large sample size that assumes a normal distribution (Winters, Winters and Amedee, 2010). According to Winters, Winters and Amedee (2010), these tests have the ability to examine the differences between individual values in a sample and are more powerful because the distribution is known. Likewise, Nahm (2016) argues that parametric statistical analyses are conducted on the principle that assumes that normality and equal variance are met, and in scenarios where they not met, such as when the sample distribution is unknown or skewed to one side, then the parametric tests cannot be used. On the other hand, Nahm (2016) suggests that the prospects of non-parametric tests providing incorrect conclusions are low because population assumptions are not required and the tests are more intuitive and require less statistical knowledge. Similarly, the tests can be used even for small samples and the statistics are computed based on signs or ranks which are not greatly affected by outliers (Nahm, 2016). However, Nahm (2016) notes that the actual differences in the population in non-parametric tests are unknown because the distribution function cannot be stated, and the information acquired from these tests are limited and more difficult to interpret. Moreover, data in non-parametric tests is not completely explored and difficulties rise in the computation of large samples because the tests only have a few analytical methods (Nahm, 2016). Meanwhile, there are no assumptions made about data distribution in

non-parametric tests and as such, absolute values of data points are ignored, focusing instead on ordinal properties such as the smallest and most common, which may lead to loss of original data (Winters, Winters and Amedee, 2010; Nahm, 2016).

The Chi-square test, Paired Student t test, Unpaired Student t test, ANOVA by sum of squares and Pearson product moment coefficient are all categorised as parametric tests (Winters, Winters and Amedee, 2010). On the other hand, they consider the Fisher exact test, Wilcoxon signed rank test, Mann-Whitney *U* test, ANOVA by rank and Spearman rank correlation coefficient as non-parametric tests. Siegel (1957) suggests that in selecting a test, consideration of the power of the statistical test, population sample, and type of measurement used in operationalising the variables should be made. Moreover, Siegel (1957) emphasises that the selected test should fit the conditions of the research and have the greatest power to reject the null hypothesis when it is actually false.

Parametric tests are adopted for this study based on factors such as the ability to identify small differences in panel data, and their power in demonstrating statistical significance compared to non-parametric tests. The Pearson product-moment correlation coefficient is employed to measure the extent and strength of the correlation between the financial and non-financial performance measures and corporate governance indicators. In addition, basing on the study objectives and variables selected, multiple regression is the most appropriate method of analysis to be used in the investigation of the relationship between corporate governance and performance of the NHS hospitals. This is because the effect that each explanatory variable has on the response variable can be calculated while controlling for other variables in the model (Hutcheson and Sofroniou, 1999; Hair *et al.*, 2018). On one hand, ordinary least squares regression is adopted as the baseline regression technique used to examine the impact of corporate governance on financial performance of the NHS hospitals. On the other hand, the relationship between corporate governance and non-financial performance of the English NHS hospitals is measured using logistic regression.

6.9.1 Ordinary least squares (OLS) regression

Specifically, ordinary least squares (OLS) regression is used to test the hypotheses proposed in chapter 5 relating to financial performance measured using ROA. According to Hutcheson and Sofroniou (1999), the OLS model is used to predict values of a continuous response variable using one or more explanatory variables, and identify the strength of the relationship between these variables. The model specified below is used to partly address the main research objective which

is to determine the impact of corporate governance on the financial performance of hospitals in the English NHS.

$$FP_{it} = \alpha + \sum_{j=1}^{J} \beta_j BS_{it} + \beta_j BI_{it} + \beta_j BE_{it} + \beta_j BM_{it} + \beta_j D_{it} + \beta_j CT_{it} + \beta_j CG_{it} + \beta_j AD_{it} + \beta_j MD_{it} + \beta_j CB_{it} + \beta_j BH_{it} + \sum_{p=1}^{P} \gamma_p Age_{it} + \gamma_p Loc_{it} + \gamma_p TA_{it} + \gamma_p HT_{it} + \varepsilon_{it}$$

Where: FP = financial performance measures.

The rest of the variables are defined in Table 2 below.

6.9.2 Logistic regression

The impact of corporate governance on non-financial performance of hospitals is measured using the 62-day cancer referral and treatment target. The nature of the referral and treatment target reflects an ordinal variable where the hospital either meets the target of 85% or not. The cancer waiting time target measure is denoted by '1' for those hospitals that meet the target and '0' for those that do not meet the target. The method of analysis used in describing the relationship between independent variables and a dichotomous dependent variable is logistic regression (Peng, Lee and Ingersoll, 2002; Kleinbaum and Klein, 2010). In this case where the dependent variable is a dichotomous outcome, the OLS estimates are rendered ineffective by the violation of the assumptions of homoskedasticity, linearity and normality that occur with a dichotomous dependent variable, but are overcome by the maximum likelihood estimation of the logistic regression (Menard, 2011). The estimation of the logit models is that an event will occur and therefore the probability of the dependent variables takes on a value of 1 (Y-1). The model specified below is used to partly address the main research objective which is to determine the impact of corporate governance on the non-financial performance of hospitals in the English NHS.

Logit [P(NFP)] = ln {P (NFP) / 1 – P (NFP)]} = $\beta_0 + \beta_1 BS + \beta_2 BI + \beta_3 BE + \beta_4 BM + \beta_5 BD + \beta_6 CT + \beta_7 CG + \beta_8 AD + \beta_9 MD + \beta_{10} CB + \beta_{11} HD + \beta_{13} Age + \beta_{14} LOC + \beta_{15} TA + \beta_{16} Hosptype + \varepsilon_1$

Where: NFP = non-financial performance measures.

The rest of the variables are defined in Table 2 below.

Table 2 Definition and operationalisation of variables

Abbreviation	Name	Definition and operationalisation
Dependent variable: Financial measures		

ROA	Return on Assets	Proportion of Net Income to Total Assets.
OM	Operating Margin	Surplus/deficit as a proportion of revenue.
Dependent variable: Non-financial measures		
62-day wait	62-day cancer referral and treatment target	The 62-day waiting time target within which diagnosed patients should start first cancer treatments of an urgent referral by a GP. Operational standard is 85% for the NHS England; denoted by "1" for those above 85%, '0' for those who breached the target.
QR	Overall quality rating	Overall quality ratings accorded to the trusts and foundation trusts by the CQC; denoted by '4' for outstanding, '3' for good, '2' for requires improvement and '1' for inadequate performance.
Independent Variables; Corporate governance variables		
BS	Board size	Total number of directors on the board.
BI	Board independence	Proportion of outside directors to total board size; measured by '1' for those above the median and '0' for those below.
BE	Board expertise	Proportion of qualified clinical directors to board size.
BM	Board meetings	Total number of board meetings held per year.
BD	Board diversity	Proportion of females on the board to the total board size. Based on the critical mass theory, those with 30% or more female representation were denoted by '1' and '0' for otherwise.
CT	CEO tenure	The length of time CEO has served on the board.
CG	CEO gender	The gender of the CEO; '1' for a female CEO and '0' for a male CEO.
AD	Academic directors	Proportion of academic directors to the board size.

MD	Multiple Directorships	Proportion of number of directors who hold other board positions in other organisations to the total board size.
CB	CEO background	CEO with a clinical background '1' and non-clinical background '0'.
HD	Honoured directors	Proportion of number of directors with an honour awarded by the sovereign to the total board size.
Control Variables		
Age	Age	Number of years the (foundation) trust has been in existence
LOC	Location	Represents the nine regions in England; Operationalised by '1' for (foundation) trusts located in London, '2' for North East, '3' for North West, '4' for Yorkshire, '5' for East Midlands, '6' for West Midlands, '7' for South East, '8' for East of England, and '9' for South West.
HT	Hospital type	Specifies the type of hospital; whether the hospital is a foundation trust '1' or a trust '0'.
TA	Total Assets	Calculated by natural log of total assets as a proxy of hospital size.

It is imperative that the explanatory variables are not related as this compromises the validity of regression results. The variance inflation factor (VIF) is used to ascertain the presence of multicollinearity amongst the variables.

6.10 Multicollinearity

Multicollinearity occurs when one or more of the explanatory variables in a regression model are correlated. Hutcheson and Sofroniou (1999) argue that a perfect or very strong relationship

between explanatory variables can affect the calculations and interpretations of the regression model, for instance, perfect multicollinearity makes the formulation of the regression equation impossible resulting in failure of the analysis. Furthermore, in instances of high multicollinearity, the parameters of the regression equation are unreliable and can change with the fluctuation in the number of observations, greatly affecting the equation and interpretation of results (Hutcheson and Sofroniou, 1999). Multicollinearity is categorised in terms of estimation or explanation (Hair *et al.,* 2018) where the consequences of multicollinearity are more profound when the objective of the analysis is explanation (Hutcheson and Sofroniou, 1999). Maddala (1992) argues that examining the separate effects of each explanatory variable on the explained variable becomes difficult when the explanatory variables are highly intercorrelated. Multicollinearity is caused by the data collection techniques used, restrictions on the model or in the population being sampled, specification of the model being used or an overdetermined model whereby the explanatory variables exceed the number of observations in the model (Gujarati and Porter, 2009).

Maddala (1992) and Hair *et al.* (2018) note that the variance inflation factor (VIF), condition number and tolerance can be used as measures of multicollinearity. Hair *et al.* (2018) define tolerance as the amount of variability of the selected independent variable not explained by the other independent variables. Tolerance is calculated as 1 - R^{2*} where R^{2*} is the amount of that independent variable which is explained by all the other existing independent variables in the regression model (Hair *et al.*, 2018). They note that a high tolerance value means a small multicollinearity degree. Similarly, Maddala (1992) suggests that the condition number is used to measure the regression estimates' sensitivity to small changes in data, and is defined as the square root of the ratio of the largest to the smallest eigenvalue of the matrix X^1X of the explanatory variables. He also defines the variance inflation factor (VIF) as; $\mathrm{VIF}(\widehat{\beta_1}) = \frac{1}{1-R_1^2}$, where R_1^2 = squared multiple correlation coefficient between x_1 and the other explanatory variables. He notes that the VIF$(\widehat{\beta_1})$ represents the ratio of the actual variance of $\widehat{\beta_1}$ to what the variance of $\widehat{\beta_1}$ would have been if $x_1$were to have no correlation with the remaining *x's.* He further argues that the VIFs and condition number are helpful in removing some variables and imposing constraints in parameters, particularly in extreme scenarios where R_1^2 =1.0 or the smallest eigenvalue is very close to zero. Likewise, he stresses that redefinition of the explanatory variables can change the intercorrelations.

The resolutions for multicollinearity in a model include deletion of collinear variables (Hutcheson and Sofroniou, 1999; Hair *et al.*, 2018), collecting more data to reduce the standard error,

combining two or more of the highly correlated explanatory variables into a single composite variable, and omission of variables that cannot be combined (Hutcheson and Sofroniou, 1999). Similarly, Maddala (1992) suggests the use of ridge regression whereby a constant λ is added to the variables of the explanatory variables before solving the normal equations in order to decrease the intercorrelations. Hair *et al.* (2018) back this proposition by referring to ridge regression and LASSO as variable selection techniques used to reduce multicollinearity. They also argue that doing nothing to reduce multicollinearity is also an option, but the model should then be used only for prediction and not for interpretation of the regression coefficients.

For this study, the VIF is used to detect multicollinearity of the variables in the model where a VIF ≥10 is indicative of possible collinearity (Franke, 2010). In case multicollinearity is detected in the model, the most appropriate resolution is to combine the variables with a VIF ≥10 to create one composite variable especially if they are well-matched. After combining the highly correlated variables, the VIF is recalculated to ensure the issue of multicollinearity is resolved.

6.11 Endogeneity

According to Bhagat and Bolton (2008) and Wintoki, Linck and Netter (2012), despite findings from several prior studies indicating that corporate governance structures drive improved performance, the findings are affected by endogeneity issues which make ascertaining reverse causation difficult. Endogeneity causes the estimators to become inconsistent leading to inappropriate inferences (Barros *et al.*, 2020). One of the most evidently common causes of endogeneity is the omission of variables that are simultaneously correlated with the included regressors and the response variable (Barros *et al.*, 2020). Additionally, measurement errors that occur in the variables adopted in the model, sample selectivity, self-selection and existence of simultaneity between the independent and dependent variables also cause endogeneity (Baltagi, 2005; Barros *et al.*, 2020). Hair *et al.* (2018) suggests that endogeneity in models can be eliminated by using fixed effects models of grouped data because they have the ability to model effects for each group separately since all the potential effects of endogeneity are constant within a group, thus removing their effects. On the other hand, they argue that the random effects result in 'pooling' across the groups where the effects of endogeneity are existent.

In line with prior empirical studies investigating the relationship between corporate governance and performance, this study also faces potential endogeneity issues and the omission of relevant variables by the regression models. The potential issues can be resolved by using the fixed effects estimator (Arora and Sharma, 2016) in order to maintain the reliability and validity of results.

6.11.1 Fixed Effects estimator

The fixed effects estimator can be used to control for the omitted variables that vary across entities but remain static overtime in a panel dataset. According to Stock and Watson (2007), fixed effects regression can be used in instances where two or more time observations occur for each entity. The different *n* intercepts in a fixed effects regression model can be proxied using a group of binary or indicator variables, which also absorb the effects of all the omitted variables that vary from entity to entity but are constant over time (Stock and Watson, 2007). Stock and Watson (2007) further note that fixed effects can also control for variables that are constant across entities but evolve overtime. Baltagi (2005) suggests that in the fixed effects model, the assumption is that the $\mu_1$are fixed parameters to be estimated and the remainder disturbances stochastic with v_{it} independent and identically distributed IID (0,σ_v^2). He also emphasises that the assumption of the model is that X_{it} is independent of the v_{it} for all *i* and *t.* Additionally, he argues that when the focus is on a specific set of *N* firms, fixed effects model is an appropriate model and inference is conditional on the particular *N* firms that are observed. Panel data, according to Stock and Watson (2007), is mainly analysed using fixed effects regression where variables that differ across entities but are constant over time are controlled for. In the same way, Veronesi, Kirkpatrick and Altanlar (2015) suggest that fixed effects estimations are adopted in their hospital study based on the possibility of omitted variables bias such as trust level unobserved time-invariant characteristics like culture, age of the facilities, resources, and the unobserved patient characteristics, for example, certain types of patients are likely to be referred to particular hospitals.

6.11.2 The Random Effects estimator

According to Hair *et al.* (2018), the reduction of variability of effect within a group is attempted through the use of a random effect by pooling across groups and focusing on the best estimate of the variability or distribution of effects across the set of groups. They suggest that this estimation technique tends to minimise outlier groups in order to achieve a more stable estimate of variation albeit at some degree of bias. Baltagi (2005) argues that if μ_1 is assumed to be random, the loss of degrees of freedom that occurs in the fixed effects model that has too many parameters, can be avoided. Therefore, the μ_1~ IID (0,σ_v^2), where the μ_1 are independent of the v_{it}, X_{it} are independent of μ_1 and v_{it}, for all *i* and *t* (Baltagi, 2005). He also suggests that for instances where N individuals are randomly selected from a large population, random effects model is the appropriate model to use. Kennedy (2008) argues that by saving on degrees of freedom, a more

efficient estimator of the slope coefficients is produced by the random effects estimator. Likewise, he notes that the estimation procedure in the random effects model does not wipe out the explanatory variables that are time invariant, therefore, estimation of coefficients on variables like gender, race and religion are allowed. He argues that the random effects model is more superior to the fixed effects model based on these results, although it can only be used in special circumstances because of its major qualifications.

Gujarati and Porter (2009) suggest that in deciding which estimation technique is more appropriate for use, the decision should be made on the assumption of the likely correlation between the individual, or cross-section specific, error component ε_1 and the *X* regressors. They argue that if the assumption is of no correlation between ε_1 and the *X*'s, then the random effects model is the appropriate model to use, while if ε_1 and the *X*'s are correlated, then the fixed effects model may be the appropriate model to use. To confirm the choice of the estimation technique to be employed, the Hausman test (Hausman, 1978) is used.

6.11.3 The Hausman's specification error test

Maddala (1992) emphasises that the Hausman's specification test is a commonly used test for examining the hypothesis of no misspecification in the model. Hausman (1978) presents a general form of specification test which attempts to examine the assumption that $E(\varepsilon/X) = 0$, as well as a unified approach to specification error tests which is applicable in specific scenarios. He states that the basic idea is that there exists an alternative estimator which is consistent under both null and alternative hypotheses; $E(\varepsilon/X) = 0$, $V(\varepsilon/X) = \sigma^2 I$. He also notes that the specification tests are performed by constructing a test of the hypothesis H_0: $\alpha = 0$. Hausman (1978) notes that the fundamental foundation of the proposed specification tests is that "under the (null) hypothesis of no misspecification, there will exist a consistent, asymptotically normal and asymptotically efficient estimator, where efficiency means attaining the asymptotic Cramer-Rao bound, although, under the alternative hypothesis of misspecification, this estimator will be biased and inconsistent."

Particularly, Hair *et al.* (2018) argue that the Hausman test is able to compare results from both the fixed-effects and random-effects estimator whereby a significance level of $p < 0.05$ supports the hypothesis that a difference between the two models exists, and therefore the fixed effects estimator should be used, and if there is no significant difference, the random effects model should be adopted.

The Hausman's test (Hausman, 1978) is performed for this study and based on results, the null hypothesis is rejected and the alternate hypothesis is accepted. The fixed effects estimator is therefore adopted to control for endogeneity in both the OLS and logistics models.

6.12 Sensitivity Analysis Tests

6.12.1 Two Stage Least Squares (2SLS) regression – Financial performance

Barros *et al.* (2020) argue that there might be inconsistence in the traditional estimation techniques of OLS, random effects and fixed effects in the presence of endogeneity. Studies by Maddala (1992) and Gujarati and Porter (2009) argue that if the simultaneous equation/ simultaneity problem is non-existent, then the estimators from the OLS estimators are both consistent and efficient, and the OLS estimators are inconsistent if there is a simultaneity problem. They suggest that the simultaneity problem should be investigated using the Hausman's specification error test. They also emphasise that the simultaneity issue arises as a result of some of the regressors being endogenous and are therefore likely to be correlated with the error term, in which case, the Hausman's specification error test is used to detect the correlation. They further suggest that 2SLS and Instrumental Variables are to be used in the presence of simultaneity, and in the absence of a simultaneity problem, the estimators will be consistent but inefficient with a smaller variance.

Basing on the arguments of Wooldridge (2010), if the null hypothesis is such that all the explanatory variables are exogenous, and one or more explanatory variables are endogenous under the alternative, then the test for endogeneity can be based on the difference between the 2SLS and OLS estimators, given that the exogenous instruments used to identify the parameters by 2SLS are sufficient. He notes that Durbin (1954), Wu (1973) and Hausman (1978) independently derived endogeneity tests, for example, given the general equation $y = x\beta + \mu$ with instruments z, the Durbin-Wu-Hausman (DWH) test is based on the difference $\widehat{\beta_{2SLS}} - \widehat{\beta_{OLS}}$. He further notes that if all the *x* elements are exogenous as well as z, then the difference between 2SLS and OLS should only be due to sampling error and this can be confirmed be estimating the asymptotic variance using $\sqrt{N}\ \widehat{\beta_{2SLS}} - \widehat{\beta_{OLS}}$. Wooldridge (2010) suggests that if homoskedasticity is maintained under the null hypothesis, the calculation will be simplified.

In instances when the fixed effects estimator is used in isolation, it may be insufficient to account for alternative corporate governance measures and other potential endogeneity problems in the model (Ntim and Osei, 2011). Further robustness checks are therefore required. Following the

suggestions by Bhagat and Bolton (2008), the two-stage least squares (2SLS) technique is employed to control for potential endogeneity. Gujarati and Porter (2009) describe the 2SLS method as consisting of two successive applications of the OLS. They argue that the notion behind 2SLS is to "purify" the stochastic explanatory variable Y_1 of the effect of the stochastic disturbance u_2. The two stage procedure of calculating the 2SLS estimator comprises of 2 stages; firstly, *X* is decomposed into two components of a problematic component that may be correlated with the regressor error, and another problem-free component that is uncorrelated with the error, and the second stage which uses the problem-free component to estimate B_1 (Stock and Watson, 2007). Maddala (1992) notes that the estimated standard errors from the second stage will be different because the dependent variables are $\widehat{y_1}$ instead y_1. The problematic component that may be correlated with the regressor term is replaced by an instrumental variable in stage 1 of the 2SLS model. Larcker and Rusticus (2010) suggest that adopting instrumental variables helps to address issues with observational data like simultaneous-equation bias, and as such, used one-year lagged performance of the hospitals as instrumental variables in their study. This approach is in line with prior studies by Bhagat and Bolton (2008) and Boakye *et al.* (2020) who adopted the same technique. For purposes of our study, instrumental variables were created by lagging the independent variables (t-1) to mitigate the bias caused by endogeneity and confirm robustness of results. In addition, a further check was performed by using an alternative measure of financial performance in the 2SLS model. The Durbin-Wu-Hausman test is employed in this study to examine which endogenous regressors are correlated with the error term.

6.12.2 Ordered Logistic regression – Non-financial performance

In order to confirm validity of the results of the impact of corporate governance on non-financial performance, two robustness tests are employed. Firstly, an alternative measure of non-financial performance using the quality ratings of the NHS hospitals is adopted. The quality ratings are awarded by the CQC and are based on the performance of the hospitals along the five parameters of safety, effectiveness, caring, responsiveness and leadership. The overall quality ratings are ranked as *outstanding* denoted by *'4', good '3', requires improvement '2'* and *inadequate '1'*. The quality ratings score awarded to the NHS hospitals reflect the performance of the hospitals in delivering healthcare services to the patients and local community. The operationalisation of the quality ratings is in line with the approach taken by Veronesi, Kirkpatrick and Vallascas (2013), (2014). Moreover, in instances where the dependent variable has more than two ranks increasing sequentially, it is appropriate to adopt the ordered logit regression (Gujarati and Porter, 2009; Veronesi, Kirkpatrick and Vallascas, 2013). Fixed effects estimator is adopted in the model to

account for potential correlation in the panel data (Kleinbaum and Klein, 2010; Veronesi, Kirkpatrick and Vallascas, 2013). Also in line with Veronesi, Kirkpatrick and Vallascas (2013), with the existence of recurring observations for each hospital trust, the robust standard errors in the ordered logistic model are clustered at hospital trust level to allow for within group (cluster) correlation. Secondly, to resolve endogeneity issues caused by measurement errors, omitted variables or simultaneity, valid instrumental variables are used (Barros *et al.*, 2020). In this case, the independent variables are lagged to create instrumental variables which also helps to resolve the issue of potential reverse causality (Veronesi, Kirkpatrick and Vallascas, 2014). Fixed effects estimator is adopted in the model to account for potential correlation in the panel data (Kleinbaum and Klein, 2010; Veronesi, Kirkpatrick and Vallascas, 2013).

6.13 Ethical considerations

Saunders, Lewis and Thornhill (2016) defined ethics as the behavioural standards that guide a researcher's conduct regarding the rights of subjects in the research project or those affected by it. They argue that ethical concerns arise in the process of designing and planning of research, seeking access to organisations and individuals, and in collecting, analysing, managing, and reporting data collected. Notably, this study does not require ethical approval because it utilises secondary methods in data collection where there is no interaction with any participants or study subjects. The data used in the study is publicly available and accessible via the trust and foundation trust websites. Access to the information is open to the general public and permitted to be used for various reasons including research purposes. However, as Saunders, Lewis and Thornhill (2016) suggest, research objectivity should be maintained during data analysis and reporting to avoid misrepresentation of the data collected.

6.14 Summary and conclusion

The chapter is a discussion of the methodology adopted to investigate the impact of corporate governance on the financial and non-financial performance of hospitals in the English NHS. This study adopts the positivist paradigm with deductive reasoning whereby hypotheses are developed based on arguments of a multi-theoretical framework and empirical evidence from prior studies. The panel data is collected from annual reports of trusts and foundation trusts in the English NHS over a period of 5 years from 2014 to 2018. The data is analysed using fixed effects OLS regression and fixed effects logistic regression as the baseline estimation models. The chapter also discusses issues of multicollinearity and endogeneity that may arise as a result of

potential correlation in the data. In addition, the fixed effects estimator and the two stage least squares (2SLS) statistical technique are employed to resolve endogeneity issues and for purposes of confirming validity of results of financial performance analysed in the fixed effects OLS model. For the fixed effects logistic model, robustness checks of using alternative non-financial measures and lagging the independent variable are used. The results of the analysis are presented in the next chapter.

Chapter 7 Results and discussion

7.1 Introduction

The main aim of this chapter is to present and discuss the results of the study. As discussed earlier in the thesis, corporate governance is measured using the observable characteristics of the board of directors. On one hand, financial performance of the NHS hospitals is measured using Return on Assets (ROA) and data is analysed using fixed effects ordinary least squares (OLS) regression technique. On the other hand, non-financial performance is measured using the 62-day cancer referral and treatment target and data is analysed using fixed effects logistic regression. The results of the investigation are presented in this chapter.

The rest of the chapter is arranged as follows: - Section 7.2 presents the descriptive statistics and Section 7.3 presents the correlation results. Section 7.4 presents the results and overall discussion of the impact of corporate governance on financial and non-financial performance. The results of the sensitivity tests are presented in Section 7.5 and the chapter is concluded in Section 7.6.

7.2 Descriptive statistics

This section presents a summary of all the dependent, independent and control variables adopted in the study to examine the influence of corporate governance on the financial and non-financial performance of trusts and foundation trusts in the English NHS. A summary of the descriptive statistics used in the study are presented in Table 3 below. All the dependent, independent and control variables are transformed by winsorizing at the 1% and 99% percentiles to limit the degree of skewness of the data. The financial performance of the English NHS hospitals illustrated in Figure 3 in Appendix B, can be described as unsatisfactory, based on the performance proxy used of ROA, which averages at -0.06. The financial position of the NHS hospitals can be attributed to the rising demand for healthcare services, high levels of bed occupancy and cuts to out-of-hospital services (Anandaciva *et al.*, 2018). Similarly, Murray, Imison and Jabbal (2014) cite the failure of the hospitals to find sufficient efficiency savings amid the increasing demand for healthcare across the NHS as contributing factors for the poor financial performance of the NHS hospitals. Furthermore, although cancer is one of the leading causes of death in the UK according to the Office for National Statistics (ONS), majority of the NHS hospitals did not meet the cancer referral and treatment target of 62

days. The 62-day target requires that at least 85% of patients should start receiving treatment not more than 62 days after an urgent referral for suspected cancer. As illustrated in Figure 4 in Appendix B, the average performance against this target time is 83.3% against the target of 85%. The decline in performance is attributed to the increased patient demand for cancer related treatments (Dorning and Blunt, 2015).

Notably, the NHS hospitals are characterised by large boards with the average board comprising of 14 directors. The boards have at least 6 non-executive directors and an average of 3 clinicians appointed as directors. In addition, each board has an average of 6 women indicating that a critical mass is reached for most of the NHS hospital boards. Majority of the boards are led by male CEOs and most of the NHS hospitals are headed by directors from a non-clinical background. Notably, the average number of years served by a CEO is 4 years.

Table 3 Summary of descriptive statistics of NHS hospitals reported in 2014 - 2018

Variables	OBS	Mean	Median	Median Q1	Median Q3	SD	Skewness	Kurtosis	Variance
ROA	625	-.055	-.042	-.103	.005	.099	-.307	6.240	.010
62-day wait	594	.833	.844	.798	.876	.0619	.101	1.010	.250
BS	622	14.537	14	13	16	2.229	.651	3.987	4.967
BI	618	6.204	6	5	7	1.205	.755	4.429	1.453
BE	617	3.058	3	2	4	1.326	.929	4.366	1.760
Doctors	616	1.657	1	1	2	.985	1.718	9.014	.970
Nurses	617	.463	0	0	1	.499	.148	1.022	.249
BM	622	10.603	11	9	12	2.877	.572	5.809	8.278
BD	621	5.779	6	4	7	1.778	.414	2.989	3.163
CG	622	.463	0	0	1	.499	.148	1.022	.249
CT	596	5.921	4	3	8	5.091	2.034	8.724	25.915
AD	617	.677	0	0	1	.946	1.719	6.497	.894
MD	612	1.809	1	0	3	2.369	1.542	5.386	5.612
CB	617	.387	0	0	1	.488	.463	1.214	.238
HD	616	.800	.5	0	1	1.024	1.563	6.058	1.048
LOC	634	5.175	5	3	8	2.685	-.106	1.616	7.209
Age	638	18.277	14	10	24	14.550	2.373	9.016	211.698
TA	625	12.467	12.438	12.031	12.905	.628	.286	2.873	.395
Hospital type	638	.622	1	0	1	.485	-.504	1.254	.235

Notes: Table 3 above shows the summary statistics for the dependent, independent and control variables used in the study. The description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait - 62-day cancer wait, BS – Board Size, BI – Board

Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD-Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type.

In terms of multiple directorships, the NHS boards have at least one director holding multiple board roles in other organisations. In terms of monitoring, the boards of directors in the NHS hospitals hold an average of 11 meetings per annum. Majority of the NHS hospitals are foundation trusts, and the average age of the trusts and foundation trusts in the English NHS is 14 years. Majority of trusts and foundation trusts are located in the East Midlands region.

Table 4 Summary of descriptive statistics of NHS trusts reported in 2014 - 2018

Variables	OBS	Mean	Median	Median Q1	Median Q3	SD	Skewness	Kurtosis	Variance
ROA	232	-.074	-.062	-.131	-.007	.109	.236	8.111	.012
62-day wait	207	.816	.821	.774	.821	.065	-.375	3.532	.004
BS	231	14.662	15	13	16	2.379	.494	3.560	5.659
BI	227	6.084	6	5	7	1.075	.560	3.133	1.157
BE	226	2.681	2	2	3	1.145	.894	3.219	1.311
Doctors	225	.1.582	1	1	2	.826	1.048	4.104	.682
Nurses	226	1	1	1	1	.601	1.994	6.231	.361
BM	231	10.381	11	9	12	2.500	-.390	3.412	6.002
BD	230	5.583	5	4	7	1.817	.309	2.448	3.301
CG	231	.381	0	0	1	.487	.490	1.240	.237
CT	209	5.215	4	2	6	4.062	1.364	4.056	16.497
AD	226	.673	0	0	1	.843	1.212	4.072	.710
MD	226	2.549	2	0	4	.2.606	1.047	3.743	6.791
CB	226	.208	0	0	0	.407	1.439	3.071	.165
HD	226	.584	0	0	1	.877	1.428	4.272	.768
LOC	241	5.4108	6	3	8	2.674	-.365	1.858	7.151
Age	241	21.365	18	15	26	14.683	2.089	7.845	215.599
TA	232	.816	.820	12.117	13	.636	-110	2.892	.4004
Hospital type	241	0	0	0	0	0	.	.	0

Notes: Table 4 above shows the summary statistics for the dependent, independent and control variables used in the study. The description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait - 62-day cancer wait, BS – Board Size, BI – Board Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD – Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type

According to the summary statistics in Table 4 and 5, there are more foundation trusts than trusts in the NHS. The performance of the trusts and foundation trusts in the NHS is largely the same despite the foundation trusts having more financial flexibility and operational autonomy as compared to the

trusts. The mean ROA for trusts is -0.07 and that of the foundation trusts is -0.043. The financial pressure facing both trusts and foundation trusts is the same as they are both financed using taxpayer funds. With regards to non-financial performance, according to the 62-day cancer referral and treatment target, the foundation trusts were closer to meeting the target of 85% with the average performance of the foundation trusts at 84.3% while that of the trusts stands at 82%. Figure 5 and 6 in Appendix B illustrate the financial and non-financial performance of the NHS trusts while Figure 7 and 8 show the financial and non-financial performance of the foundation trusts respectively.

Table 5 Summary of descriptive statistics of NHS foundation trusts reported in 2014 - 2018

Variables	OBS	Mean	Median	Median Q1	Median Q3	SD	Skewness	Kurtosis	Variance
ROA	393	-.043	-.0312	-.089	.015	.091	-.703	4.382	.008
62-day wait	387	.843	.855	.812	.883	.058	-.753	3.630	.003
BS	391	14.463	14	13	16	2.135	.753	4.305	4.557
BI	391	6.274	6	5	7	1.271	.773	4.610	1.615
BE	391	3.276	3	2	4	1	1	1.376	1.893
Doctors	391	1.701	2	1	2	1.065	1.818	9.341	1.133
Nurses	391	1.685	1	1	2	.886	1.388	4.6872	.785
BM	391	10.734	11	9	12	3.098	.796	5.915	9.515
BD	391	5.895	6	5	7	1.747	.507	3.309	3.053
CG	391	.512	1	0	1	.501	-.046	1.002	.251
CT	387	6.302	5	3	8	5.535	2.055	8.520	30.642
AD	391	.680	0	0	1	1.001	1	1.869	1.003
MD	386	.680	0	0	2	2.104	1.988	7.678	4.427
CB	391	.491	0	0	1	.501	.036	1.001	.251
HD	390	.926	1	0	1	1.081	1.540	6.098	1.169
LOC	393	5.031	4	3	8	2.685	.051	1.538	7.208
Age	397	16.403	13	10	17	14.161	2.698	10.595	200.544
TA	393	12.343	12.343	11.981	12.750	.617	.532	3.098	.381
Hospital type	397	1	1	1	1	0	.	.	0

Notes: Table 5 above shows the summary statistics for the dependent, independent and control variables used in the study. The description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait – 62-day cancer wait, BS – Board Size, BI – Board Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD-Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type

The corporate governance practices of the trusts and foundation trusts are similar to a larger extent. The average board size of the trusts and foundation trusts comprise of 15 and 14 directors respectively. On average, each of the boards has 6 independent directors, showing that the proportion of inside directors is greater than that of outside directors. Similarly, the average number

of clinical directors on boards is 2 on the trust boards and 3 for the foundation trust boards. Both trusts and foundation trusts average 11 board meetings per annum.

7.3 Correlation analysis

The Pearson's product moment correlation matrix is the parametric test used to detect the correlation between the dependent, independent and control variables selected for the model. The results are presented in Table 6 below. Field (2017) indicates that a coefficient of +1 is indicative of a perfect positive relationship, -1 shows a perfect negative relationship and 0 specifies no linear relationship. According to Table 6 below, the correlation between the independent variables is low with the highest association being between Academic directors and Total Assets at 0.323. The highest reported VIF is for academic directors at 1.36 followed by hospital type at 1.34. Overall, all reported VIFs are considerably lower than 10, suggesting low multicollinearity among the dependent, independent and control variables.

Table 6 Pearson's correlation matrix

	ROA	62-day wait	BS	BI	BE	BM	BD	CT	CG	VIF
ROA	1.000									
62-day wait	0.149	1.000								
BS	0.064*	-0.097*	1.000							1.28
BI	0.144	0.041**	-0.218	1.000						1.14
BE	-0.061*	-0.085*	-0.219	0.153	1.000					1.20
BM	-0.124	0.029***	-0.100	0.030***	0.013***	1.000				1.05
BD	0.004***	-0.027***	-0.140	0.033***	0.030***	0.027***	1.000			1.08
CT	0.189	0.105	0.033***	0.064**	-0.046***	-0.061**	0.003***	1.000		1.11
CG	-0.009***	0.042**	-0.059**	0.059**	0.120	-0.004***	0.148	-0.104	1.000	1.23
AD	0.042**	-0.019***	0.002*	0.111	0.146	-0.096*	-0.041**	-0.120	-0.174	1.36
MD	-0.043**	0.031***	-0.085**	0.015***	0.133	0.045***	-0.069**	-0.064**	-0.106	1.11
CB	0.042**	0.059**	0.007***	-0.012***	0.161	-0.066**	0.176	-0.096**	0.249	1.26
BH	0.157	0.027***	0.126	0.075**	0.061**	-0.105	-0.078**	0.160	-0.122	1.17
Hospital Type	0.214	0.160	-0.067**	0.152	0.199	0.020***	0.164	0.129	0.103	1.34
LOC	-0.069*	-0.119	-0.021***	-0.060**	-0.040***	0.074**	-0.029***	0.003***	-0.161	1.09
Age	0.047**	-0.038***	0.062**	0.013***	-0.030***	-0.069**	-0.107	0.014***	0.075**	1.15
TA	0.303	-0.271	0.274	0.089**	0.035***	-0.096**	-0.020***	0.069**	-0.144	1.30

	AD	MD	CB	HD	Hospital type	LOC	Age	TA	VIF
AD	1.000								1.36
MD	0.147	1.000							1.11
CB	0.088**	-0.098**	1.000						1.26
BH	0.233	-0.051	0.070**	1.000					1.17
Hospital Type	0.017***	-0.225	0.282	0.152	1.000				1.34
LOC	-0.104	-0.025***	0.012***	-0.030***	-0.110	1.000			1.09
Age	-0.106	0.056**	-0.181	-0.003***	-0.245	-0.136	1.000		1.15
TA	**0.323**	0.072**	-0.107	0.160	-0.039***	-0.019***	-0.022***	1.000	1.30

Note: The coefficients of the correlation of the dependent, independent and control variables are reported at significance of * 10%, ** 5% and *** 1% levels. The description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait - 62-day cancer wait, BS – Board Size, BI – Board Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender, CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD - Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type.

7.4 Results and discussion

The following sections present the results from the investigation of the impact of corporate governance on the financial and non-financial performance of the NHS hospitals as measured by the ROA and the 62-day cancer referral and treatment target respectively. Financial performance is analysed using fixed effects OLS regression while non-financial performance is analysed using fixed effects logistic regression.

Table 7 presents the results of the relationship between corporate governance and financial performance of the NHS trusts and foundation trusts combined, and trusts and foundation trusts separately. The results presented also show the relationship between corporate governance and financial performance of the trusts and foundation trusts, in line with the subsidiary objective of the research study. The Adjusted R^2 of 15.38%, 17.59% and 12.33% of the NHS hospitals, trusts and foundation trusts indicates that the model is strong and has the ability to explain the variation in the dependent variable, hence a good model fit. Hypotheses on board expertise (H3a), board meetings (H4a), board diversity (H5a), CEO gender (H7a) and academic directors (H8a) are supported according to the results presented.

In addition, Table 8 presents the results of the relationship between corporate governance and non-financial performance of the NHS trusts and foundation trusts combined, and trusts and foundation trusts separately, in line with the main and subsidiary objectives of the research study. The Wald chi2 value is statistically significant at 25.17, 22.88 and 29.56 for the models analysing NHS hospitals, trusts and foundation trusts respectively, indicating that the model is a good fit. The value of the Pseudo R^2 can explain 12.69%, 19.48% and 18.75% of the variation in the dependent variable for the NHS hospitals, the trusts and foundation trusts respectively. Hypotheses on board expertise (H3b), board diversity (H5b) and multiple directorships (H9b) are supported.

According to the results of the independent samples t-test, the null hypothesis that the hospital types of trusts and foundation trusts are the same is rejected, thus indicating a significant statistical difference between the two hospital types.

7.4.1 Board size

The empirical results indicate that the relationship between board size and financial performance is insignificant and negative for NHS trusts and foundation trusts. From the stakeholder-agency theory perspective, the directors are viewed as agents of the various stakeholders of the firm (Hill

and Jones, 1992), and from a resource dependence theory viewpoint, as a co-optation vehicle for managing external firm dependencies (Pfeffer and Salancik, 2003). Based on these two theoretical arguments, the large sized boards would be beneficial to the performance of the trusts and foundation trusts. However, the ineffectiveness of large boards (Jensen, 1993) combined with the associated problems of poor coordination of decision making and information processing (Huther, 1997), free rider problems (Lehn, Patro and Zhao, 2009), communication challenges (Eisenberg, Sundgren and Wells, 1998), information asymmetries (Conyon and Peck, 1998), time constraint issues (Lipton and Lorsch, 1992) and the discordant teams which are a result of lack of interpersonal relations (Forbes and Milliken, 1999) all contribute to this negative result. These challenges hinder the performance of the directors in undertaking their advisory and monitoring roles. This negative relationship is also backed by empirical evidence from prior studies such as Guest (2009) and Kao, Hodgkinson and Jaafar (2019) who similarly report a negative relationship between board size and financial performance of firms and more specific to hospitals, Veronesi, Kirkpatrick and Vallascas (2013) also found that board size has an insignificant impact on hospital outcomes. In relation to the NHS trusts and foundation trusts, these results are closely reflective of the summary statistics presented in Table 3 where the average board comprises of 14 directors and the overall performance of the NHS trusts and foundation trusts as measured by ROA is unsatisfactory. The NHS trust and foundation trust boards tend to be large in accordance with guidance from the National Health Service Trust (Membership and Procedure) Regulations 1990 which stipulates that a maximum board size should comprise of 11 members. Accordingly, an optimal board size is required for enhanced financial performance in the health care sector measured by ROA and Net Profit (Afriyie *et al.*, 2020). There are arguments that the optimal board size ranges between eight to nine directors, with a maximum of ten directors (Lipton and Lorsch, 1992). According to the data on the composition of the trust and foundation trust boards, the average size of the NHS trust and foundation trust boards is 14 directors. It is plausible therefore, in line with evidence from prior studies, that the large size of the NHS trust and foundation trust boards impacts their discussions on financial performance matters.

When analysed at hospital type level, the impact of board size is positive and insignificant on financial performance of the trusts. Meanwhile, board size exerts a negative insignificant impact on the financial performance of foundation trusts. Foundation trusts have a two-tier governance structure comprising of a board of governors and a board of directors. Therefore, having a large board in addition to the board of governors increases overall size of the boards combined, making board dynamics, coordination and managing the decision-making process more difficult compared

to the trusts that have a sole unitary board. This is possibly the reason for the variation in results at hospital type level.

With regards to non-financial performance, the coefficient of board size is positive and statistically insignificant for the performance of the NHS hospitals, as well as for the trusts and foundation trusts. The odds ratio for board size suggests that the likelihood of an improvement in non-financial performance increases by 1.0583 times when the board size of the NHS trusts and foundation trusts combined increases by one director. This finding can be explained by the prediction of the stakeholder-agency theory and the resource dependence theory that argue that a larger board size allows for the representation of the various competing stakeholder needs as well as increased access to resources, respectively. Therefore, the board is able to reap the benefits that accrue from having a large board, such as the diversity in skill set, perspective and knowledge, and the scope to secure critical resources which are pivotal for improving performance (Goodstein, Gautam and Boeker, 1994; Forbes and Milliken, 1999; Arora and Sharma, 2016). Related to the NHS context, the large boards are beneficial for allowing representation of various stakeholders of the trusts and foundation trusts, for example, related stakeholders from affiliated universities, financiers, staff members amongst others. This increases the depth and breadth of discussions on service and non-financial factors that impact the health and wellbeing of the patients and public. Also, because of the diversity in stakeholder representation, the access to critical resources such as information, expertise and experience, that are required for the success and survival of the trusts and foundation trusts is broadened.

7.4.2 Board independence

The regression results indicate that when the proportion of outside directors increases, the financial and non-financial performance of the NHS trusts and foundation trusts combined declines. This insignificant negative impact on the financial and non-financial performance is consistent for both trusts and foundation trust hospitals, as well as consistent with the hypotheses that board independence has a negative relationship with performance. Although the findings conflict the arguments of the resource dependence theory relating to strategic composition of the board to increase access to critical resources such as expertise and human capital, the findings are in line with the arguments of the stewardship theory. The stewardship theory predicts that the co-operative behaviour of the inside directors who are perceived as stewards is rational, collective and aimed at achieving organisational objectives (Davis, Schoorman and Donaldson, 1997). The results therefore favour the appointment of inside directors over outside directors for various reasons. Firstly, the negative influence exerted by

outside directors can be attributed to lack of firm-specific knowledge and expertise, information asymmetry and the lack of support from inside directors in carrying out their board roles (Yasser, Mamun and Rodrigs, 2017). In addition, the outside directors receive insufficient and untimely information on the hospital operations which results in information asymmetry which affects and limits their constructive contribution in board discussions (Veronesi and Keasey, 2011). Moreover, as indicated by Veronesi and Keasey (2011), there is a disconnect in the NHS trust and foundation trust boards between the individual and collective board tasks where outside directors are isolated and are hardly included in board debates hence limiting their input in decision making. Also, in a study on NHS trust and foundation trust boards, Veronesi and Keasey (2011) suggests that the diversified experiences of independent and clinical directors result in latent tensions during board room discussions and this creates obstacles for the independent directors' involvement in decision making, with their inputs not being implemented. Likewise, the prevailing issue of the experts controlling decision making on the NHS trust and foundation trust boards restricts the breadth of inputs in problem solving as prominence is given to the experts to make decisions (Veronesi and Keasey, 2011). This passive attitude of the board towards independent directors on NHS trust and foundation trust boards impacts their contribution towards overall performance. In addition, the independent directors tend to have multiple directorships and because of this, they do not have adequate time to effectively carry out their roles. Considering that the NHS is a fast-paced environment, busy directors end up becoming overwhelmed with too many obligations to effectively contribute to hospital deliberations on improving performance. In addition, independent directors may not have the expertise and experience to contribute effectively to board discussions that are specific to healthcare operations. This result is in line with findings by Mangena, Tauringana and Chamisa (2012), Farhan, Obaid and Azlan (2017) and Zhou, Owusu-Ansah and Maggina (2018).

7.4.3 Board expertise

The results of the study reveal that board expertise has a significant negative impact on financial and non-financial performance of the trusts and foundation trusts in the English NHS. In addition, at hospital type level, board expertise exerts a significant negative effect on financial performance of the trusts and an insignificant negative impact on the financial performance of the foundation trusts. Likewise, the coefficient of board expertise is negative and insignificant for the non-financial performance of trusts, and significant and negative for the non-financial performance of the foundation trusts. The overall negative result provides evidence for the board expertise hypotheses that suggest that board expertise has a significant impact on financial and non-

financial performance of the NHS trusts and foundation trusts. The negative finding contradicts the stakeholder-agency, stewardship, and upper echelons theories. There are several reasons for this result. Firstly, according to Veronesi and Keasey (2011), the decision making process in the NHS context is disjointed as problems are resolved explicitly by the experts in the specific field of expertise. For example, financial decisions are directed to financial experts like accountants, while clinical decisions are left to clinicians. Therefore, the clinicians are reluctant to make decisions relating to financial performance due to their inadequate financial knowledge and instead tend to defer such matters to the financial experts on the board (Veronesi and Keasey, 2011). In addition to this expert model that reduces the influence of the clinicians, the introduction of managerial roles and controls like the performance measurement systems that further reduce the authority and power of clinicians who because of their professional expertise, had traditionally dominated the NHS (Chang, Lin and Northcott, 2002). Secondly, Alexander and Morrisey (1988) and Succi and Alexander (1999) suggest that conflicts between hospitals and clinicians are heightened when clinicians are appointed to the boards as this further worsens their divergent interests (Succi and Alexander, 1999). The conflict and distrust between clinicians on the board and hospital management results from the competing goals and cultural differences brought about by different educational backgrounds, training and professional socialisation (Succi and Alexander, 1999). Thirdly, Alexander and Morrisey (1988), Goes and Zhan (1995) and Succi and Alexander (1999) find that integrating clinicians on management boards results in hospital inefficiencies, particularly increased costs. More so, in line with their professional and ethical norms, clinicians are primarily focused on medical outcomes for patients rather than other factors that would impact financial performance such as cost saving initiatives. Clay-Williams *et al.* (2017) suggest that the clinicians are not necessarily trained managerial professionals and thus have difficulty reconciling their roles as clinicians and managers. This ties with their lack of a business exposure beyond their clinical expertise. In addition, it is possible that the clinical directors are overwhelmed with increasing workloads as they are tasked with meeting the increasing demand for healthcare, while trying to deliver high standards of quality within constrained financial resources. They therefore experience a lot of internal and external demands, and as a result are unable to cope with performance standards required. All these factors combined impact the contribution of clinicians to financial and non-financial performance of the NHS hospitals.

On further analysis, the impact of both doctors and nurses is negative on financial performance of NHS trusts and foundation trusts, with the impact of nurses being statistically significant. However, the coefficient of doctors is positive but insignificant for non-financial performance of NHS trusts and foundation trusts while the coefficient of nurses is negative and significant for non-financial performance of the NHS trusts and foundation trusts. This can be attributed to the

level of influence and seniority that doctors are accorded compared to nurses. The negative significant relationships found are consistent with hypotheses proposed, and is in line with studies by Alexander and Morrisey (1988), Succi and Alexander (1999), Culica and Prezio (2009) and Collum *et al.* (2014).

7.4.4 Board meetings

Frequency of board meetings is found to have a negative impact on financial and non-financial performance of the English NHS trusts and foundation trusts. The effect of board meetings is statistically significant on the financial performance of the NHS trusts and foundation trusts while its insignificant on the non-financial performance of NHS trusts and foundation trusts. This finding contradicts the stakeholder-agency theory which emphasises the vital role of monitoring stakeholder-agent relationships by the managers (Hill and Jones, 1992). Directors having meetings to discuss matters that affect the institution is part of them performing their monitoring task (Afriyie *et al.*, 2020). The level of oversight of the board of directors increases with the number of meetings as management and the institution's performance is discussed more frequently (Afriyie *et al.*, 2020). The increased meetings also means that the various stakeholder claims are discussed and deliberated upon in line with the stakeholder-agency theory.

However, as indicated by the findings, an increase in frequency of board meetings results in a decline in financial and non-financial performance of hospitals, which is a contradiction of the predictions of the stakeholder-agency theory. This negative effect can be attributed to the benefits of the meetings being outweighed by the costs incurred, such as director fees and related logistic expenses. Given that the NHS is a financially constrained environment, extra costs incurred as a result of increased meetings would affect the financial performance of the trusts and foundation trusts. Moreover, the meetings may involve routine tasks (Vafeas, 1999), in which case they generate costs without producing significant contributions (Rodriguez-Fernandez, Fernandez-Alonso and Rodriguez-Rodriguez, 2014). In addition, the NHS trusts and foundation trusts are likely to increase the frequency of board meetings as a response to the prior year performance (Vafeas, 1999) or the occurrence of corporate events such as acquisitions, mergers, restatement of financial accounts (Brick and Chidambaran, 2010). The increased meetings are therefore more reactive than proactive, and the outcome may not be an immediate improvement in performance of the trusts and foundation trusts. This means that the meetings are focused on remedial actions which may not necessarily result in an immediate improvement in financial performance of the hospitals.

When analysed at hospital type level, the impact of board meetings is insignificant and negative on financial performance of trusts and foundation trusts. On the other hand, the coefficient of board meetings varies on the non-financial performance of the trusts and foundation trusts with the coefficient being insignificant and positive for trusts, and insignificant and negative for foundation trusts. The difference in the effect of board meetings on non-financial performance at hospital level can be attributed to the governance arrangements in the foundation trusts which may delay decision making. The board of governors are responsible for holding the non-executive directors accountable for the performance of the board of directors and therefore, certain decisions may take longer to make as there is an added level of accountability.

7.4.5 Board diversity

In relation to board diversity, the empirical results show that board gender diversity has a significant negative impact on financial and non-financial performance of NHS trusts and foundation trusts in England. At the hospital type level, the effect exerted by board gender diversity is significant and negative for the financial performance of the trusts and insignificant and negative for the financial performance of the foundation trusts. Furthermore, the coefficient of board diversity on non-financial performance is insignificant and negative for trusts and significant and negative for foundation trusts. This result confirms that a higher proportion of females on the board is associated with a decline in overall performance of the NHS trusts and foundation trusts. However, according to the critical mass theory, when the minority reaches a representation of 30% of the group, a quantifiable impact is realised. The negative impact of board gender diveristy on the financial and non-financial performance of hospitals can therefore be attributed to a number of factors.

While women are said to contribute to improved monitoring of firms (Unite, Sullivan and Shi, 2019; Wang, 2020), over monitoring of management by female directors has a reverse effect on firm performance (Adams and Ferreira, 2009). There is a decline in strategic advisory, increased managerial myopia, poor acquisition performance and weakened corporate innovation when the intensity of monitoring increases (Faleye, Hoitash and Hoitash, 2011). Moreover, Faleye, Hoitash and Hoitash (2011) suggest that the poor strategic decisions are especially detrimental when it comes to corporate innovation especially in firms with complex operations. Similar to the NHS trusts and foundation trusts that are complex institutions, innovation and strategic decision making are pivotal for improving performance of the hospitals. Therefore, given that the effects of over monitoring that are usually associated with female directors include a decline in strategic decision making, the effect of female directors on performance of the NHS trusts and foundation

trusts becomes negative. In addition, the female directors may also experience the effects of socialisation (Rose, 2007) and tokenism (Van Ness and Kang, 2010; Mahadeo, Soobaroyen and Hanuman, 2012) which affects their contribution to decision making and subsequently impacts their contribution to the financial and non-financial performance of the hospitals. Moreover, female directors generally tend to adapt to the established gender values which focus on reducing bad social outcomes, with no particular impact on the financial aspects (Ellwood and Garcia-Lacalle, 2015). The female directors in the NHS therefore tend to focus on the non-financial aspect of performance of the trusts and foundation trusts. However, this imbalanced approach is detrimental to the overall performance of the hospitals as suggested by Ellwood and Garcia-Lacalle (2015) who also found that despite NHS boards having a high percentage of females, the variations in their representation has no ultimate impact on financial performance or quality of healthcare services. The overall result provides evidence to support the proposed hypotheses that gender diverse boards have a significant impact on the financial and non-financial performance of NHS hospitals. The findings of this study are in line with studies by Adams and Ferreira (2009), Ahmad *et al.* (2019) and Kweh *et al.* (2019) who indicate that board gender diversity negatively impact performance of firms.

7.4.6 CEO tenure

In analysing the effect of CEO tenure on performance of NHS trusts and foundation trusts, the regression results depict an insignificant positive impact on financial and non-financial performance of the NHS hospitals. In addition, the odds ratio for CEO tenure suggests that the likelihood of an improvement in non-financial performance increases by 1.0375 times when the CEO serves an additional year of their tenure on the board of the NHS trusts and foundation trusts. These findings are consistent with the assumptions of the upper echelons theory that suggests that the overall outcomes, strategic decisions and performance of an institution are partially predicted by the background characteristics of the managers (Hambrick and Mason, 1984). Among the characteristics predicted by the theory includes the tenure on the board. Given that the NHS is a long-standing institution, the CEOs with longer tenures thrive and perform better because of their institutional knowledge and experience within the healthcare sector which enhances their ability to provide effective leadership in decision and strategy making. The CEOs that have served for a number of years on the board draw on experiences through the years to guide their decisions, problem solving or for strategic development. They also exhibit high competence and commitment to the hospital's mission (Vafeas, 2003) while demonstrating a higher level of accountability (Kaur and Singh, 2019). These qualities enhance the alignment of

their goals with those of the hospitals. These results are supported by prior studies which also found that CEO tenure has a positive impact on financial performance of firms (Van Ness, Miesing and Kang, 2010; Livnat *et al.*, 2021) while Chen, Zhou and Zhu (2019) found that CEO tenure has a positive impact on non-financial performance of as measured by corporate social responsibility. However, the statistical insignificance of the findings do not provide support for the proposed hypotheses which predicted a significant result.

The findings on CEO tenure vary at the hospital type level. The impact of CEO tenure is insignificant and positive on financial performance of the trusts and foundation trusts irrespective of hospital type. However, the coefficient of CEO tenure for non-financial performance of the trusts is insignificant and negative while the coefficient is insignificant and positive for the foundation trusts. The variation in the effect of CEO tenure on non-financial performance of the trusts and foundation trusts can be attributed to the limited operational autonomy that the trusts have compared to the foundation trusts. The discretion allowed to the CEOs in decision and strategy making in trusts is limited, therefore the ability of long tenured directors to influence the board decreases, thus negatively impacting non-financial performance.

Table 7 Results of the fixed effects OLS regression analysis

	NHS hospitals	**Trusts**	**Foundation trusts**
Measure	**ROA**	**ROA**	**ROA**
BS	-.0002	.0033	-.0021
	(.0019)	(.0032)	(.0024)
BI	-.007	-.0079	-.0090
	(.0077)	(.0151)	(.0087)
BE	**-.1179*** **	**-.1853*** **	-.0829
	(.0500)	**(.0926)**	(.0579)
Nurses	**-.1771*** **	**-.4427*** **	-.0884
	(.0751)	**(.1805)**	(.0790)
Doctors	-.0890	-.1695	-.0490
	(.0673)	(.1219)	(.0771)
BM	**-.0033** **	-.0033	-.0030
	(.0017)	(.0038)	(.0018)
BD	**-.0219*** **	**-.0249***	-.0170
	(.0085)	**(.0144)**	(.0105)
CT	.0004	.0023	.0005
	(.0009)	(.0035)	(.0009)
CG	**-.0227*** **	**-.0340***	**-.0173***
	(.0093)	**(.0193)**	**(.0104)**
AD	**-.1510***	-.115	-.1503
	(.0837)	(.1387)	(.1024)
MD	-.0173	-.0112	-.0194
	(.0402)	(.0560)	(.0626)
CB	-.0108	-.0232	-.0081

	NHS hospitals	Trusts	Foundation trusts
	(.0111)	(.0268)	(.0117)
HD	.0030	.0027	.0082
	(.0099)	(.0208)	(.0110)
LOC	.0009	-.0019	-
	(.0186)	(.0217)	-
Age	**-.0077*** **	**-.0153*** **	**-.0046*** **
	(.0017)	**(.0035)**	**(.0019)**
TA	**.2137*** **	**.2020*** **	**.2229*** **
	(.0241)	**(.0496)**	**(.0265)**
Firm year effect	**Yes**	**Yes**	**Yes**
Year fixed effect	**Yes**	**Yes**	**Yes**
Adjusted R^2	**0.1538**	**0.1759**	**0.1233**
Prob>F	**0.0000**	**0.0000**	**0.0000**
Observations	**576**	**199**	**373**

Note: This table represents the OLS regression analysis results measuring the hypotheses 1 – 11. The statistical significance is reported at * 10%, ** 5% and *** 1% levels. The respectively. Note. The relationship between corporate governance and financial performance of NHS hospitals, Trusts, Foundation Trusts is reported in Model 1, Model 2, and Model 3, respectively. Robust standard errors are reported in parentheses. description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait - 62-day cancer wait, BS – Board Size, BI – Board Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD – Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type.

7.4.7 CEO gender

According to the empirical results, CEO gender has a significant negative impact on financial performance of NHS trusts and foundation trusts in England. Meanwhile, the coefficient of CEO gender on non-financial performance of NHS trusts and foundation trusts is negative and insignificant. The negative findings on both financial and non-financial performance are consistent with the arguments of the upper echelons theory which suggests that the attributes of top managers can partially predict organisational outcomes (Hambrick and Mason, 1984). Peni (2014) argues in accordance with existing literature, an individual's work success can be affected by gender-based disparities. For instance, female directors are perceived as being more cautious, risk averse and conservative, with a disposition to avoid losses and also tend to be less confident when compared with their male counterparts (Levin, Snyder and Chapman, 1988; Byrnes, Miller and Schafer, 1999; Peni, 2014; Kaur and Singh, 2019). Although according to the data collected for this study, majority of NHS trusts and foundation trusts are led by men, the few that are led by women are seen to have performed poorly. The results therefore provide evidence that the gender-based differences have an impact on the leadership styles, strategic direction and decision making of female directors, subsequently affecting overall performance of the NHS trusts and foundation trusts. Moreover, there is a likelihood that the influence and prestige enjoyed by men

in upper echelons and in similar positions as the female directors, are not extended to female directors (Zelechowski and Bilimoria, 2004). This lack of influential power affects the performance of female CEOs and their contribution to the performance of the trusts and foundation trusts that they oversee. The result on financial performance of the trusts and foundation trusts is consistent with the hypotheses that CEO gender has a significant impact on financial performance of the hospitals. Empirical findings from Jadiyappa *et al.* (2019) and Kaur and Singh (2019) support the negative result of the impact of CEO gender on financial performance of firms. On the other hand, Dezső and Ross (2008), Jadiyappa *et al.* (2019) and Kaur and Singh (2019) also indicate that CEO gender negatively impacts non-financial performance of firms.

However, at the hospital type level, there is a variation in the influence of CEO gender on performance. Although the impact remains significant and negative on the financial performance of both trusts and foundation trusts, the effect that CEO gender exerts on non-financial performance of the trusts and foundation trusts varies. The coefficient of CEO gender on the non-financial performance of trusts is positive and insignificant, while it is negative and insignificant for the foundation trusts. This variation can be attributed to the different governance structures of the trusts and foundation trusts. Having a two-tier governance structure may limit the powers of the CEO in foundation trusts while for the trusts, being a unitary board, the CEO has the ultimate authority over the board decisions especially regards to non-financial performance, which prior studies by Siciliano (1996), Terjesen, Sealy and Singh (2009), Hafsi and Turgut (2013) and Harjoto, Laksmana and Lee (2015) have showed women to have an inclination towards.

7.4.8 Academic directors

Recruiting academic directors to the board has a significant negative impact on the financial performance of NHS trusts and foundation trusts in England. The impact remains negative but statistically insignificant for both trusts and foundation trusts. This negative finding is contrary to the arguments of the resource dependence theory which suggest that the strategic composition of the board of directors is pivotal for creating linkages to valuable resources for firm survival and success. Firms respond to their dependencies by altering their board composition by appointing directors with differing skills and knowledge to address different dependencies. Appointing academic directors to the board is part of the modification of the board's composition in response to environmental dependencies. Particularly for the NHS trusts, the 1990 Health and Community Act presented stipulations that an individual who is not an employee of the trust but holds a post in a university with a medical or dental school and also works for the trust or is seconded to work for the trust by the employees is regarded as an executive director. In addition, for the NHS

foundation trusts that include a medical or dental school, one of the criteria for eligibility for appointment as a non-executive director includes being a member of an affiliated university (Your duties: a brief guide for NHS foundation trust governors). Therefore, among the stakeholders represented on the board of governors of the foundation trusts includes a representative from any of the local university medical school (Allen, 2006). The impact of these academic directors is negative albeit insignificant on the financial performance of the trusts and foundation trusts. In this case, the negative impact can be attributed to the appointed academic directors being from an unrelated area of speciality to the hospital's needs, whereby their expertise does not translate well for effective decision making (Francis, Hasan and Wu, 2015). The criteria for eligibility do not specify the particular qualifications of the academic representative from the university. Therefore, certain universities affiliated with hospitals appoint academic directors on their boards to ensure stakeholder representation on the board without specifically vetting the director's area of expertise. So, when the academic background of the directors is not related to finance or accounting or business, it is difficult for the academic directors to translate their expertise into effective decision making. Moreover, the NHS trusts and foundation trusts have a dominant expert model where decision making is dominated by experts in a certain field (Veronesi and Keasey, 2011), therefore the contribution of non-experts may not be implemented. Overall, the findings in relation to academic directors do not support the proposed hypothesis that academic directors have a significant relationship with financial performance of NHS trusts and foundation trusts.

On the other hand, the coefficient of academic directors is positive albeit insignificant for the non-financial performance of NHS hospitals as well as the trusts and foundation trusts. The odds ratio for academic directors suggests that the likelihood of an improvement in non-financial performance increases by 2.5834, 2.4039 and 3.1648 times when academic directors on NHS trust and foundation trust boards respectively, increase by one. This finding is consistent with the resource dependence theory which supports the appointment of skilled and networked directors to the board as a strategy for managing external firm dependencies. Academic directors are perceived to be highly knowledgeable, experienced with transferable skills and a diverse outlook which improves cognitive thinking within board debates. Moreover, Cho *et al.* (2017) suggests that the positive impact of the academic directors on non-financial performance depends on if the academic background of the director is specialised for example in science, medicine, and the positive impact weakens when the academic directors hold administrative positions at their respective universities. Precisely, academic directors in the medical field are essential for improving hospital performance as this is related to their expertise. They would therefore be in a

better position to monitor, advise, oversee committees and effectively contribute to decision and strategy making for improving non-financial performance of the hospitals (Francis, Hasan and Wu, 2015; White *et al.*, 2014). Likewise, the social connections and networks of the academic directors are valuable for access to resources and information which can be useful in decision making.

Table 8 Results of fixed effects logistic regression analysis

	NHS hospitals		**Trusts**		**Foundation trusts**	
	62-day cancer referral and treatment					
	Coefficient	**Odds ratio**	**Coefficient**	**Odds ratio**	**Coefficient**	**Odds ratio**
BS	.0568	1.0583	.0409	1.0417	.0689	1.0711
	(.0839)	(.0888)	(.1223)	(.1274)	(.1154)	(.1236)
BI	-.5304	.5884	-.7545	.4702	-.4575	.6329
	(.3254)	(.1915)	(.5258)	(.2473)	(.4309)	(.2727)
BE	**-5.5141****	**.0040*****	-1.2470	.2874	**-7.4987*****	**.0006*****
	(2.2401)	**(.0090)**	(3.9065)	(1.1226)	**(2.8959)**	**(.0016)**
Nurses	**-9.5457*****	**.0001*****	-6.0411	.0024	**-10.6906*****	**.0000*****
	(3.4928)	**(.0002)**	(7.0509)	(.0168)	**(4.1420)**	**(.0001)**
Doctors	.3007	1.3508	4.3597	78.2361	-1.3910	.2488
	(2.8288)	(3.8212)	(5.1901)	(406.0505)	(3.3874)	(.8429)
BM	-.0122	.9879	.0227	1.0230	-.0166	.9835
	(.0782)	(.0772)	(.1748)	(.1789)	(.0876)	(.0861)
BD	**-.9824*****	**.3744*****	-.4364	.6464	**-1.3989*****	**.2469*****
	(.4261)	**(.1595)**	(.6191)	(.4002)	**(.6151)**	**(.1518)**
CT	.0368	1.0375	-.1653	.8476	.0548	1.0563
	(.0461)	(.0479)	(.1708)	(.1447)	(.0505)	(.0534)
CG	-.1730	.8411	1.1051	3.0194	-.4056	.6665
	(.4447)	(.3741)	(1.1688)	(3.5291)	(.4752)	(.3167)
AD	.9491	2.5834	.8771	2.4039	1.1521	3.1648
	(3.4477)	(8.9069)	(5.0155)	(12.0567)	(4.8734)	(15.4230)
MD	**2.4903***	**12.0658***	.6095	1.8395	**5.6468*****	**283.3891*****
	(1.5091)	**(18.2079)**	(1.9405)	(3.5695)	**(2.5479)**	**(722.0424)**
CB	-.4873	.6142	-.2110	.8098	-.5440	.5804
	(.4790)	(.2942)	(1.1380)	(.9216)	(.5288)	(.3069)
HD	.1561	1.1689	**-2.3270***	**.0976****	**.6691****	**1.9526***
	(.2560)	(.2992)	**(.6848)**	**(.1213)**	**(.3554)**	**(.6939)**
Age	-.2258	.7978	**-.3138***	**.7307*****	-.1957	**.8222*****
	(.1717)	(.0602)	**(.1758)**	**(.1009)**	(.2124)	**(.0728)**
TA	-.2772	.7578	-1.0060	.3657	-.0970	.9075

	NHS hospitals		Trusts		Foundation trusts	
	(1.2846)	(.8795)	(1.5924)	(.7356)	(1.8046)	1.3146
LOC	-	1	-	1	-	1
Hospital type	-	1	-	1	-	1
Firm year effect	**Yes**		**Yes**		**Yes**	
Year fixed effect	**Yes**		**Yes**		**Yes**	
Pseudo R^2	**0.1269**		**0.1948**		**0.1875**	
Wald Chi	**25.17**		**22.88**		**29.56**	
Prob > chi2	**0.0219**		**0.0432**		**0.0055**	
Observations	**317**		**106**		**211**	

Note: This table represents the Logistic regression analysis results measuring the hypotheses 1 – 11. The statistical significance is reported at * 10%, ** 5% and *** 1% levels. Note. The relationship between corporate governance and non-financial performance of NHS hospitals, Trusts, Foundation Trusts is reported in Model 1, Model 2, and Model 3, respectively. Robust standard errors are reported in parentheses. The description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait – 62-day cancer wait, BS – Board Size, BI – Board Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD – Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type.

7.4.9 Multiple directorships

Board members who hold several positions on boards of other organisations are found to have an insignificant negative impact on the financial performance of NHS trusts and foundation trusts. The insignificant negative impact persists for the trusts and foundation trusts as well. The finding is inconsistent with the resource dependence theory which posits that interlocking directorships helps to create vital access to resources that firms need to survive and succeed. Directors with multiple board roles are common in the NHS trust and foundation trust boards given that the composition of the board of directors is made up of both executive directors and non-executive directors who have no existing relationship with the trusts or foundation trusts but are recruited for their expertise, accolades and skills (Pearce and Zahra, 1992). Generally, directors with multiple board roles are perceived to be more experienced and more efficient in performing their board roles (Sarkar and Sarkar, 2009). However, there is a downside to holding multiple board roles as the dedication effect supersedes the reputation effect when the directors become overwhelmed with duties and are too busy to effectively carry out their board responsibilities (Iturriaga and Rodríguez, 2014). The directors with multiple board roles also tend to lack motivation to improve performance (Farhan, Obaid and Azlan, 2017). Moreover, the capacity of the busy directors to gain a desirable level of competence (Chen, Lai and Chen, 2015) and understanding of the hospital's operations is limited by their numerous obligations to different

boards. Especially in the context of a highly specialised and busy environment like the NHS, directors with multiple board roles would be overwhelmed with board roles and duties of many organisations. The directors have limited time to gain a sufficient level of competency to make decisions for the hospitals. This therefore puts them in an inferior position in board debates as they are less informed about specific hospital issues and discussions. Subsequently, their ability to monitor, advise and oversee management is impacted, and this negatively impacts financial performance of the hospitals in the long run. This finding is consistent with other studies that similarly indicate that multiple directorships negatively impact financial firm performance (Jackling and Johl, 2009; Cashman, Gillan and Jun, 2012; Falato, Kadyrzhanova and Lel, 2014; Gray and Nowland, 2018).

However, the coefficient of multiple directorships for the non-financial performance is positive and statistically significant for NHS hospitals and foundation trusts in England. For the trusts, the coefficient of multiple directorships on non-financial performance is also positive but insignificant. The positive finding is consistent with the predictions of the resource dependence theory which explains certain decisions that the trusts and foundation trusts make in terms of board composition. In order to manage their external dependencies, the trusts and foundations trusts appoint directors from external related stakeholders. These outside directors are likely to have other board roles as well and they bring benefits such as greater diversity of experience (Ferris, Jagannathan and Pritchard, 2003) and a good network which would work to the advantage of the hospital especially in accessing vital resources such as expertise and information. Non-financial performance of the hospitals therefore improves because the directors who hold multiple board roles contribute to decision and strategy making based on their diverse experience and interactions with different stakeholders. This finding is in line with the proposed hypotheses and prior studies by Pandey, Sehgal and Mittal (2019).

7.4.10 CEO background

The impact of the background of the CEO on financial and non-financial performance of NHS trusts and foundation trusts in England is found to be negative and insignificant. These findings for the impact on both financial and non-financial performance persist for the trusts and foundation trusts. Likewise, the results are aligned with the arguments of the resource dependence theory and the upper echelons theory. The resource dependence theory advocates for the appointment of directors from diverse backgrounds to the board to take advantage of their diverse experiences, skills, and networks. Meanwhile, the upper echelons theory argues that the characteristics of the CEO such as their background can possibly affect organisational outcomes in

terms of strategic choices and decision making (Hambrick and Mason, 1984). The results indicate that appointing a CEO from a clinical background is detrimental to financial performance because their primary priorities are partial to their clinical background and professional training which are inclined to the identification and resolution of patient needs and problems, while non-clinician directors view and treat patient needs as customer demands (Veronesi and Keasey, 2011). In addition, as Veronesi and Keasey (2011) suggest, individual expertise at board level is given prominence therefore clinical related issues are prioritised. Board discussions may be streamlined according to CEO expertise as opposed to taking a more general and holistic approach to problem solving (Veronesi and Keasey, 2011). Moreover, the financial performance of the trusts and foundation trusts is impacted by the opportunistic tendencies of the CEO who may be driven to pursue narrow interests of protecting their positions at the expense of the hospital's financial interests by undertaking conservative and risk-averse financial policies (Molinari *et al.*, 1993). This approach in the long run is detrimental to financial and non-financial performance of hospitals as several ideas and opinions of the board of directors may be ignored. This narrow focus also results in other aspects of performance being overlooked as clinical work is prioritised over management, and this results in inefficient leadership of the board. Inefficient leadership therefore has an impact on the overall financial and non-financial performance of the trusts and foundation trusts. Hypotheses 10a and 10b are therefore not supported. There is a dearth of studies on the impact of CEO background on firm performance. However, one study by Molinari *et al.* (1993) indicates that CEOs with a clinical background are detrimental to financial performance of hospitals. In addition, this negative finding is further backed by findings from Veronesi, Kirkpatrick and Vallascas (2014) which reveal that a clinical qualification may not be vital for improved hospital performance.

7.4.11 Honoured Directors

The appointment of honoured directors has an insignificant positive impact on financial and non-financial performance of NHS hospitals in England. The positive result is consistent with the resource dependence theory which supports the recruitment of affluent directors to the board as a vehicle for the firm to manage external environmental dependencies and establish legitimacy. According to the data on the composition of the NHS trust and foundation trust boards between 2014 and 2018, majority of the boards had directors with honorary decorations such as CBE (Commander of the Most Excellent Order of the British Empire), MBE (Member of the Order of the British Empire), Dame amongst others. The appointment of honoured directors increases legitimacy of the trusts and foundation trusts and given that the new NHS is driven by patient

choice, the honoured directors on the board may attract a range of patients to use the hospitals based on their social status. Not only does the socioeconomic status of the directors serve to establish legitimacy and boost the image of the hospitals, their contribution in terms of varied perspectives, experience and access to vital hospital resources contribute to improving hospital financial and non-financial performance. It can also be argued that these directors are conscious of their reputation and stature and are therefore more committed to governance and monitoring of hospital management and operations as a whole, to avoid being linked to situations that might harm their reputation in society. However, because the findings are not statistically significant, they do not provide evidence for the proposed hypotheses.

Furthermore, at the hospital type level, honoured directors have a positive insignificant effect on financial performance of the trusts and foundation trusts. However, the relationship varies for non-financial performance where the coefficient of honoured directors is negative and significant for trust hospitals and significant and positive for foundation trusts. This can be attributed to the operational autonomy of the board of directors in the foundation trusts in making decisions and setting strategies that concern the hospital and its overall performance. The contribution of the directors with honours is therefore more recognised on boards where they have managerial discretion compared to the trusts that are accountable to central NHS. As Finkelstein and Hambrick (1990) suggest, the performance of top management is enhanced by the level of discretion allowed to the managers. There are no studies that have examined the impact of the honoured directors on the financial and non-financial performance of hospitals in the English NHS. This is therefore a novel contribution.

7.4.11.1 Control Variables

The control variables included in the OLS and logistic regression models have varying results of their impact on the financial and non-financial performance of trusts and foundation trusts in the English NHS. The hospital age is found to have a significant negative relationship with financial performance of the English NHS hospitals as well as the trusts and foundation trusts. Meanwhile, the relationship between the age of the hospital and non-financial performance is negative and insignificant for NHS hospitals and foundation trusts, while the effect is negative and significant for trust hospitals. This results shows that the older hospitals are associated with poor performance and this could be attributed to various reasons such as technological advancements in treating illnesses, and rigidity to traditional operational tendencies of the older hospitals.

On the other hand, the hospital size proxied by the log of total assets is found to be significantly and positively related with financial performance of the English NHS hospitals, and trusts and

foundation trusts on a standalone basis. Essentially, this means that larger hospitals benefit from economies of scale in their operations (Posnett, 1999) and enjoy cost saving efficiencies. However, hospital size has a negative insignificant relationship with non-financial performance of the NHS hospitals, trusts and foundation trusts.

The control variable of hospital type was omitted by the fixed effects estimator in both models because of collinearity. In addition, location was also omitted because of collinearity in the OLS model for foundation trusts. The omission was also observed in the logistic model for NHS hospitals, trusts and foundation trusts. Boakye *et al.* (2020) argue that variables which are omitted by the fixed effects model will have the same impact later on.

7.5 Sensitivity analysis

To confirm the validity and reliability of the findings, three techniques were employed as robustness checks for the OLS model and the logistic model. Firstly, for the OLS model, an alternative financial performance measure of operating margin was adopted. Operating margin has been used by prior studies in measuring financial performance of hospitals (Goes and Zhan, 1995; Culica and Prezio, 2009; Collum *et al.*, 2014). Operating margin shows how efficiently the hospitals are being managed. Secondly, endogeneity in the models that can impact inferences made from results is resolved by using instrumental variables which are derived by lagging the independent corporate governance variables. Following the arguments of Wintoki, Linck and Netter (2012), historical or lagged values are expected to provide an exogenous source of variation for corporate governance because the current shocks to performance are unanticipated at the time boards were selected, otherwise the estimated costs and benefits of particular board structures would not be traded off. The instrumental variables created are adopted in the 2SLS estimation technique, which is an extension of the OLS regression method, to address issues of reverse causality. Endogeneity in the variables is measured using the Durbin-Wu-Hausman Test.

7.5.1 Results and discussion of the 2SLS regression analysis

Table 9 below presents the sensitivity test results of the second stage regression where instrumental variables are introduced in the model to replace the predicted values in the first stage regression model. 3 models are presented showing the measurement of the impact of corporate governance on financial performance of NHS hospitals, trusts and foundation trusts. The results of over-identification and weak instruments tests suggest that the instrumental variables are appropriate. The F-statistic is higher than the critical value reported, therefore the

instruments selected for the analysis are not weak. For the tests of over-identification, the p-value is not significant demonstrating that the model is well specified. The Durbin-Wu-Hausman test of endogeneity reveals a p-value greater than 0.005, indicating that that there is no endogeneity detected in the model.

Table 9 Results of the 2SLS regression analysis

	NHS hospitals	**Trusts**	**Foundation trusts**
	Operating Profit Margin		
BS	.0005	.0041	-.0037
	(.0024)	(.0035)	(.0032)
BI	**.0444*** **	**.0334***	**.0422*** **
	(.0116)	(.0186)	(.0153)
BE	-.0297	.0269	**-.1721*** **
	(.0456)	(.0922)	(.0528)
Nurses	. 0313	-.1362	**-.1620***
	(.0787)	(.2013)	(.0912)
Doctors	-.0730	.1061	**-.1924****
	(.0664)	(.1229)	**(.0748)**
BM	-.0017	-.0019	-.0022
	(.0014)	(.0026)	(.0016)
BD	.0205	-.0036	.0340
	(.0178)	(.0220)	(.0313)
CT	**.0040*** **	**.0045*** **	**.0030*** **
	(.0008)	(.0014)	(.0009)
CG	.0078	**-.0284*** **	**.0167***
	(.0079)	(.0136)	(.0096)
AD	-.0087	-.1144	.0202
	(.0629)	(.1332)	(.0674)
MD	-.0209	-.0106	.0158
	(.0196)	(.0333)	(.0255)
CB	**.0194*** **	.0156	.0095
	(.0074)	(.0337)	(.0090)
HD	**.0169*** **	.0098	.0059
	(.0076)	(.0135)	(.0095)
Firm year effect	**Yes**	**Yes**	**Yes**
Year fixed effect	**Yes**	**Yes**	**Yes**
Observations	**484**	**179**	**305**
Adjusted R^2	**0.0568**	**0.1439**	**0.0558**
Hausman Test of Endogeneity			
X^2	**1.9058**	**0.7601**	**1.7308**
p-value	**0.3300**	**0.4709**	**0.3694**
Test of weak instruments			
F-statistic	**437.6541**	**154.0038**	**280.9949**
p-value	**0.0000**	**0.0000**	**0.0000**
Partial R^2	**0.4963**	**0.4637**	**0.4848**

	NHS hospitals	Trusts	Foundation trusts
Test of overidentifying restrictions			
p-value	**0.2875**	**0.3276**	**0.1884**

Note: This table represents the 2SLS regression analysis results measuring the hypotheses 1 – 11. The statistical significance is reported at * 10%, ** 5% and *** 1% levels. Note. The relationship between corporate governance and financial performance of NHS hospitals, Trusts, Foundation Trusts is reported in Model 1, Model 2, and Model 3, respectively. Robust standard errors are reported in parentheses. The description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait – 62-day cancer wait, BS – Board Size, BI – Board Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD – Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type.

There are a number of results that persist in both the OLS FE regression model and the 2SLS regression model using alternative assumptions. For the NHS hospitals, the impact of CEO tenure and the presence of honoured directors continue to report a positive impact on financial performance and the result is statistically significant for the robustness checks. Similarly, for the trusts on a standalone basis, the impact of CEO gender indicates a significant negative impact on financial performance while CEO tenure has a positive and significant impact on financial performance. For the results of the foundation trusts, board expertise has a significant negative impact on financial performance, and the finding remains significant and negative for the impact of both doctors and nurses on financial performance. Conversely, CEO tenure has a significant positive impact on financial performance of the foundation trusts.

7.5.2 Results and discussion of the Ordered logistic regression analysis

Secondly, the sensitivity tests were also performed for the results on non-financial performance shown in Table 10 below. An alternative measure of non-financial performance of the overall quality ratings of the trusts and foundation trusts was employed. The quality ratings were operationalised as 4 for *outstanding*, 3 for *good*, 2 for *requires improvement* and 1 for *inadequate*. This operationalisation approach is in line with Veronesi, Kirkpatrick and Vallascas (2013), (2014). Also, the independent corporate governance variables were lagged to rule out the possibility of the results being driven by reverse causality. By lagging the independent variables by one year, the quality ratings which are awarded to the trusts and foundation trusts by the CQC were not predicted at the time the NHS hospitals adopted particular board practices. This therefore allows for the derivation of exogenous variables to eliminate the effects of reverse causality. The quality ratings are categorised as an ordinal variable given that they are ordered from *outstanding* (4) to *inadequate* (1) (Menard, 2011). The analysis was therefore re-run using ordered logistic

regression and standard robust errors were clustered at hospital type level to allow for the presence of within group (cluster) correlation (Veronesi, Kirkpatrick and Vallascas, 2013).

Table 10 Results of the ordered logistic regression analysis

	NHS hospitals		**Trusts**		**Foundation trusts**	
	Quality Ratings					
	Coefficient	**Odds ratio**	**Coefficient**	**Odds ratio**	**Coefficient**	**Odds ratio**
BS	.0632	1.0653	.0033	1.0033	.0598	1.0616
	(.0700)	(.0746)	(.0972)	(.0972)	(.0799)	(.0848)
BI	.1896	1.2088	-.1883	.8284	.2469	1.2800
	(.2792)	(.3375)	(.4962)	(.4111)	(.3140)	(.4019)
BE	**-3.1966****	**.0409****	-.6163	.5400	**-3.4609****	**.0314***
	(1.6936)	**(.0693)**	(2.2731)	(1.2274)	**(1.9252)**	**(.0605)**
Nurses	**-4.7650***	**.0085***	**-**4.1861	.0152	-3.8937	.0204
	(2.7349)	**(.0233)**	(3.9536)	(.0601)	(2.5403)	(.0517)
Doctors	-1.9088	.1483	.04748	1.0486	-2.9013	.0549
	(2.4828)	(.3681)	(3.8314)	(4.0177)	(3.0377)	(.1669)
BM	-.0668	.9354	-.0425	1.0435	**-.0796****	.9235
	(.4922)	(.0460)	(.0794)	(.0828)	**(.0446)**	(.0412)
BD	**.5797****	1.7855**	.6111	1.8425	.3247	1.3836
	(.2999)	(.5355)	(.4216)	(.7769)	(.3219)	(.4454)
CT	.0563	1.0579	**.1629*****	**1.1770*****	.0470	1.0481
	(.0362)	(.0383)	**(.0577)**	**(.0680)**	(.0297)	(.0312)
CG	.0330	1.0335	-.6021	.5476	.0384	1.0391
	(.3137)	(.3242)	(.6363)	(.3484)	(.3468)	(.3604)
AD	-1.8192	.1622	2.6221	13.7642	-2.3620	.0942
	(2.5425)	(.4123)	(3.2721)	(45.0382)	(3.1026)	(.2924)
MD	-1.2190	.2955	-.6917	.5007	-1.3309	.2642
	(1.2089)	(.3572)	(1.7167)	(.8596)	(1.0968)	(.2898)
CB	.1322	1.1414	-.3706	.6903	.1859	1.2043
	(.2977)	(.3398)	(.5751)	(.3970)	(.3344)	(.4028)
HD	.1694	1.1846	.0012	1.0779	**.6570****	**1.9291****
	(.1526)	(.1807)	(.2315)	(.5463)	**(.3226)**	**(.6223)**
Firm year effect	**Yes**		**Yes**		**Yes**	
Year fixed effect	**Yes**		**Yes**		**Yes**	
Pseudo R2	**0.1642**		**0.1545**		**0.0909**	
Wald chi2	**41.86**		**46.39**		**.**	
Prob > chi2	**0.0002**		**0.0000**		-	

	NHS hospitals	Trusts	Foundation trusts
Observations	**451**	**152**	**299**

Note: This table represents the Logistic regression analysis results measuring the hypotheses 1 – 11. The statistical significance is reported at * 10%, ** 5% and *** 1% levels. Note. The relationship between corporate governance and non-financial performance of NHS hospitals, Trusts, Foundation Trusts is reported in Model 1, Model 2, and Model 3, respectively. Robust standard errors are reported in parentheses. The description of the abbreviations of the variables are ROA – Return on Assets, 62-day wait - 62-day cancer wait, BS – Board Size, BI – Board Independence, BE – Board Expertise, BM – Board Meetings, BD – Board diversity, CG – CEO Gender CT – CEO Tenure, AD – Academic Directors, MD – Multiple Directorships, CB – CEO Background, HD – Honoured directors, LOC – Location, Age, TA – Total Assets, Hospital Type.

The findings of the robustness tests therefore confirm the validity and reliability of results of the first logistic model. The significant negative effect of board expertise, particularly nurses on the non-financial performance persists in both the logistic models under alternative assumptions for the NHS hospitals and foundation trusts. The effect of CEO tenure remains significant and positive for the trusts. Meanwhile for the foundation trusts, the effect of honoured directors is significant and positive in the robustness checks. The remaining traditional corporate governance variables of board size, board independence, frequency of board meetings, board diversity, CEO gender, academic directors, multiple directorships and CEO background have an insignificant impact on non-financial performance in the sensitivity tests.

7.6 Summary and conclusion

The results of this study reveal the impact that corporate governance has on the financial and non-financial performance of English NHS hospitals. The variables were selected on the basis of the composition of the board of directors of the trusts and foundation trusts. The results therefore illustrate the impact of the observable board characteristics on the financial and non-financial performance of the trusts and foundation trusts. Firstly, board expertise and particularly nurses, frequency of board meetings, board diversity, CEO gender and academic directors exert a significant negative effect on the financial performance of the NHS hospitals. At hospital type level, board expertise, especially nurses, board diversity and CEO gender have a significant negative effect on financial performance of trusts. For the foundation trusts, only CEO gender exerts a significant negative impact on financial performance. From these results, it can be inferred that corporate governance mechanisms adopted in NHS trusts and foundation trusts are not effective given their negative influence on financial performance of the hospitals.

Secondly, multiple directorships prove to have a positive significant impact on non-financial performance of the NHS hospitals. Meanwhile, board expertise particularly nurses and board

diversity exert a significant negative impact on non-financial performance of the NHS hospitals. At hospital type level, multiple directorships and honoured directors have a significant and positive impact on non-financial performance of the foundation trusts. On the other hand, board expertise and in particular nurses, and board diversity reveal a significant and negative impact on the non-financial performance of the foundation trusts. Notably, all the corporate governance indicators have an insignificant impact on non-financial performance of the trusts. It can therefore be deduced that to a larger extent, the corporate governance mechanisms have a similar effect on non-financial performance as they do on financial performance of the NHS hospitals.

At the hospital type level, the effect of corporate governance is the same on financial performance of trusts and foundation trusts, except for the effect of board size which varies for the different hospitals. The results are mainly driven by the trusts possibly because the trusts have to meet financial targets such as breaking even on their income and expenditure as set by the NHS Executive while the foundation trusts have financial autonomy and are not obligated to breakeven on their income and expenditure (Goddard, Mannion and Smith, 1999; Allen, 2006). On the other hand, majority of the corporate governance indicators except for frequency of board meetings, CEO tenure, CEO gender and honoured directors have the same impact on the non-financial performance of the trusts and foundation trusts, with the results being driven by the foundation trusts. This is possibly as a result of the operational autonomy that foundation trusts enjoy meaning that their boards are more empowered to make decisions that positively influence patient outcomes. In addition, decisions in foundation trusts are made in line with community needs through the influence of the board of governors who have accountability to the local community.

It is possible therefore that the private sector-like board of director's model is not a fit for the public NHS trusts and foundation trusts. This assertion is in line with Hermalin and Weisbach (2001) who suggest that the governance mechanisms of different types of organisations are impacted by the different functional objectives. For example, for-profit organisations focus on profit maximisation objectives while the objectives of other types of organisations are internally determined and not defined by economic theory (Hermalin and Weisbach, 2001). Because of the difference in objectives of the for-profit and non-for-profit organisations, the configurations of the board of directors of the NHS trusts and foundation trusts should be closely tied to the social objective with a subordinate objective of financial viability of the trusts and foundation trusts. Therefore, the implementation of the NPM reforms where public institutions in the UK adopted business-like governance arrangements is not effective as the NHS trusts and foundation trusts are more socially oriented than profit oriented. The governance configurations should therefore

match the objectives of the trusts and foundation trusts in order to achieve the desired impact of corporate governance playing a vital role in improving hospital performance.

Chapter 8 Summary of findings, Conclusions, limitations and areas of further research

8.1 Summary of study and key findings

This study explores the impact of corporate governance on the financial and non-financial performance of the hospitals in the National Health Service (NHS) in England for a period of 5 years from 2014 to 2018. The NHS in England was selected as the context of study because of the edifying case study it presents. Firstly, the state has exerted a concerted effort in marketizing welfare governance in the NHS through a series of significant reform attempts in the 1990s and 2000s (Greener and Powell, 2008). Secondly, the NHS is largely perceived by outsiders as an outstanding example of 'socialised medicine' in the western world (Webster, 2002). Thirdly, the NHS is one of the most well-regarded institutions in the UK that is funded by restricted government resources and benefits from an effective model of intervention that is focused on a hospital care system which integrates specialist, emergency and primary care system (Pencheon, 2015) and lastly, the NHS is like many public institutions that face challenges in engineering its services to meet the changing demand (Pencheon, 2015). The period of study from 2014 to 2018 was selected because it represents the period when the NHS underwent significant changes following the enactment of the transformational Health and Social Care Act 2012. Data was collected from the trusts and foundation trusts, collectively known as the providers of healthcare services in the NHS. An unbalanced panel data comprising of 130 trust and foundation trusts in 2014, 129 in 2015 and 128 for the years 2016 to 2018 was used.

Basing on the gaps identified in the existing corporate governance literature, the main objective of this study was to investigate the impact of corporate governance on the financial and non-financial performance of hospitals in the English NHS. The sub-objective was to determine the impact of corporate governance on financial and non-financial performance of the NHS trusts and NHS foundation trusts. Corporate governance is measured using the observable attributes of the board of directors given that they are the main vehicle of corporate governance (Naciti, 2019) and have the overall responsibility for the firm's operations (Jensen, 1993). The observable board characteristics, structure and activities of the board of directors are therefore used as the proxies for corporate governance in this study. The attributes of the board of directors of the NHS trusts and foundation trusts are similar to those of listed firms because public institutions adapted private sector like board of director models as part of the NPM reforms in the 1980s (Clatworthy, Mellett and Peel, 2000; Farrell, 2005). The board attributes include board size, board

independence, board expertise, frequency of board meetings, board gender diversity, CEO tenure, CEO gender, academic directors, multiple directorships, CEO background and honoured directors. Implementing effective governance arrangements associated with improved viability and performance is necessary for hospitals to meet performance targets amidst the increasing pressure on the health services (Alexander and Lee, 2006). Particularly, the governance arrangements adapted by not-for-profit hospitals are distinct given their obligation to meet various competing stakeholder claims (Parker, 2003; Alexander and Lee, 2006). Having various stakeholder claims blurs the focus of the not-for-profit organisations (Eldenburg et al., 2004), though, the governing boards of not-for-profit hospitals have the fiduciary duty to ensure that an organisation stays true to its core mission (Alexander and Lee, 2006). It is important to note that corporate governance mechanisms adopted by the hospitals are not only intended to drive financial performance, but also the provision of quality health services which is their primary objective (Ellwood and Garcia-Lacalle, 2015).

This study therefore considers performance of the hospitals in terms of both financial and non-financial performance metrics. On the one hand, financial performance focuses on the ability of the trusts and foundation trusts to sustain financial viability within allocated resources, and this is measured using the accounting ratio of ROA. The ROA assesses the trusts and foundation trusts ability to generate financial resources that are needed to replace assets, acquire new technology and meet increases in service demand (Pink *et al.*, 2007). On the other hand, non-financial performance measures the efficiency of health services as measured by the trusts and foundation trusts performance on the 62-day cancer referral and treatment waiting time target. The ordinary least squares (OLS) method is used as the baseline estimation technique to analyse the available data on financial performance, while the logistic regression technique is used to examine the relationship between corporate governance and non-financial performance of the NHS hospitals. Fixed effects (FE) estimator is employed to control for potential omitted variables and endogeneity in both models. For both the FE OLS and FE logistic regression techniques, three models are estimated; the first model analyses financial and non-financial performance of English NHS trusts and foundation trusts combined, the second and third models analyse data at the hospital type level namely, trusts and foundation trusts respectively. To confirm validity of results and further address potential endogeneity, alternative financial and non-financial performance measures of operating margin and overall quality ratings are used respectively. In addition, instrumental variables are used by lagging the independent variables in both models. Alternative analysis techniques of 2SLS and ordered logistic regression are also used to analyse financial and non-financial performance, respectively.

The results of the study provide evidence for which board attributes are vital for the financial and non-financial performance of the trusts and foundation trusts. Based on the results of this study, it can be concluded that corporate governance practices adopted by the hospitals are to a large extent similar to those of listed firms, in line with the various provisions and guidance from the UK Corporate Governance Code 2018. However, the results also indicate that the adopted corporate governance practices of listed firms might not be effective for hospitals as demonstrated by the majority of negative relationships found. Furthermore, the impact of corporate governance on financial and non-financial performance of the NHS trusts and foundation trusts are similar irrespective of the hospital type. The results from this study illustrate this deduction.

The findings of the baseline regression analyses using FE OLS and FE logistic regression techniques measuring the impact of corporate governance on financial and non-financial performance respectively are summarised in Table 11 below. Hypotheses on board expertise (H3a), board meetings (H4a), board diversity (H5a), CEO gender (H7a) and academic directors (H8a) are all supported for their significant impact on financial performance of the trusts and foundation trusts. Meanwhile, hypotheses on board expertise (H3b), board diversity (H5b) and multiple directorships (H9b) are all supported for their significant impact on non-financial performance of the trusts and foundation trusts.

Table 11 Summary of hypotheses and results from the baseline regression analyses

Corporate governance variables	**Hypotheses**	**Relationship and statistical significance**	**Statistical support for hypotheses**
Board size	H1a. Board size has a significant relationship with financial performance of English NHS hospitals.	Negative Not significant	Not supported
	H1b. Board size has a significant relationship with non-financial performance of English NHS hospitals.	Positive Not significant	Not supported
Board independence	H2a. Board independence has a significant impact on financial performance of hospitals in the English NHS.	Negative Not significant	Not supported
	H2b. Board independence has a significant impact on non-financial performance of hospitals in the English NHS.	Negative Not significant	Not supported
Board expertise	H3a. Board expertise has a significant impact on financial performance of English NHS hospitals	Negative Significant	Supported
	H3b. Board expertise has a significant impact on the non-financial performance of English NHS hospitals.	Negative Significant	Supported
Board meetings	H4a. Board meetings have a significant relationship with financial performance of English NHS hospitals.	Negative Significant	Supported

Corporate governance variables	**Hypotheses**	**Relationship and statistical significance**	**Statistical support for hypotheses**
	H4b. Board meetings have a significant relationship with non-financial performance of English NHS hospitals.	Negative Not significant	Not supported
Board diversity	H5a. Board diversity has a significant relationship with financial performance of English NHS hospitals.	Negative Significant	Supported
	H5b. Board diversity a significant relationship with non-financial performance of English NHS hospitals.	Negative Significant	Supported
CEO Tenure	H6a. CEO tenure has a significant relationship with financial performance of English NHS hospitals.	Positive Not significant	Not supported
	H6b. CEO tenure has a significant relationship with non-financial performance of the English NHS hospitals.	Positive Not significant	Not supported
CEO gender	H7a. CEO gender has a significant relationship with financial performance of English NHS hospitals.	Negative Significant	Supported
	H7b. CEO gender has a significant relationship with non-financial performance of English NHS hospitals.	Negative Not significant	Not supported
Academic directors	H8a. Academic directors have a significant relationship with financial performance of English NHS hospitals.	Negative Significant	Supported
	H8b. Academic directors have a significant relationship with non-financial performance of English NHS hospitals.	Positive Not significant	Not supported

Corporate governance variables	Hypotheses	Relationship and statistical significance	Statistical support for hypotheses
Multiple directorships	H9a. Multiple directorships have a significant relationship with financial performance of the English NHS hospitals.	Negative Not significant	Non supported
	H9b. Multiple directorships have a significant relationship with non-financial performance of the English NHS hospitals.	Positive Significant	Supported
CEO background	H10a. CEO background has a significant relationship with financial performance of the English NHS hospitals.	Negative Not significant	Not supported
	H10b. CEO background has a significant relationship with non-financial performance of the English NHS hospitals.	Negative Not significant	Not supported
Honoured directors	H11a. Honoured directors have a significant relationship with financial performance of the English NHS hospitals.	Positive Not significant	Not supported
	H11b. Honoured directors have a significant relationship with non-financial performance of the English NHS hospitals.	Positive Not significant	Not supported

8.2 Conclusions

From the findings summarised in Table 11 above, it can be confirmed that regardless of whether the impact is positive or negative, there is empirical evidence that corporate governance has an impact on the financial and non-financial performance of the NHS trusts and foundation trusts. To a larger extent, the results of the study show that the impact of corporate governance on financial and non-financial performance is similar, with majority of the results indicating negative relationships. Also, in accordance with the subsidiary objective of this study, the negative impact of the corporate governance variables on financial and non-financial performance persists for both trusts and foundation trusts when analysed separately. The NHS trusts and foundation

trusts, irrespective of hospital type, are struggling to find a balance between financial viability and delivering quality health services in the current financial and operational constraints. Even with the government's announcement in June 2018 that NHS funding would be increased by an average of 3.4% for the next 5 years, governance reforms have to be made to the existing corporate governance structures in order to tackle the declining financial and non-financial performance of the NHS trusts and foundation trusts.

Big encompassing changes are difficult to make, and they are often stimulated as a reactionary response to a crisis as opposed to being a proactive response to good science (Pencheon, 2015). Pencheon (2015) argues that the NHS is very busy and mostly focused on completing immediate tasks as opposed to acting more strategically. Like other existing health systems, the NHS is focused on demand and prioritises problems, crises and are not necessarily proactive to need, planning, policy, preparation or prevention (Pencheon, 2015). However, proactive measures have to be taken to reconfigure the current mechanisms mirrored in the attributes of the board of directors as the findings of the study deem them insufficient to meet the financial and non-financial performance standards and evolving healthcare needs. Moreover, medical scandals continue to happen and the systemic failures in the corporate governance systems of the trusts and foundation trusts are often criticised. Hermalin and Weisbach (2001) argue that the governance mechanisms of different types of organisations are impacted by the different functional objectives, for example, the not-for-profit organisations focus on their primary objectives such as social welfare. Therefore, the governance configurations of the trusts and foundation trusts should be more representative of their main objective of providing quality health care services with a subordinated objective of maintaining financial viability rather than being more adaptive to the private sector board of director models.

Notably, the corporate governance mechanisms that are associated with improving viability and performance of the trusts and foundation trusts were identified in this study. The results show that multiple directorships have a positive significant influence on non-financial performance of the trusts and foundation trusts. The rest of the other observable attributes of the board of directors such as board expertise, board meetings, board diversity, CEO gender and academic directors have a significant negative impact on financial performance of the trusts and foundation trusts. While board expertise and board diversity have a significant negative impact on non-financial performance of the trusts and foundation trusts. It can therefore be effectively deduced that corporate governance is not a 'one-size-fits all types of firms' phenomenon. As effectively put by Rashid (2018), adjustments have to be made when adapting the across-the-board 'one size fits all' corporate governance practices in consideration of the fundamental institutional differences

in order to accomplish the anticipated outcomes. Different organisational types should structure their corporate governance arrangements in accordance with their mission, goals, functions and objectives.

8.3 Implications

This study presents some important implications for policy and practitioners. Overall, out of the 128 trusts and foundation trusts observed in 2018, 61% of 80 foundation trusts reported a deficit in 2018 and 79% of the 48 trusts reported a deficit in the same year. In addition, the majority of the trusts and foundation trusts scored a rating of *'requires improvement'* for their overall quality ratings. It can therefore be inferred that majority of the NHS trusts and foundation trusts are showing signs of poor financial and non-financial performance. With the already constrained funding arrangements in place for the NHS, significantly increasing capital allocations to the providers is both difficult and has repercussions to the taxpayers. Hospital boards have to improve their performance in their key roles of monitoring, oversight and advisory in order to improve performance of the hospitals. Increased collaboration is required between clinical directors and other directors on the board in order to achieve conducive board dynamics and avoid conflicts between the two groups. When there is cohesion within the board, the corporate governance practices become effective given that the diverse skill level on the board is being utilised for strategic decision making to improve hospital performance.

It is apparent from the study that the number of clinicians appointed to the hospitals boards is still at low levels. According to the data, only 22% of physicians, doctors and nurses combined, hold board seats between 2014 and 2018. Veronesi and Keasey (2011) also argue that clinician representation on boards remains fairly limited. These low representation levels lead one to question whether the full extent of the potential contribution of the clinicians on hospital boards is realized given their minimal representation. Borrowing from the arguments of the critical mass theory, the assertion is pivotal given that a quantifiable impact of minority groups can only be felt when they reach a critical mass of 30%. Therefore, the recruitment of clinicians on hospital boards should be increased to allow a fair balance of expertise and discussions on the board. The requisite expertise should be a combination of financial skills and specific skills required for the hospital to enhance both financial and non-financial board debates. Hence, setting minimum quotas for the number of clinicians appointed as directors on the hospital board seems reasonable, to allow the hospitals to reap the full benefits of clinician expertise and their patient centric nature.

Relatedly, the increased recruitment of clinicians to hospital boards should be accompanied by requisite leadership and business trainings to enable clinicians hone desired skills in accounting, finance and business, to enhance their strategy and decision-making capabilities. Among the anecdotal arguments for why the presence of clinicians on the board negatively impacts hospital performance is their lack of business and financial acumen that is necessary for the clinicians to strategically exert influence and control in board level discussions. As Veronesi and Keasey (2011) argue, a new generation of skilled professionals from the private sector with strong accounting and financial backgrounds, are being appointed to hospital boards and are dominating board proceedings. This creates unnecessary tension and conflict between two different leagues of experts where one group dominates the other (Veronesi and Keasey, 2011). It also gives room for conflicts for superiority tensions according to speciality and since business and numerical skills are desirable board skills, the influence of clinical directors is weakened. Enforcing and integrating mandatory trainings in these fields for the clinicians will undoubtedly increase their influence on boards and improve their decision-making ability and board dynamics. This will elevate their performance because they will possess both clinical experience and financial abilities which are both desirable skills necessary for improving hospital performance.

The study has implications for the nomination committees or director selection/recruitment strategies. Based on empirical findings from this study, it can be deduced that the competency factor is important when nominating inside and outside directors to the board. When it comes to specialised industries like the health sector, competency of the directors should be a major contributing criteria for their appointment. For example, clinicians should be competent in making financial decisions and female directors should be appointed for their expertise and not as tokens or to meet proposed gender diversity provisions. Therefore, the implication for practitioners is to assess the competency and the suitability of the director skills prior to their board appointment, in order to attain the full benefit of the contribution of these directors for improving hospital performance. It is imperative that the stature or titles of the directors do not supersede their level of competency for the position because patient choice is based on hospital performance and less on hospital image which could be a reflection of the high calibre of selected board of directors. The appointed directors should have a well-balanced and diverse skill set.

8.4 Limitations

Deductions from the findings should be made while being mindful of the limitations of the study. Although the NHS is present in 4 countries in the UK namely, England, Scotland, Wales, and Ireland, this study is confined to only one country due to challenges of data incompatibility.

Comparability of data amongst the 4 countries is restricted by the limited amount of basic data collected due to the differences in population demography, healthcare policies and discrepancies in definitions and data collection (Bevan et al., 2014). As a result of this, the scope of study sample is restricted to only trusts and foundation trusts in England.

Still related to challenges of data, the information collected does not provide sufficient granularity to explicitly portray corporate governance practices of the hospitals. The different trusts and foundation trusts have varying levels of disclosure, therefore the information reported in the annual reports varies in granularity. In addition, reporting of certain measures is not standard across the annual reports of all the hospitals, making it difficult to measure and compare certain corporate governance mechanisms and performance indicators. As a result of the lack of in-depth granularity of the manually collected data, it was impossible to obtain certain important aspects of corporate governance, for example, ethnicity and age of directors which are not stated in the annual reports. This limited the investigation to only indicators and characteristics that were explicitly reported in the annual reports.

In using hospitals in the NHS England as the context for studying corporate governance and performance in the health sector, there is uncertainty of the extent to which the findings can be generalised to firstly, other countries with a different health system arrangement and structure, and secondly, to all public institutions. It is important to recognise the unique structure of the National Health Service whereby a trust or foundation trust is comprised of a hospital or group of hospitals. This differs from other developed countries where hospitals operate on a stand-alone basis and not in a cluster setting and thus do not enjoy the synergies and economies of scale that accrue to the NHS hospitals in their current arrangement. It is therefore questionable whether the different institutional structures affect the generalisability of these findings to different hospitals that operate on a stand-alone basis. More so, since the NHS is a public institution, concerns of the generalisability of findings from a public hospital context to other public institutions remain.

Related to the above, this study is in the context of a developed country. It is important to consider the apparent disparities between developed and developing countries in relation to the implementation of corporate governance when generalising these findings. Anecdotally, the outcomes of the studies from developed and developing countries would be different because of the different internal and external corporate governance dynamics that prevail in the two regions. Okeahalam and Akinboade (2003) note that developing countries are transition economies that are yet to advance to appropriately working and functional corporate governance systems amid existing peculiarities such as corruption, weak business environment and low financial

intermediation. Similarly, Ayandele and Isichei (2013) argue that compliance and enforcement of effective corporate governance appears to be weak or non-existent in developing economies. These factors have an impact on the interaction of corporate governance and performance of hospitals in developing countries versus developed countries. The extent to which findings from a developed country can be generalised to a developing country is therefore extremely limited.

Concerns about the possibility that the annual reports are manipulated or window dressed cannot be ignored. This means that the accuracy of the performance measures used to assess financial and non-financial performance of the NHS providers is equivocal. Anecdotally, the likelihood that financial statements and quality reports can be manipulated paves the way for questions to be asked about the validity of results. This is on the back of the assumption that the parameters inspected by the CQC may be an inaccurate representation of the hospital's financial and non-financial position. A case in point is the Mid-Staffordshire NHS foundation Trust where the entire system including the regulator failed to detect any systemic failings despite the appalling standards and quality of care being given to the patients at the hospital (Francis, 2013). Moreover, the measures used as proxies of financial and non-financial performance may not be able to adequately express the actual financial and non-financial position of the hospitals. In addition, hospitals disproportionately put effort in achieving the set target while ignoring other aspects of hospital performance in order to achieve strategic advantages (Freeman, 2002). According to Bevan and Hood (2006), an incident was reported by the National Audit office, (2001) on nine NHS trusts that inappropriately adjusted their waiting time targets for first outpatient appointment and elective admission for a period of 3 years and more, affecting over 600 patient records. They note that the inappropriate adjustments were as a result of junior staff following incorrect established procedures to intentionally manipulate and misstate the records. However, the measures used to assess financial and non-financial performance are linked to the parameters considered by the NHS Executive in monitoring performance of NHS hospitals, for example, quality of care, responsible financial and operational management amongst others.

In relation to the above argument, it is fair to assume that the data on the observable corporate governance variables collected from annual reports may not fully replicate corporate governance mechanisms and practices adopted by the hospitals. Considering the limitations of using secondary data, primary data collection methods such as interviews, self-administered surveys, and observation techniques are better placed to provide greater insights of corporate governance practices of the hospitals. Furthermore, the use of secondary data creates uncertainty of the exogeneity of the corporate governance mechanisms given that the roles of the nomination committee and their selection criteria, for example, were not interrogated.

The NHS in England is faced with a variety of externalities that affect its performance. All these external factors cannot be fully exhausted by means of the control variables incorporated in the data analysis models. This, therefore, partly weakens the validity and reliability of results given that all the other externalities which have not been considered in the analysis, could have a potential impact on the performance of hospitals.

Last but not least, the direction of causality remains a confounding factor. From the analysis alone, it is difficult to determine if the direction of causality of the relationships assumed are correct. The question of whether corporate governance impacts performance of hospitals, or that high performing hospitals exhibit good corporate governance practices or attract a certain calibre of directors remains unresolved to an extent. Therefore, the impact of causality on the results remains a debatable matter.

8.5 Areas for further studies

Much as this study is relatively comprehensive to the extent that it is allowed, there are certain caveats that made it impossible to fully examine the corporate governance and performance relationship. Directions for future studies are therefore suggested herein. Firstly, future corporate governance studies should focus on extending the breadth of research to cover non-financial performance of other organisations outside of listed firms. While financial performance has been severally investigated (Ahmad *et al.*, 2019; Duppati *et al.*, 2020; Puni and Anlesinya, 2020), there is an ostensible dearth of studies exploring the impact of corporate governance on non-financial performance of firms (Siciliano, 1996; Hafsi and Turgut, 2013; Malagila *et al.*, 2021). Future studies should therefore aim at addressing the gap by using non-financial measures of performance of other types of firms in their studies.

Secondly, the assimilation of external mechanisms of corporate governance in the studies would extend the scope of extant literature from primarily focusing on internal corporate governance mechanisms. Majority of corporate governance studies have explored internal corporate governance mechanisms in relation to characteristics of board of directors. Therefore, future studies should consider external corporate governance mechanisms such as the ownership and capital structure of firms. Moreover, the scope of research can be extended to use a multi-country study in order to compare the performance of corporate governance studies in a number of countries. More so, investigating the effects of corporate governance in firms with weak internal and external corporate governance systems would be interesting. Firms in developing countries are assumed to have weak internal corporate governance mechanisms based on the

prevailing corporate governance environment in which they operate (Ayandele and Isichei, 2013). Therefore, examining the corporate governance and performance relationship in developing countries which exhibit weak internal and external corporate governance practices should provide interesting results. So far, only one study by Abor (2015) is identified to have investigated the impact of corporate governance on performance of hospitals in Ghana, a developing country.

Furthermore, reviewing the impact of board committees will provide more insight into the criteria for executive compensation and appointment of directors to the board. Understanding the operations and practices of the board committees promises to provide more perspective on how financial and non-financial performance is influenced by the different corporate governance mechanisms.

In relation to board composition, it is suggested that the future studies should consider the degree of competency of the directors on the board. For instance, the competency of women on the board in relation to diversity should be examined as well as the competency of the outside directors in relation to board independence. Competency can be observed using the different qualifications and functional backgrounds of these directors. To take it further, it is recommended that board diversity and independence is measured in terms of ethnicity as well for social inclusion purposes.

Finally, to provide a new and broader insight into the corporate governance and performance relation, future studies should adopt mixed methods of research. The combination of both qualitative and quantitative research methods is bound to provide an in-depth understanding of corporate governance practices in firms that only one type of research method may not be able to portray. This is because mixed methods utilise the pros of both qualitative and quantitative methods to enhance granularity of data. For example, using interviews and annual reports would give the researcher valuable insights. So far, no study has been identified to have used mixed methods in their investigation.

Appendix A Summary of literature review

Table 12 Summary of Literature Review

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings
						Variables confirmed
Abdulsamad, Yusoff, and Lasyoud (2018)	Malaysia	Public Listed	Agency theory	Panel Data regression	ROA, EPS	Board meetings, Board independence,
Abor and Biekpe (2007)	Ghana	Private SMEs	Agency theory, Stewardship theory, Resource Dependence approach, Stakeholder theory,	Panel regression	ROA	Board size, board composition, management skill, CEO duality, inside ownership, family ownership, foreign ownership
Abor (2015)	Ghana	Hospitals (Public, Not-for-profit, For-profit)	Managerialism theory, Stakeholder theory, Resource Dependency theory	Multiple regression model	Occupancy, discharge, efficiency	Board size, presence of a board, outside directors, medical staff on board, CEO

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
						duality, board diversity, board meetings
Adams and Ferreira (2009)	US	Publicly listed 1996 - 2003			ROA, Tobin's Q	Board gender diversity
Aggarwal, Jindal and Seth (2019)	India	Public Listed 2006 – 2015	Agency theory, Resource Dependence theory	Panel data regression	Tobin's Q	Demographic board diversity, Structural board diversity
Agrawal and Knoeber (1996)	US	Forbes largest firms 1987		OLS regression	Q	Insider shareholdings, outside directors, debt, and corporate control activity
Ahmad *et al.* (2019)	Malaysia	Public listed 2011 - 2013	Resource Dependence Theory	Multiple regression	ROA	Proportion of women on board, women directors with accounting qualifications (moderating variable)

Appendix A

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Ahmadi, Nakaa and Bouri (2018)	France	108 Public listed 2011 – 2013	Agency theory, Stewardship theory	OLS regression	ROA, ROE	Board size, Independent directors, CEO duality, gender diversity, CEO tenure
Alexander and Morrisey (1988)	US	General community hospitals 1982		OLS regression	Hospital costs	Hospital-physician integration
Arora and Sharma (2016)	India	1,922 Public listed 2001 - 2010	Resource Dependence theory	OLS regression	ROA, ROE, NPM, Tobin's Q, SR.	Board size, board independence, activity intensity, CEO duality, institutional ownership
Arosa, Iturralde and Maseda (2013)	Spain	307 SMEs private				Board composition, board size, board activity, leadership structure, CEO tenure

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Arslan, Karan and Eksi (2010)	Turkey	1995 – 2006				Board ownership, CEO duality, Board independence, Board size,
Assenga, Aly and Hussainey (2018)	Tanzania	10 Public listed firms 2006 – 2013	Agency theory, Resource Dependence theory	Panel Data regression	ROA, ROE	Outside directors, board size, CEO duality, gender diversity, board skill, foreign directors
Augusto, Pascoal and Reis (2019)	America, Europe	858 American, 560 European Public listed 2016		2SLS	ROA, Tobin's Q	Board size, Board Experience, proportion of NEDs,
Bai (2013)	US	137 For-profit hospitals and 226 non-profit hospitals 2000 - 2005		OLS regression	Community benefits	Board size, presence of government officials on the board, presence of physicians on the board
Bai and Krishnan (2015)	US	Non-profit hospitals 2004 – 2008		OLS regression	Process of care quality	Physician participation on board

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Baysinger and Butler (1985)	US	266 large corporations 1970 - 1980	Agency theory of the firm	Cross-lagged regression	RFP	Board independence
Ben Barka and Legendre (2017)	France	43 Public Listed firms 2002 – 2006	Agency theory, Resource theory	Multivariate Regression analysis	ROA, ROE	Independent directors, board meetings, CEO duality, presence of institutional investors on the board
Bennouri *et al.* (2018)	France	394 Public listed 2001 - 2010		Multivariate Regression analysis	ROA, ROE, Tobin's Q	Female directors
Berezinets, Ilina and Cherkasskaya (2017)	Russia	207 Public firms 2007 - 2011		Regression analysis	Tobin's Q	Board size, board independence, gender diversity, presence of board committees,
Bhagat and Bolton (2019)	US	100 largest Financial institutions 2003- 2016		OLS, 2SLS	ROA, Annual Stock Return, Tobin's Q	Director ownership

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings Variables confirmed
Botje, Klazinga and Wagner (2013)	Netherlands	97 private, non-profit hospitals Nov 2010 - Feb 2011		Statistical analysis using Stata	Process indicators	Quality orientation of boards
Boyd (1995)	US	192 Public companies 1980 - 1984	Agency theory, Stewardship theory	Regression analysis	ROI	CEO duality
Brick, Palmon and Wald (2006)	US	1163 – 1441 firms 1992 - 2001		Pooled regression analysis, Fixed effects regressions	ROA, Stock Return	CEO and Director compensation
Campbell and Mínguez-Vera (2008)	Spain	68 Public listed firms 1995 - 2000		2SLS	Tobin's Q	Gender diversity
Carter *et al.* (2010)	US	641 public firms 1998 - 2002	Resource Dependence theory, Human capital theory,	OLS, 3SLS	ROA, Tobin's Q	Gender diversity

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
			Agency theory, Social Psychology theory			
Chancharat, Detthamrong and Chancharat (2019)	Thailand	102 Public listed firms 2006 - 2017	Agency theory, Stewardship theory	Fixed effects regression	ROE, ROA, Tobin's Q	Board size, board independence, political connection
Chen, Leung and Evans (2018)	US	1,224 Public firms 1998 – 2006		OLS regressions	Tobin's Q, ROE, ROA	Female board representation
Chen, Zhou and Zhu (2019)	US	Public firms 1999 – 2013		2SLS	CSR performance	CEO tenure
Ciftci *et al*. (2019)	Turkey	234 Public listed firms 2010 - 2013	Institutional theory	Fixed effects OLS	ROA, Tobin's Q	Ownership concentration, Cross ownership, Foreign ownership, Board size, Family board membership

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Collum *et al*. (2014)	US	637 not-for-profit hospitals 2011	Agency theory	OLS regression	Total margin, operating margin, ROA	Management involvement on board
Chou *et al*. (2013)	Taiwan	Listed firms 2006 - 2007		Pooled regression	ROA, EPS, Sales To Assets ratio, Sales Growth rate	Board meeting attendance
Conyon and He (2017)	US	3000 publicly traded US firms 2007 - 2014		Instrumental variable quantile regression	Tobin's Q, ROA	Percentage of women on boards
Culica and Prezio (2009)	US	Top 100 non-profit hospitals 2003 – 2005	Institutional theory	Multiple Linear Regression	Total marginal profit (operating profit margin)	Board meetings, Board tenure,
Daily and Dalton (1992)	US	100 Publicly held		Multivariate Regression	ROA, ROE, Price/ Earnings ratio	CEO founder, CEO Duality, Board composition

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Dang *et al.* (2018)	Vietnam	478 Public listed firms 2012 – 2014	Agency theory	Quantile Regression	ROA, Tobin's Q	Board independence, CEO Duality, Board size
Delis *et al*. (2017)	North America, UK	1,085 Public listed firms 1999 - 2012		Fixed Effects Regression	ROA, Tobin's q, Sales growth, Operating expenses	Genetic Diversity
Duppati *et al.* (2020)	India Singapore	Public listed firms 2005 - 2015	Stewardship theory, Resource Dependence theory	Quantile Regression	ROA, Tobin's Q	Board Diversity, Board independence, CEO Duality, Board size
Duru, Iyengar and Zampelli (2016)	US	Public listed 1997 - 2011	Agency theory, Stewardship theory, Resource Dependence theory	Pooled OLS, Fixed panel effects	ROA, ROE, ROS	Board size, Board independence, Gender diversity, CEO duality

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Dwivedi and Jain (2005)	India	340 Public listed firms 1997 – 2001	Agency theory	Simultaneous equation regression	Tobin's Q	Board size, Ownership structure
Elsayed (2007)	Egypt	92 Public limited firms 2000 – 2004	Agency theory, Stewardship theory		Tobin's Q	Board leadership structure
Elsayed and Elbardan (2018)	UK	Public listed 2010 - 2014	Agency theory, Tournament theory	OLS regression	ROA, Tobin's Q	Executive compensation
Farhan, Obaid and Azlan (2017)	UAE	127 Public listed companies 2010 - 2013	Agency theory	Multivariate Regression	ROA, Tobin's Q	Board size, Board independence, AC characteristics
Firth, Fung and Rui (2006)	China	594 Public listed firms 1998 - 2000	Agency theory	Regression	Return on Sales, Annual Stock Return	Compensation

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Freihat, Farhan and Shanikat (2019)	Jordan	Public listed firms 2011 - 2014		OLS regression	Tobin's Q	Ownership concentration, number of board meetings, CEO duality, board size, board independence
García-Ramos and García-Olalla (2011)	Spain, Portugal, Italy	Public listed 2001 – 2007	Agency theory	Panel data regression	Tobin's Q	Board size, board independence, CEO duality, board activity
Gaur, Bathula and Singh (2015)	New Zealand	145 Public listed firms 2004 – 2007	Agency theory, Stewardship theory, Resource Dependence theory, Stakeholder theory	Random effects, least square estimation	ROA, ROE, ROS	Ownership concentration, board size, board independence, CEO duality, board qualifications, insider representation
Goes and Zhan (1995)	US	300 acute care hospitals 1981 – 1990	Agency theory	Multiple Regression	Operating margin, average daily occupancy,	Hospital-Physician integration – physician involvement in hospital governance,

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings
						Variables confirmed
					Operating expenses/100 patient days	physician ownership, financial integration
Afrifa and Tauringana (2015)	UK	Public listed firms 2004 - 2013	Resource dependence theory, life cycle theory, market learning theory, agency theory	Panel data regression	Tobin's q	Board size, CEO age, CEO tenure, proportion of NEDs, Director's renumeration
Gómez, Cortés and Betancourt (2017)	Colombia	Public listed firms 2008 - 2014	Stewardship theory, Agency theory	Linear regression	ROA, ROE	Board size, Independent members, number of meetings
Goodall (2011)	US	Top 50 hospitals 2009		Regression	Hospital quality score	Physician leader/ non-physician leader
Green and Homroy (2018)	Belgium, Denmark, France, Germany,	Euro Top 100 firms (Public listed)		Fixed effects OLS regression	ROA, Tobin's Q	Non-executive independent female directors

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Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings Variables confirmed
	Italy, Netherlands, Norway, Spain, Sweden, Switzerland, UK	2004 - 2015				
Guo and Kga (2012)	SriLanka	174 Public Listed 2010		Multiple Regression	ROA, Tobin's Q	Board size, NEDs, Shareholding, CEO duality
Harjoto, Laksmana and Yang (2019)	US	Public listed firms 2000 - 2013	Stakeholder theory, Upper echelon theory, Social categorisation theory, Similarity/ attraction theory, cognitive resource diversity, intergroup contact theory	Multivariate regression	MSCI ESG ratings	Board nationality, Educational background diversity

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings Variables confirmed
Hauser (2018)	US	Public listed firms 1996 – 2014		OLS regression	ROA, Tobin's Q	Director workload
Horváth and Spirollari (2012)	US	136 Public listed firms 2005 – 2009		Fixed effects estimator	Price to Book ratio	Board size, Board activity, Board composition, Insider ownership, Gender diversity, Age of directors
Huang and Hilary (2018)	US	2,222 Public listed firms 1998 - 2010		Pooled Regression analysis	Tobin's Q, ROA	Board Tenure
Jackling and Johl (2009)	Australia	84 Public listed firms 1999 - 2004	Agency theory, Stewardship theory	Linear Regression model	ROE, Market-to-Book ratio	Board size, Proportion of outside directors, Age of board members, proportion of female directors
Jakpar, Tinggi and Hui (2019)	Malaysia	30 Public listed firms		OLS regression	ROA	Board size, NEDs, proportion of Independent directors

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
		2011 - 2015				
Jha and Epstein (2010)	US	1,000 Not-for-profit hospitals Nov 2007 – Jan 2008			Overall quality score	Board training and expertise in quality, quality as a priority for board oversight and evaluation of the CEO's performance, the board as an influential entity in the quality of care delivered, awareness of current quality performance, specific board functions
Joecks, Pull and Vetter (2013)	Germany	151 Public listed firms 2000 - 2005	Critical mass theory	Panel data regression	ROE	Gender diversity

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Judge, Naoumova and Koutzevol (2003)	Russia	113 firms	Agency theory, Institutional theory	Multiple regression	Score from five-point Likert scale	Board leadership, Board composition,
Kagzi and Guha (2018)	India	126 Public listed firms 2010 - 2014	Resource Dependence theory, Critical mass theory, Agency theory, Signalling theory, Behavioural theory of a firm, Contingency theory, Resource Based view, Upper echelons theory, Stewardship theory, Human capital theory,	GMM estimator	Tobin's q	Board diversity

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
			Social capital theory			
Kalodimos (2017)	US	62 non-profit hospitals 2006 - 2010		Panel data regression	Patient survival rate	Board's involvement in compensation setting process of the CEO
Kao, Hodgkinson and Jaafar (2019)	Taiwan	Public listed firms 1997 – 2015	Agency theory	Panel estimation	ROA, ROE	Board independence, Board size, Board leadership, Ownership structure
Kaur and Singh (2019)	India	307 Public listed firms 2012 – 2016	Upper echelon theory	Fixed effects regression	ROA, ROE	CEO tenure, CEO duality, CEO education level, CEO directorships, CEO gender, CEO nationality, CEO share ownership
Kiel and Nicholson (2003)	Australia	348 Public listed firms	Agency theory, Stewardship theory, Resource	Regression analysis	ROA, Tobin's Q	Board size, Proportion of outside directors, CEO duality, Board interlocks

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
			Dependence theory, Institutional theory, Stakeholder theory			
Kılıç and Kuzey (2016)	Turkey	149 Public listed firms 2008 - 2012	Resource Dependence theory, Agency theory	Instrumental variables regression	ROA, ROE, ROS	Gender diversity
Kweh *et al.* (2019)	Malaysia	Top 200 Public listed firms 2010 - 2015	Agency theory, Resource Dependence theory, Upper echelons theory	OLS regression	ROA, ROE	Board gender diversity, Board independence
Kyereboah-Coleman (2008)	Ghana	SMEs 1990 – 2001	Agency theory	Panel data analysis	ROA, Tobin's q, Growth in sales	Board size, board composition, CEO duality

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Kyereboah-Coleman and Biekpe (2006)	Ghana	100 Private firms	Agency theory	Generalised Least squares	ROA, ROE, Export sales growth	Board size, Board composition, CEO duality, Ownership structure,
Lam, McGuinness and Vieito (2013)	China	Public listed firms 2000 – 2008	Agency theory	Panel regression	ROA, ROE	CEO gender, executive compensation
Lam and Lee (2008)	Hong Kong	128 Public listed firms 2003	Agency theory, Stewardship theory	Multivariate regression	ROA, ROE, ROCE, MTBV	CEO duality
Larmou and Vafeas (2010)	US	257 Public listed firms 1994 - 2000		Panel regression	Operating income before depreciation divided by total assets	Board size
Lew, Yu, and Park (2018)	China	102 Public listed firms 2012	Agency theory, Resource Dependence theory	Multiple OLS	ROE, ROA	Board independence, CEO duality

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Li and Chen (2018)	China	Public listed firms 2007 - 2012		OLS pooled regression	Tobin's q	Gender diversity
Livnat *et al*. (2016)	US	3,800 Public listed firms 1996 - 2016	Agency theory, Resource Dependence theory	Multivariate regression	Market-to-book ratio, Stock Returns	Board tenure
Low, Roberts and Whiting (2015)	Hong Kong, South Korea, Malaysia, Singapore	Public listed firms 2012 - 2013	Agency theory, Stakeholder theory, Resource Dependence theory, Behavioural theory of a firm, Stewardship theory	OLS regression	ROE	Female directors on board
Lückerath-Rovers (2013)	Netherlands	116 Public listed Dutch firms 2008	Resource Dependence theory	Regression analysis	ROE, ROS, ROIC, Total Shareholder Return	Board diversity

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Mahadeo, Soobaroyen and Hanuman (2012)	Mauritius	42 Public listed firms 2007	Agency theory	OLS regression	ROA	Board gender, age, education, independence
Mak and Kusnadi (2005)	Singapore, Malaysia	460 Public listed firms 1999 - 2000		Multivariate regression	Book value of Asset, Leverage, Total Fixed Asset/ Asset, Sales growth, CAPEX, Tobin's q	Board size, CEO duality, proportion of executive and independent directors, number of directors in the AC, AC Chair, Proportion of executive directors in the AC, Proportion of independent directors in the AC, Ownership
Makhlouf *et al.* (2017)	Jordan	120 Public listed firms 2009 - 2013	Agency theory, Resource Dependence theory,	Multivariate regression	ROA, Tobin's q	Board size, board independence, board meetings, leadership structure, board of director's ownership

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings Variables confirmed
			Stewardship theory,			
Malik and Makhdoom (2016)	Brazil, China, France, Germany, India, Italy, Japan, Korea, Malaysia, Mexico, Netherlands, Russia, South Korea, Spain, Switzerland, Taiwan, UK, US	100 Public listed firms 2005 - 2012	Agency theory, Stewardship theory	Panel data analysis	Tobin's q, ROA, Stock Return	Board size, board independence, CEO compensation, frequency of meetings, large shareholders
Mangena, Tauringana and Chamisa (2012)	Zimbabwe	53 Public listed firms 2000 – 2005	Agency theory, Political theory	GMM approach	Tobin's q, ROA	Board size, proportion of NEDs, Ownership concentration

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Marinova, Plantenga and Remery (2016)	Netherlands, Denmark	186 Public listed firms 2007	Agency theory	2SLS	Tobin's q	Board gender diversity
Mashayekhi and Bazaz (2008)	Iran	Public listed firms 2005 – 2006	Agency theory	Multiple regression	EPS, ROA, ROE	Board size, board independence, board leadership, institutional investors on board
McGuire and Taylor (2017)	US	112 Public listed firms 1993 and 1998		Hierarchical regression	ROA, ROI	Demographic diversity
Merendino and Melville (2019)	Italy	65 Public listed firms 2003 – 2015	Agency theory	GMM estimator	ROA	Board size, board independence, ownership structure, shareholder agreements, CEO duality

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Molinari *et al.* (1993)	US	Hospitals 1985	Agency theory, Managerialism theory	Multiple regression		Presence/ absence of insiders on the board
Molinari *et al.* (1995)	US	Hospitals 1985 - 1988	Agency theory, managerialism theory		Operating margin	Physician board participation
Muchemwa, Padia and Callaghan (2016)	South Africa	Public listed firms 2006 - 2012	Agency theory, Resource Dependence theory	Multiple linear regression	ROA, ROE, Tobin's q	Board composition, board size,
Alsartawi (2019)	Gulf Cooperation Council countries	46 Public listed banks 2013 – 2016	Stewardship theory, Agency theory	Multiple regression	ROA	Board independence, frequency of meetings,
Naimah and Hamidah (2017)	Indonesia	Public listed firms 2005 - 2014			ROA	Board size, board independence, Outside directors, AC size, frequency

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
						of audit committee meetings, Audit quality
Naseem *et al.* (2017)	Pakistan	1047 firm-year observations Public listed 2009 – 2015	Agency theory, Resource Dependence perspective	Panel data regression	Tobin's Q, EPS	Board size, Audit committee independence, board independence, gender diversity, Board meetings
O'Connell and Cramer (2010)	Ireland	Public listed firms	Agency theory	OLS regression	RET, ROA, Financial Q	Board size, board composition, Ownership
Osei-Bonsu and Lutta (2016)	Brazil, Mexico, South Africa, Poland	Public listed 2011 - 2014	Agency theory	Multiple OLS regression	ROE, ROA	CEO cash compensation
Peni (2014)	US	305 Public listed firms 2006 - 2010	Agency theory	Cross sectional panel regressions	ROA, Tobin's q	CEO and Chair characteristics
Ponnu and Karthigeyan (2010)	Malaysia	115 Public listed firms	Agency theory	Multivariate	ROA, ROE	Board independence

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings Variables confirmed
		2006				
Pucheta-Martínez and Gallego-Álvarez (2019)	34 countries across Africa, Asia, Europe, Latin America, North America, Oceania	Public listed firms 2004 - 2015	Agency theory, Resource Dependence theory	Multivariate analysis	Tobin's q	Board size, board independence, CEO duality, female directors, board compensation
Puni and Anlesinya (2020)	Ghana	Public listed firms 2006 - 2018	Agency theory	Panel regression	ROA, ROE, EPS, Tobin's q	Board composition: board size, inside directors and outside directors, Board committees, CEO duality, board meetings, shareholder concentration
Raithatha and Komera (2016)	India	3,100 Public listed firms 2002 - 2012	Agency theory	GMM estimator	ROA, ROE, Tobin's q, RET	Executive compensation

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Rashid (2018)	Bangladesh	135 Public listed firms	Agency theory, Stewardship theory	3 SLS	ROA, Tobin's q	Board independence
Rechner and Dalton (1991)	US	141 Public listed firms 1978 - 1983	Agency theory	Multivariate regression	ROE, ROI, PM	CEO duality
Reguera-Alvarado and Bravo (2017)	US	694 Public listed firms 2008 - 2012	Agency theory	3 SLS	Tobin's q	Board independence, Independent directors' tenure
Reiter *et al*. (2009)	Canada	92 Non-profit hospitals 1999 - 2006		Fixed effects regression	Operating revenues	CEO Compensation
Ritchie and Eastwood (2006)	US	Non-profit organisations	Resource Dependence theory	Multiple regression	Total contributions, Direct public support	Executive functional background

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings Variables confirmed
Rodriguez-Fernandez, Fernandez-Alonso and Rodriguez-Rodriguez (2014)	Spain	Public listed firms	Agency theory, Stewardship theory, Resource Dependence theory, Institutional theory, Organisational portfolio theory	Multiple regression	ROA, ROE, Tobin's q	Board size, composition, duality, number of annual meetings, busyness of directors
Rose (2007)	Denmark	Public listed firms 1998 – 2001		Cross sectional regression	Tobin's q	Female board representation
Rwakihembo, Kamukama and Kijjambu (2020)	Uganda	Private limited firms	Agency theory, Resource perspective	Standard linear regression	Profitability, liquidity, financial efficiency, solvency ratios	Board composition
Saidu (2019)	Nigeria	37 Public listed firms	Agency theory	OLS regression	ROA, ROE	CEO origin, education, ownership

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
		2011 - 2016				
Scholtz and Kieviet (2018)	South Africa	315 Public listed firms 2013 – 2015	Agency theory	OLS regression	Tobin's q, ROA	Proportion of females on the board, proportion of ethnic diversity on the board, proportion of directors with a business qualification on a board, board size
Shahrier, Ho and Gaur (2020)	Malaysia	200 Public listed firms 2014 - 2017	Agency theory, Stewardship theory, Stakeholder theory, Resource Dependence view	Cross sectional regression	ROA, ROE	Ownership concentration, board independence, board competence
Shaukat and Trojanowski (2018)	UK	Public listed firms 1999 – 2008	Agency theory	Ordered Logit models	ROA, ROE, ROIC, Tobin's q	Board size, Number of NEDs, Number of independent NEDs

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Shin *et al.* (2018)	Korea	Public listed firms 2001 - 2011	Resource Dependence theory	OLS regression	Tobin's q, RET, ROA	Board size, Board independence, board meetings, ownership
Siciliano (1996)	US	240 non-profit firms	Resource Dependence theory		Social performance, total revenues/ total expenses, level of donations	Board diversity, Board size
Singh *et al*. (2018)	Pakistan	324 Public listed firms	Agency theory, Resource dependence theory	Generalised least squares	Tobin's q	Board size, number of board committees, ownership concentration, board independence, CEO duality
Smith, Smith and Verner (2006)	Denmark	2500 Listed and non-listed firms 1993 - 2001	Agency theory	Panel data regression	Gross profit/net sales, Contribution margin/net sales, Operating	Proportion of women in top management

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
					income/net sales, Net income after tax/net assets	
Srivastava (2015)	India	Public listed firms 2008 – 2009	Agency theory, Stewardship theory, Resource Dependence theory	Multivariate regression	Tobin's q	Board leadership, board size, board composition
Succi and Alexander (1999)	US	Short term community hospitals 1993		OLS regression	Operational efficiency	Physician involvement in management and governance
Tejerina-Gaite and Fernández-Temprano (2020)	Spain	Public listed firms 2005 – 2015	Agency theory, Upper echelons theory, Resource Dependence	GMM joint models	ROA, MTB	Quoted boards to date, Quoted boards currently, Tenure, Age

Author/publication year	Country of study	Nature of company and time period	Theoretical framework	Statistical analysis	Performance measure	Findings Variables confirmed
			theory, Stewardship theory			
Terjesen, Couto and Francisco (2016)	47 countries	3,876 Public listed firms 2010	Agency theory, Resource Dependence theory, Upper echelons theory	GMM model	Tobin's q, ROA	Female directors on board, Board independence
Ujunwa (2012)	Nigeria	122 Public listed firms 1991 – 1998	Agency theory, Stakeholder theory	GLS regression	ROA	Board nationality, board ethnicity, board duality, board gender, board skill, board size,
Ullah and Kamal (2020)	Pakistan	150 public listed firms 2001 – 2004	Agency theory, Resource Dependence theory, Stewardship theory		ROA, Tobin's q	Board meetings, board size, board independence, executive directors, non-executive directors, board diversity

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Vafeas (1999)		350 Public listed firms 1990 – 1994	Contracting and Agency theory	Cross sectional regression	ROA	Board meetings
Vafeas and Theodorou (1998)	UK	250 Public listed firms 1994		Cross sectional OLS regression	Market-to-Book	Board composition, board ownership, leadership structure, committee composition,
Van Ness and Kang (2010)	US	Public listed firms	Agency theory, Stewardship theory	OLS regression	Revenue, ROA, Financial leverage, Market price to book ratio, Free cashflow to Net income	CEO Duality, proportion of outside directors, gender diversity, average age of board members, average board tenure, board size, occupational expertise
Veronesi, Kirkpatrick and Vallascas (2013)						

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Veronesi, Kirkpatrick and Vallascas (2014)	UK	Public hospitals 2006 – 2009		Pooled regression	Quality of financial resource management	Presence of clinicians on the board
Vintilă and Gherghina (2013)	Romania	Public listed firms 2007 - 2011	Agency theory	Panel data regression	Tobin's q	Board independence, CEO duality
Wahba (2015)	Egypt	40 Public listed firms 2008 - 2010	Agency theory, Stewardship theory	Generalised Least Squares	ROE, Tobin's q	Board composition, Board leadership structure
Wang *et al*. (2019)	Pakistan	Public listed firms 2011 – 2014		Multivariate regression	ROA, ROE, Tobin's q, Market-to-Book	Board size, Board independence, board diversity, managerial ownership, institutional ownership, board meeting
Wang (2020)	Taiwan	Public listed firms 2016	Agency theory	Regression analysis	Tobin's q, ROA	Gender diversity

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Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Weir and Laing (2001)	UK	320 Public listed firms 1995 -1996			ROA	NEDs, CEO duality, strong board
Weir, Laing and Mcknight (2002)	UK	Public listed firms 1994 - 1996	Agency theory		Tobin's q	NEDs, Independent NEDs, CEO duality, presence of an AC, CEO shareholding, external shareholding, average number of additional directorships, percentage of independent NEDs on AC, key director on AC, takeover probability
Wijethilake and Ekanayake (2019)	Sri Lanka	Public listed firms 2009	Resource Dependence theory, Agency theory, Stewardship theory	Hierarchical regression analysis	EPS	CEO duality,

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Withers and Fitza (2017)	US	Public listed firms 1999 - 2012	Resource Dependence theory	Variance decomposition analysis	ROA	Board chairs
Yasser *et al*. (2017)	Pakistan	Public listed firms 2009 - 2013	Agency theory, Stewardship theory	Fixed effects regression	ROA, Tobin's q, EVA	NEDs, Board diversity, board size, family directorship and ownership, minority shareholding
Zhang *et al*. (2018)	China	Public listed firms 2016		Hierarchical regression	Tobin's q	Number of committees, Independent directors with relevant background, number of meetings, Board size, proportion of female directors, structure of leadership

Appendix A

Author/publication year	**Country of study**	**Nature of company and time period**	**Theoretical framework**	**Statistical analysis**	**Performance measure**	**Findings**
						Variables confirmed
Zhou, Owusu-Ansah and Maggina (2018)	Greece	2008 - 2012	Agency theory, Resource Dependence theory	OLS regression	ROA	Board size, board independence, AC committee formation, AC effectiveness
Zubaidah, Nurmala and Kamaruzaman (2009)	Malaysia	75 Public listed firms		Linear multiple regression	VA efficiency of total resources	Board composition, director's ownership, CEO duality, board size

Appendix B Snapshot of performance of English National Health Service hospitals

Figure 3 Graphical representation of financial performance of NHS hospitals 2014 - 2018

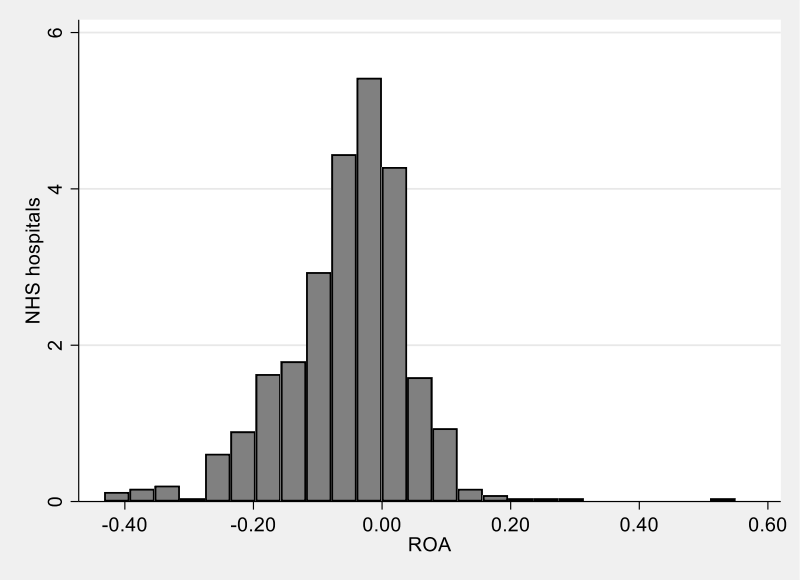


Figure 4 Graphical representation of non-financial performance of NHS hospitals 2014 - 2018

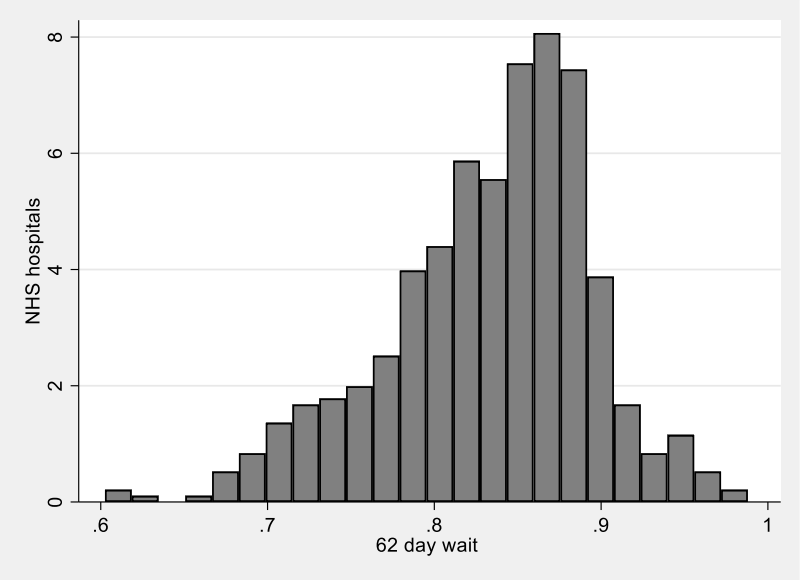


Figure 5 Graphical representation of financial performance of NHS trusts 2014 - 2018

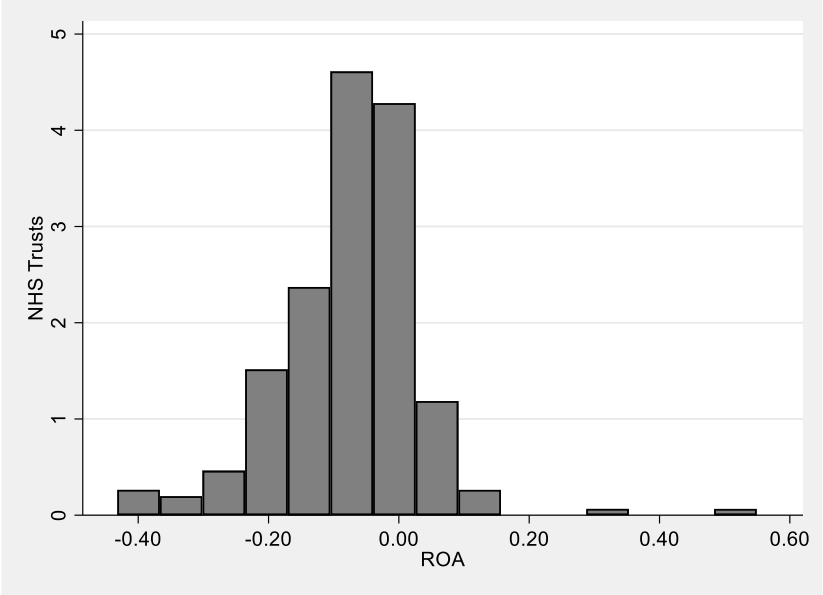


Figure 6 Graphical representation of non-financial performance of NHS trusts 2014 - 2018

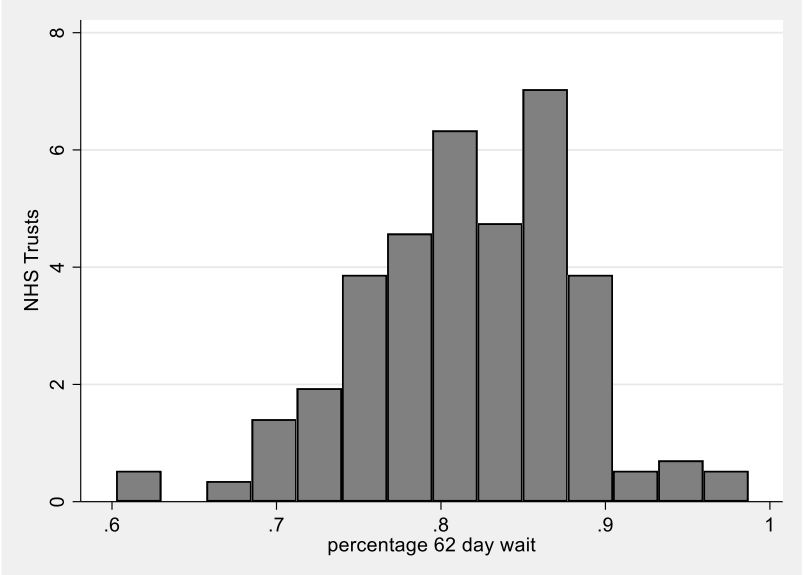


Figure 7 Graphical representation of financial performance of NHS foundation trusts 2014 - 2018

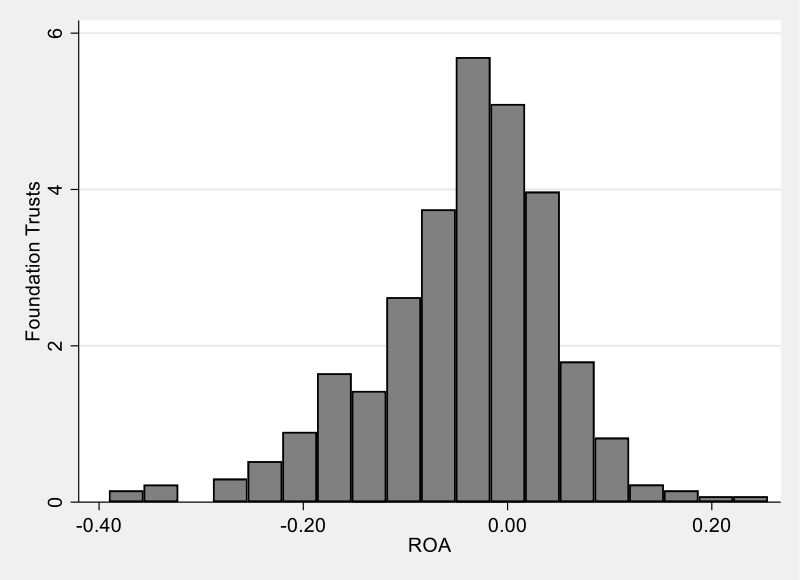
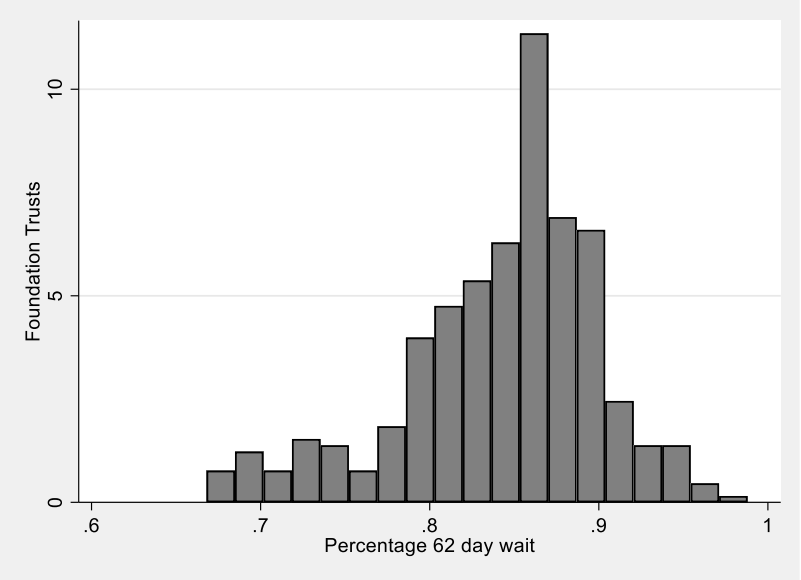


Figure 8 Graphical representation of non-financial performance of NHS foundation trusts 2014 - 2018



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