REVISITING THE LINK BETWEEN BOARD SOCIAL CAPITAL AND FIRM PERFORMANCE: THE ROLE OF INFORMAL INSTITUTIONS

by

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Submitted in fulfilment of the requirements of the Degree of Doctor of Philosophy (Management)

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June 2021

Abstract

Board social capital concerns the connections directors have with others. Scholars have often sought to analyse the relationship between board social capital and firm performance, yet the extant literature is both inconclusive and under contextualised. Drawing on the concepts of informal institutions and social norms, I investigate how the effect of board social capital on performance is dependent on the firm's external environment.

In a cross-national sample of firms, study 1 explores how country-level generalised trust and country-level corruption interact with the relationship between board social capital and firm performance. Data on the board of directors was collected from BoardEx and matched with financial data from Datastream. Longitudinal data was gathered for 7,479 firms across 57 countries. Using panel data analysis, I find that board social capital has a positive effect on firm performance. Importantly, the results also shows that when firms are located in high trust countries, investor reliance on firm-specific signals of legitimacy, like board social capital, are reduced. This demonstrates that board social capital is most important for firms in countries with low levels of generalised trust. Conversely, I do not find a significant interaction effect of corruption on the relationship between board social capital and firm performance. This suggests country-level corruption does not have a bearing on the effect of board social capital. Study 2 investigates the interaction effect of county-level religiosity on the relationship between board social capital and firm performance in a sub-sample of United States firms. Using panel data analysis, I find that board social capital has a positive impact on performance for firms in the United States. In my main results, I find religiosity does not interact with the relationship between board social capital firm performance. This suggests that board social capital has a positive effect on firm performance in the United States irrespective of county-level religiosity.

These findings deepen our understanding of corporate governance by demonstrating the conditions under which board social capital is most important. The results show that firms should take into account certain informal institutions when considering board composition. When firms are headquartered in countries with low levels of generalised trust, they should recognise the increased importance of hiring directors with greater levels social capital.

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Acknowledgements

I would like to thank my supervisors Dr Adina Dudau, Prof Yannis Tsalavoutas and Dr Georgios Kominis. I am immensely grateful for your guidance, feedback, support, and patience over the duration of my PhD. I would also like to thank my family, my girlfriend, Jasmin, and all the friends who have been there along the way.

Author's declaration

I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

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1 Chapter 1 – Introduction

1.1 Introduction

Social capital research has proliferated in recent years. One emerging stream of this body of research considers the social capital of organisations. In particular, the concept of social capital has been adapted into corporate governance research with scholars considering how the social capital of the board of directors influences the firm. Within the literature on board social capital, its impact on performance is perhaps the most contested area of study. Scholars have frequently sought to empirically investigate the relationship between firms' board social capital and their performance (e.g Bøhren and Strøm, 2010; Barroso-Castro et al, 2016; Kim, 2007; Kor and Sundaramurthy, 2009; Lee et al, 2016; Jackling and Joh, 2009) but the findings are inconclusive (Sullivan and Tang, 2013; Barroso-Castro et al, 2016; Zona et al, 2018).

The extant literature which examines board social capital relative to firm performance is under contextualised. As scholars have focused solely and narrowly on firm-level variables, the extant research lacks theoretical specificity and does not address how the environment in which a firm operates influences the relationship between board social capital and firm performance. This study is motivated by the absence of empirical corporate governance studies which consider how variables external to the firm influence the effect of board social capital. This thesis links the concept of board social capital with informal institutions like generalised trust, corruption, and religiosity to investigate how firm's external environment, in part, determines the influence of board social capital on firm performance.

1.2 Motivation of the thesis

The thesis is comprised of two studies. The studies are linked by the common theme of examining how social norms and informal institutions (Pejovich, 1999) interact with the relationship between board social capital and firm performance. Scholars have often sought to analyse how board composition and board social capital impacts firm performance but have done so neglecting the influence of informal institutions (Zattoni et al, 2020) and focusing exclusively on single country studies.

There are different types of board social capital that a director may accumulate. My research focuses on a type of formal board social capital, which is sometimes referred to as 'external board' social capital (e.g Barosso-Castro et al, 2016) but will thereafter be referred to in this thesis plainly as 'board social capital'. This type of board social capital focuses on the resources which are attained from institutionalised relationships or membership of a group. This is distinct from social capital garnered from informal relationships, i.e friendship ties with neighbours or friends, which exist

outside of formalised structures. More specifically, I focus on the social capital generated through director interlocks – that is the social capital garnered from a director sitting on multiple boards simultaneously, creating a formal link between two or more firms. This is distinct from other forms of relationships firms may create as it focuses specifically on formal relationships of the directors. The social capital of directors is particularly important, given that they are responsible for the firms strategic direction and governance. The benefits of this type of social capital can be categorised into two main themes. The first is that from holding multiple directorships a director's access to knowledge and resources is expanded (Kim and Cannella, 2008). This occurs as their network is expanded to include other directors and they gain access to the way other organisations are being run, allowing them to better contribute to the firms which they serve. The second benefit is reputational, holding multiple directorships is viewed as a sign of prestige (DiMaggio and Powell, 1983), and can improve perceptions of the firm and the legitimacy of the decisions taken by the board of directors.

I use informal institutions as an interaction term on the relationship between board social capital and firm performance because is it theorised those informal institutions influence the behaviours and beliefs of the directors themselves. Informal institutions relate to social norms, traditions and moral values which are longstanding (Pejovich, 2006). Informal institutions or social norms are known to influence the behaviour of those who live in that area (Perkins and Berkowitz, 1986; Contreras, 2019). This is also true for firm directors, the informal institutions of where a firm is headquartered has been shown influence the behaviour and decisions of firm directors (Hilary and Hui; 2009), irrespective of whether they live in that area or not (Fang, 2015, Dyreng et al, 2012). The central debate around board social capital revolves around two main theoretical lenses, agency perspective and the resource-based view, which are concerned with the tendency of directors to use or misuse their social capital based on their values. Given that the outcomes of a director's social capital on the firm revolves somewhat around their own values, it is prudent to study informal institutions as it has been shown to be a key determinant of values and behaviour.

In a cross-national sample of firms from 57 countries, the first study examines the relationship between board social capital and firm performance, taking into account the interaction effect of country-level corruption (measured using perceptions of corruption) and country-level generalised trust. The study is motivated, in part, by a lack of cross-national research on the association between board social capital and firm performance, which is thematic of a wider tradition in corporate governance research of single-country studies. The lack of cross-national studies which take account of the national context as a potential influence on the relationship between board social capital and performance represents an important gap in our understanding of the efficacy of corporate governance mechanisms. Researchers in this field have studied firm-level board characteristics but ignored the national context, making the implicit assumption that national institutions or social norms

do not influence the effectiveness of the board (Zattoni et al, 2020). This research gap is significant, as it is clear that both firm-level and country-level variables interact to influence outcomes for the firm (Kumar and Zattoni, 2019; Stathopoulos and Talaulicar, 2020), but we do not yet know how. There are two reasons informal institutions may interact with board social capital. One of the earliest and perhaps the most prominent of corporate governance used to analyse why are board is or is not effective is agency theory (Daily, Dalton and Rajagopala, 2003; Wasserman, 2006). Agency theory considers the problem that arises from the separation of ownership and control of the firm, and methods of how this problem can be reduced (Panda and Leepsa, 2017) – there is full discussion of agency theory and other theories of corporate governance in section 2.4.2. Researchers have frequently studied firm-level mechanisms of addressing agency theory (Kumar and Zattoni, 2013) but have largely ignored informal institutions (Zattoni et al, 2020). This gap is significant as informal institutions shape, in part, the behaviours and values of directors (Chourou, 2020), and influence the exchange relationships between business partners (Whitley, 1999). As informal institutions shape the behaviours of directors and the values that they hold, it is likely that they also influence the efficacy of corporate governance mechanisms (Zattoni et al, 2020), like board social capital, and the functioning of the board as a whole. In short, the effect that director's board social capital has on the firm is likely reliant on the values of those directors themselves, which have been shown to be shaped by informal institutions (Hilary and Hui, 2009). Secondly, informal institutions, in part, shape the which that firms are viewed by investors (Hartwell and Malinowskac, 2019). Firms may experience improved market performance being headquartered in locations with positive informal institutions such as generalised trust, partially as it signals legitimacy to investors (Amirslani, 2017). It is possible that the reliance of a firm on board social capital to achieve legitimacy is tempered by whether they benefit from being located in an area with good informal institutions.

As the study is the first cross-national research on board social capital, I add to the literature by demonstrating how trends in board social capital vary by country. Most importantly, I investigate how informal institutions influence the impact of board social capital on firms. The study marks the first empirical investigation into how the national environment determines the influence which board social capital has on firm performance. In doing so the study provides an initial understanding of the contexts in which board social capital is of the greatest utility to firms.

The second study zooms into one country. Study 2 examines the effect of board social capital on firm performance in the United States while examining how county-level religiosity interacts with the relationship. In recent years, a burgeoning stream of literature which considers the impact of religious social norms on corporate behaviour has begun to emerge (e.g Hilary and Hui, 2009; McGuire et al, 2012; Cai et al, 2019; Chourou, 2020; Leventis et al, 2018; Wu et al, 2016; Chantziaras et al 2020; Hunjra et al, 2020). Similarly, scholars have built a rich body of research which considers firm-level governance mechanisms and their relevance to outcomes for the firm (Kumar and Zattoni,

2019). However, these two literatures have not yet been merged. Study two aims to provide an understanding of how county-level religiosity, as a social norm, tempers the relationship between board social capital and firm performance.

1.3 Research questions

Both studies in the thesis examine the effect of board social capital on firm performance. The thesis embraces an objectivist, positivist research philosophy – deriving hypotheses from the literature before testing them empirically. Consequently, the first research question is:

"What is the impact of board social capital on firm performance?"

The first study examines the effect of board social capital on firm performance in a cross-national panel of firms. The study also investigates how factors in the firm's external environment, namely: generalised trust and corruption ***(measured by perceptions of corruption)***, attenuate or bolster the relationship between board social capital and firm performance. Thus, the second research question is:

"What is the influence of country-level corruption and country-level generalised trust on the relationship between board social capital and firm performance?"

This study covers 37,109 firm-year observations from 57 countries over the years 2005 – 2015. The board-level data for the study is drawn from the BoardEx Organisational Summary files, while the accounting data is drawn from Datastream. The sample starts in year 2005, this because prior to that point BoardEx coverage of Europe and the rest of the world was limited. The sample ends in 2015, this is because of the time lag effect I employ – board-level data from 2015 predicts firm performance up to 2018. The board-level data from BoardEx is matched with accounting data from Datatstream and country-level data from a variety of sources. It is expected that country-level corruption will positively interact with the relationship between board social capital and firm performance. It is also expected that there will be a negative interaction effect of generalised trust on the relationship between board social capital and firm performance.

Firm performance is measured using two computations of market-based performance measure – Tobin's Q. Board social capital is measured using the average number of current directorships members of the board of directors at the focal firm. Corruption is measured using data from Transparency International's (TI) Corruption Perception Index (CPI) while generalised trust is measured using data from the Integrated Value Survey (IVS).

The second study examines the effect of board social capital on firm performance in a United States based panel of firms, while considering the effect county-level religiosity. Thus, the third research question is:

"What is the impact of county-level religiosity on the relationship between board social capital and firm performance?"

This study covers 13,600 firm-year observations from the United States over the years 2005 – 2015. Again, the board-level data for the study is drawn from the BoardEx Organisational Summary files, while the accounting data is from Datastream. It is expected that firms headquartered in areas with lower levels religiosity will experience a greater positive effect of board social capital on firm performance.

The measures used in the second study largely mirror those in the first. In addition to the variables used in the first study, I add a measure of religiosity which is constructed using data from The Association of Religious Data Archive (ARDA) and the US Census Bureau. Religiosity is measures as the number of religious adherents, as defined by ARDA, as a percentage of the county population. I also add a battery additional controls at the county-level largely drawn from the US Census Bureau.

1.4 Contribution of the thesis

Scholars have frequently attempted to analyse the relationship between board social capital and firm performance (e.g Bøhren and Strøm, 2010; Barroso-Castro et al, 2016; Kim, 2007; Kim and Cannella, 2008; Kor and Sundaramurthy, 2009; Lee et al, 2016; Jackling and Joh, 2009; Devos et al, 2009), however, the extant literature is inconclusive (Sullivan and Tang, 2013; Barroso-Castro et al, 2016). Some scholars have found a positive relationship between board social capital and firm performance (Bøhren and Strøm, 2010; Kim, 2007; Kor and Sundaramurthy, 2009) arguing that social capital can endow firms with access to information and resources they would not otherwise be able to obtain (Barroso-Castro et al, 2016). Conversely, others report that the effect is negative (Lee, Choi and Kim, 2012; Jackling and Joh, 2009; Devos et al, 2009), arguing that social capital may lead to an agency problem (Zona et al, 2018) or that directors with greater levels of board social capital, as evidenced by director interlocks, become simply too busy to monitor effectively (Jackling & Johl, 2009). The lack of consistency in the results reported by researchers is puzzling – particularly given the relative consistency of the measures employed.

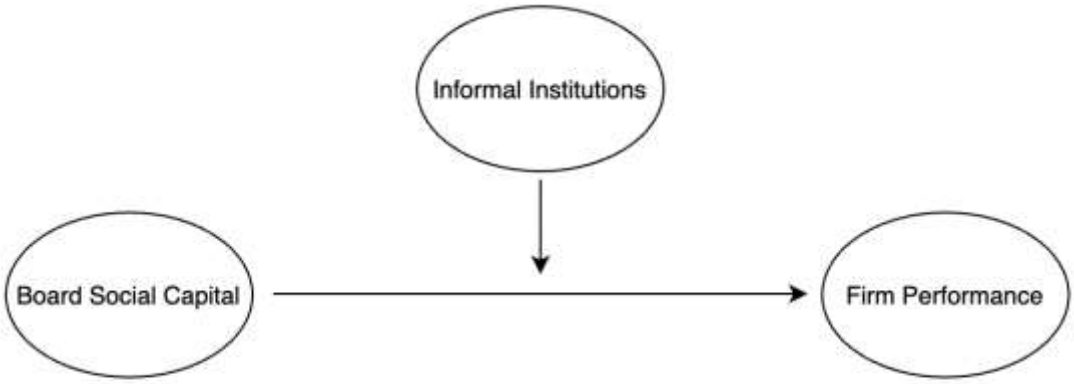
One theme which runs throughout the broader corporate literature but is particularly pertinent relative to board social capital is that much of the research is under-contextualised (Kumar and Zattoni, 2013). While past researchers have established that board social capital may have a positive or

negative effect on firm performance, there has been little consideration of the conditions which may influence the relationship – and thus past findings lack theoretical specificity. In particular, researchers have neglected that a firm's external environment may determine the effect of which board social capital has on firm performance. Within the wider corporate governance literature, scholars have called for research which merges and acknowledges the importance of micro and macro-level variables (Young and Thyil, 2008).

This thesis contributes to the existing literature by providing a more fully contextualised empirical analysis of the relationship between board social capital and firm performance. The research builds on the current body of literature by providing an initial understanding of how the wider business and social environment, and in particular social norms and informal institutions, determine the influence board social capital has on firm performance.

Study 1 and study 2 are linked by the common theme of investigating how informal institutions interact with the relationship between board social capital and firm performance. Informal institutions are defined as: "traditions, customs, moral values, religious beliefs, and all other norms of behavior that have passed the test of time" (Pejovich 1999, p. 166). Informal institutions provide communities or countries with prevailing set of values which are passed down through generations (Pejovich, 2006).

Figure 1: Theoretical model



The first study examines the relationship between board social capital and firm performance in a cross-national sample of firms from 57 countries. This is a novel endeavour, as all prior research on this topic has been drawn from single country-samples. By design, the impact of country-level variables has been omitted from the current body of literature. My research is the first to acknowledge that country-level social norms may interact with the efficacy of board social capital. Specifically,

my research examines the interaction effect of country-level corruption and generalised trust on the relationship between board social capital and firm performance.

The findings of my first study indicates that in a cross-national sample of firms, board social capital is positively and significantly related to firm performance. The results demonstrate that board social capital is a resource which is associated with greater firm performance. The data also indicates that the prevalence of generalised trust reduces the positive relationship between board social capital and firm performance. This signifies that investor reliance on board social capital as a signal of legitimacy is heightened when a firm does not benefit from the endowed trust of being headquartered in a country with high level of generalised trust. By contrast, the coefficient of the interaction between corruption and board social capital is not significant. This is notable, given that corruption is known to cause environmental uncertainty for organisations (Rodriguez et al, 2005) and, in the past, scholars have proposed that board social capital is a mechanism for dealing with environmental uncertainty (Boyd, 1990; Zona et al, 2018). However, the data suggests that the positive effect of board social capital on performance is not increased by country-level corruption.

The second study investigates the relationship between board social capital and firm performance in a sample of firms from the United States. The study builds on past literature which uses the social norm of religiosity to explain corporate behaviour (e.g Hilary and Hui, 2009; McGuire et al, 2012; Cai et al, 2019; Chourou, 2020; Leventis et al, 2018; Wu et al, 2016; Chantziaras et al 2020; Hunjra et al, 2021). However, previous studies which have used religiosity to explain corporate behaviour have done so largely referring to accounting practises, and this study is also among the first to reconcile the importance of religiosity in determining firm performance. Indeed, despite its central importance to American society religiosity has been widely neglected in the study of organisations and management (Tracey, 2014; Gümüsay; 2017). The study is the first to consider how religious social norms interact with the effect of board structure, and in particular board social capital. The study is also the first to control for a full battery of corporate governance controls while considering the effect of religiosity on firm-level outcomes.

The results of the second study indicates that board social capital has a positive influence on firm performance on firms in the United States. The study uses sample of 13,600 firm-year observations corresponding to 1,628 United States firms from a variety of industries. This contrasts with past studies which have employed smaller samples and focused on particular industries, for example: 72 United States high technology firms (Kor and Sundamurthy, 2009) or 145 Italian manufacturing firms (Zona et al, 2018). As I employ a significantly larger sample of firms from a range of industries, this increases the external generalisability of the findings regarding the relationship between board social capital and firm performance.

The central contribution of my second study is that I investigate the interaction effect of religiosity on the relationship between board social capital and firm performance. I conjecture that religious firms are more risk averse and are consequently less likely to benefit fully from board social capital which has often been theorised as a resource that enable firms to improve performance when confronted with greater uncertainty or risk exposure (Boyd, 1990; Martin et al, 2015). The study 2 results regarding the interaction effect of religiosity on the relationship between board social capital and firm performance are inconclusive. I find an non statistically significant negative relationship between the interaction of my main religiosity proxy (number of adherents in the country over the total population in the county in which the firm is headquartered), and board social capital on firm performance. I carry out further testing, using an alternative proxy of religiosity (number of congregations in the county where the firm is headquartered) and I find a significant negative relationship on the interaction of religiosity and board social capital on firm performance, which provides some support for hypothesis 2.

While I am not able to find evidence for my first hypothesis using my main religiosity measure the use of an alternative religiosity proxy supports my second hypothesis, that firms headquartered in non-religious counties benefit more from board social capital. The study builds on the existing knowledge of board social capital and corporate governance practises in the Unites States by demonstrating the potential interaction effect of religiosity. The study also advances research in this area as it is the first to consider the influence of religiosity on firm performance while controlling for a battery of board-level variables. The study demonstrates the potential impact of county-level social norms affecting firm-level governance mechanisms in the United States, which may prove a fruitful avenue for future research.

Overall, my thesis examines how the relationship between board social capital and firm performance is shaped, in part, by the wider business and social environment where the firm is headquartered. The thesis builds on the literature which attempts to understand how board social capital influences outcomes at the firm-level. Moreover, the thesis advances our understanding of how firm's external environment may determine the optimal board composition.

1.5 Structure of the thesis

This thesis is structured in six chapters. This chapter introduces the motivation of the thesis, the research questions, and the contribution.

Chapter 2 provides an analysis of the concepts of board social capital and corporate governance which underpin this research. The chapter starts by outlining the origins of the social capital concept before introducing the concept of board social capital. Corporate governance and the main

theoretical lenses which scholars use to understand it are then reviewed. The chapter then reviews the theoretical and empirical literature which links board social capital to firm performance before outlining the research gap.

Chapter 3 is the first study of the thesis. The first section of the chapter begins with discussion of the concept of corruption. The chapter then reviews past empirical literature which links corruption with outcomes at the firm-level before subsequently formulating a hypothesis for how corruption (measured using perceptions of corruption) interacts with the relationship between board social capital and firm performance. The second section of the chapter provides discourse on generalised trust and reviews the literature on how generalised trust impacts on firm-level outcomes. The section concludes with the formulation of hypothesis on how generalised trust interacts with the relationship between board social capital and firm performance. The third section of the chapter outlines the research design for the study. The section reports variable measurement – providing a detailed account of how the variables are constructed. The section then outlines the empirical research models used to test the hypotheses, and the econometric and statistical issues which arise from the choice of methods employed. Finally, the section discusses the approach to sample selection and data collection. The final section of the chapter reports the descriptive statistics and the results of the multivariate analysis. The section begins with univariate analysis, followed by a bivariate analysis and the reporting of correlation coefficients. The chapter then proceeds to present and analyse the results of the multivariate analysis and additional robustness and sensitivity tests.

Chapter 4 comprises the second study of the thesis, which addresses the effect of county-level religiosity on the relationship between board social capital and firm performance in the United States. The first section of the chapter discusses religiosity, and in particular the role of religiosity in shaping social norms. The section then reviews the empirical literature on the effect of religiosity on business outcomes before proceeding to present hypothesis on how religiosity influences the relationship between board social capital and firm performance in the United States. The second section of chapter four provides the research design for study 2. The section discusses variable measurement – reporting how the variables are constructed. The section then outlines the empirical research models used to test the hypotheses, and the econometric and statistical issues which arise from the choice of methods employed. Finally, the section discusses the approach to sample selection and data collection. The third section reports the descriptive statistics and the results of the multivariate analysis. The chapter begins with univariate analysis and provides followed by a bivariate analysis, and reporting of correlation coefficients. The chapter then proceeds to present results of the multivariate analysis and additional sensitivity tests, where the results are discussed in relation to the hypothesized relationships.

The thesis concludes with chapter 5 which presents a summary of this research. I highlight the contributions and detail limitations of the thesis. The chapter discusses the implications of the study for management practise. Finally, I present a number of avenues for future research.

2 Chapter 2 – Social capital and corporate governance

2.1 Introduction

This chapter first discusses the concept of social capital. I analyse the theoretical roots and definitions of social capital before moving on to outline how the term has been categorised and operationalised within the broader literature. Firm-level social capital is then reviewed – I discuss the two main ways which researchers have posed firms can harness social capital. I then define the term board social capital before discussing how it is measured within the literature. The discussion of board social capital is then contextualised by a discussion of corporate governance. I first define the term corporate governance before discussing the principal theoretical lenses through which researchers understand the concept. Subsequently, I present and analyse theories of how social capital influences the firm. I then review the existing research which has examined the causal link between board social capital and performance, before highlighting gaps in the extant literature.

2.2 Social Capital

2.2.1 Origins of social capital

Social capital is a concept with diverse roots that can be linked to authors as far back as Durkheim, Weber, Locke, Rousseau, and Simmel (Bankston and Zhou, 2002; Brewer, 2003; Portes and Sensenbrenner, 1993). However, the early modern development of social capital can chiefly be attributed to three principal authors: Bourdieu, Coleman and Putnam. Initially, a sociological concept, social capital is being applied to increasingly diverse fields and subjects, including: sociology, politics, mental health, economics, accounting and management (Adler and Kwon, 2002; Coleman, 1988; Lochner et al, 1999; Lee, 2009; Putnam, 2000; Svendsen and Svendsen, 2003). While social capital has been adapted into empirical research in a growing number of fields, its meaning remains contested (Fulkerson and Thompson, 2008).

Bourdieu is credited with bringing social capital in modern-day discussions (Claridge, 2004), and he was the first scholar to provide a systematic review of the term we now know as social capital. Bourdieu conceptualisation of social capital was interconnected with his broader theoretical ideas on class (Siisiäinen, 2000). He originally applied the concept to the issue of social mobility, or rather, the lack of it, theorising that social capital was used by the elite to sustain the social hierarchy. Bourdieu (1986, pp.249) defines social capital as:

> *'the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group – which provides each of its members with the*

> *backing of the collectively-owned capital, a 'credential' which entitles them to credit, in the various senses of the word'.*

Bourdieu's conceptualisation of social capital places it in the context of other forms capital; citing how both secondary forms - cultural and social - ultimately lead to economic capital. Bourdieu emphasises the functionality of social capital, demonstrating that individuals use social capital to advance their own interests (Siisiäinen, 2000). According to Bourdieu, social capital, in part, explained why the reproduction of the upper classes, were self-perpetuating (Webb, Schirato & Danaher, 2001). From this perspective, it is stressed that social capital can be viewed as a hereditary and is passed down through generations to allow the same individuals to sustain power.

The Bourdieuan approach to social capital is considered egocentric, as it focuses on the outcomes for the individual rather than the group (Clarridge, 2004). This is an important distinction from the work of Coleman, which is rooted in network theory. Coleman's analysis, compared with that of Bourdieu, marks a shift to a more sociocentric conceptualisation of social capital (Cusack, 1999; McClenaghan, 2000). In Coleman's seminal text "Social Capital in the Creation of Human Capital", he used social capital to analyse dropouts in high school. Describing both its forms and structural conditions, Coleman (1988, p. 98) defines social capital as:

> *"…a variety of different entities having two characteristics in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure' (Coleman 1988, p. S98).'*

Coleman's definition bridges both the individual and collective. Under the umbrella of social capital, Coleman includes expectations of reciprocity and group norms. Coleman sees social capital much like other forms of capital, in that it is a necessary component for achieving specific outcomes. Coleman conceptualises social capital as a tool that has the possibility of facilitating any manner of action, which could be harnessed by people at all levels of society and the outcomes depend on how social capital is used. This is distinct from the way social capital is conceptualised by Putnam, who viewed social capital as a tool for the elite.

Putnam is perhaps the best-known modern social capital scholar, and he defines the term as follows:

> *"by social capital I mean all features of social life - networks, norms and trust - that enable participants to act together more effectively to pursue shared objectives."* (Putnam 1996, p.54)

For Putnam, social capital is a critical component of building and maintaining democracy. In essence, Putnam viewed social capital as an asset of the individual but one which could be aggregated in order to measure the social capital of whole societies or nations. Like Coleman, he viewed the concept as a facilitator of cooperation. In his view, social capital is a public good - determined by civic engagement and trust in others.

It is clear from the variation in perspective amongst key social capital scholars that social capital means different things to different social scientists (Tzanakis, 2013). The broad intellectual roots of social capital have drawn criticism from some scholars. Multifaceted and abstract definitions coupled with a growing range of operationalisations have sometimes been cited as problematic (Field, 2008). The lack of a standardised definition has meant the term has been used very widely within research, to the point some have argued that the meaning of the concept is so broad and variable the term is not useful (Fine, 2010).

However, there are common themes that run throughout these early approaches to social capital. Predominantly, scholars agree is that social capital is *sustained and created through interaction*. Scholars also mostly agree that social capital is a resource embedded within social relations and the broader social structure, which an actor may use to their benefit. Moreover, the different uses for social capital by the early theorists shows social capital is a multi-level concept, arguably suitable for micro (individual), meso (group) and macro (societal) levels of analysis.

The foundations of the concept of social capital lie in work of the sociologists reviewed in this section. However, the concept of social capital has evolved as its popularity has grown and it has been adopted into empirical research. Rather than providing an extensive exploration of the foundations of social capital in the classical literature, this chapter goes on to explore the contemporary theoretical and empirical underpinnings of the social capital concept.

2.2.2 Definitions of social capital

Social capital is a complex, multidimensional concept; it has retained the interest of researchers for three decades. The perennial allure of the concept has led to a proliferating number of definitions and meanings. Social scientists have frequently sought new ways to define what is regarded as a "wonderfully elastic term" (Lappe and Du Bois, 1997, p.119).

Scholars have characterised social capital in many ways, often dependent on discipline, level of investigation and even political orientation. Adler and Kwon (2002) note that definitions of social capital tend to vary dependent on whether the focus is on the substance, the source, or the effect of the concept. While many of the most cited definitions of social capital are similar, scholars choose to emphasize different parts of the concept, dependent on how they are using the term within their

own research. Table 1 represents an overview of multiple contemporary definitions of social capital, adapted from Ostrom (2009).

Table 1: Social Capital Definitions. Adapted from Ostrom (2009)

Author	Definition
Nahapiet and Ghoshal (1998)	"Sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit"
Kwon and Adler (2002)	"The goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action"
Hillman and Daziel (2003)	"Resources accessible through the network of relationships possessed by an individual or a social unit"
Burt (2005)	"Advantage created by a person's location in a structure of relationships"
Pierre Bourdieu (with Wacquant, 1992)	"Social Capital is the sum of resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition."
Coleman (1994)	"Social Capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure."
Putnam (1995)	"features of social organisation such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit"
Woolcock (1998)	"…the information, trust, and norms of reciprocity inherent in one's social network."
Adler and Kwon (2002), p. Burt (1992)	"Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its efforts flow from the information, influence and solidarity it makes available to the actor.' '...friends, colleagues, and more general contacts through whom you receive opportunities to use your financial and human capital."
Ostrom and Ahn (2003)	'Social capital as an attribute of individuals and their relationships that enhances their ability to solve collective action problems"
Ostrom (2009)	"social capital represents the resources that arise from relationships and that can accrue to either the individual or the collective"

There are many commonalities which echo throughout the most widely cited definitions of social capital. Three elements commonly feature in social capital definitions and conceptualisations: social networks (of families, friends, communities, groups), norms of reciprocity (shared norms, values, and behaviours) and trust (in other people and institutions) (Bhandari and Yasunobu, 2009). Social capital involves membership in groups and networks, informal social relations, trust in people and institutions and civic & organisational participation. Frequently, definitions of social capital centre around notions of social networks. More specifically, definitions often reference the benefits that can be ascertained from one's position in a network. Some scholars choose to reference the actual and potential resources accessible through networks (Nahapiet and Ghoshal, 1998), or while others refer more broadly to the advantages that are attained through a position in a social network (Burt, 2005).

While scholars differ in how they choose to define social capital, there is some agreement that social capital is associated with relationships where trust and reciprocity is developed amongst individuals. In most cases, if social relations are not maintained, social capital will decline over time as reciprocity and shared norms depend on communication (Coleman, 1990). There is broad agreement amongst scholars, irrelevant of whether or not they focus on an individual or societal perspective, that it is interaction between people that maintains and reproduces social capital (Lin, 2002).

Variance in the way in which the term is defined can arise from multiple different sources. One factor is whether the scholars emphasise social capital's sources or its effects, or both (Baron et al, 2000; Robison et al, 2000). There is also debate about the separation between source and effect. For example, should relationships be treated as means towards an end or as ends in themselves (Ostrom, 2009). Definitions of social capital also diverge regarding the appropriate the level of analysis. Some definitions view social capital as an asset to the benefit of an individual while others emphasise benefits to the group. These variation in the level of analysis somewhat mirror the differentiated views of classic social capital scholars, for example, the Bourdieuan approach to social capital is considered egocentric, as it focuses on the outcomes for the individual, while Coleman's approach is considered sociocentric.

In an extensive review of definitions of social capital, Adler and Kwon (2002) categorise the definitions depending on whether their focal point is on internal, external, or both types of linkages. External linkages are used to refer to ties that exist within groups often called 'bridging', while a focus on internal relations is referred to as 'bonding'. Similar categorisations of definitions could be employed with Pichler and Wallace (2007) 'informal' or 'formal' typology of social capital, or Nahapiet and Ghoshal's (1998) 'structural', 'relational' and 'cognitive' typology of social capital. Further discussion of these different types of social capital can be found in the categorisations of social capital section which follows.

The discussion in this section aims to provide the reader with an understanding of the ways in which social capital has been defined as well as reasons for the variance amongst the definitions. As identified in this literature review, there is frequent adaptation of the social capital concept based on several variables. Researchers must discuss and define social capital relative to their own discipline, study level, and context (Claridge, 2004). Table 1 outlines a broad range of definitions – I have outlined commonalities amongst these definitions while providing insight into the where the definitions diverge. Rather than choosing on definition, in the following sections, I will identify an appropriate operationalisation and conceptualisation of social capital relative to the aims of this thesis in assessing the influence of the social capital of the board of directors on firm performance.

2.2.3 Categorisations of social capital

Scholars have attempted to delineate the different forms of social capital. This section will review the different categorisations of social capital, which have been adapted into empirical research with a view to giving the reader a more thorough understanding of the conceptualisation of social capital and particularly its usages within contemporary empirical research. Examining the various typologies of social capital helps to add to the overall understanding of the term by elucidating its different characteristics.

In his seminal work, Bowling Alone, Putnam (2000) investigates trends of civic engagement within America. Putnam differentiates between what he terms ‘bonding’ and ‘bridging’ social capital. Bonding social capital consists of "inward-looking [networks that] tend to reinforce exclusive identities and homogeneous groups” while, on the other hand, bridging social capital are networks which are “outward looking and encompass people across diverse social cleavages” (Putnam, 2000, p. 22). In short, bonding social capital involves people whom all share common identity characteristics, like race and social class, while bridging social capital networks are diverse and encompass people of different backgrounds.

As bonding social capital can lead to tight-knit and exclusive groups that are harder for outsiders to access, it is sometimes associated with the potential negative side of social capital. By comparison, bridging social capital generally tends to be associated with positive societal outcomes. Indeed, scholars have often reported a positive association between bridging social capital and lower levels of crime, higher economic growth, and better public health (Aldridge et al, 2002; Coulthard et al. 2002; Putnam, 1993).

In essence, bonding social capital binds people who are already like one another closer together while bridging social capital connects those who are different from one another. Networks can and often do compromise of both of these types of social capital. Putnam gives the example of a black church in America where members share the same ethnicity and religion but vary regarding class and gender

(Putnam, 2000). Putnam's typology of social capital has been applied to understanding a vast range of issues, including but not limited to: community health (Poortinga, 2006), economic growth (Beugelsdijk & Smulders, 2003), adaption to climate change (Adger, 2003), resource management (Pretty, 2003) and corruption (Harris, 2007).

Szreter and Woolcock (2004) introduced a third type of social capital - linking, which addresses a gap in Putnam's categorisation (Kawachi et al, 2004). Linking social capital refers to 'norms of respect and networks of trusting relationships between people who are interacting across explicit, formal, or institutionalised power or authority gradients in society.' (Szreter and Woolcock, 2004, pp 33). This addition to Putnam's categorisation is useful theoretically as it allows for consideration of power relations relative to social capital although it has not been adopted as commonly into empirical research.

Pichler and Wallace (2007) propose an alternative conceptualisation of social capital. They make a distinction between 'formal' and 'informal' types of social capital. Their conceptualisation of formal social capital draws upon two main literatures - social networks and civic participation. Pilcher and Wallace initially conceptualised social capital in this way to trace patterns of social capital throughout Europe. The categorisation enabled them to better understand the relationship between social capital embedded in institutions and organisations opposed that created and sustained through informal social settings.

Informal social capital is built upon social network theory; the strength of this type of social capital is based on density, strength and extensiveness of social networks. Alternatively, formal social capital is based upon the "tradition of democracy and the study of civil society" (Pichler and Wallace, 2007, pp.24). Formal social capital is defined as "participation in formally constituted organisations and activities and trust in other people since this gives an indication of the societal level of trust that is universalistic in character" (Pichler and Wallace, 2007, pp.25). On the other hand, informal social capital is built upon social networks, social and family support, that are sustained outside of formalised network structures. For example, a group of neighbours meeting outside their houses to have a chat about issues in the neighbourhood is an example of informal social capital – the interaction does not take place within a formally recognised network structure. On the other hand, neighbours meeting through an organisational setting, for example, as part of a neighbourhood action group or local parish council, would constitute formal social capital as the interaction takes place within a formalised network structure.

Nahapiet and Ghoshal (1998) propose that there are three types of social capital: structural, relational and cognitive. Structural social capital refers to the "impersonal configurations of linkages between people and units" (Nahapiet & Ghoshal, 1998, p. 244). Relational social capital refers to personal

relationships between those within the organisation built up over a history of interactions. Cognitive social capital cognitive dimension refers to “those resources providing shared representations, interpretations, and systems of meaning among parties” (Nahapiet & Ghoshal, 1998, pp. 244). These three dimensions of social capital are distinguished from one another but at the same time-related. Moreover, each of these forms has two characteristics in common: "(1) they constitute some aspect of the social structure, and (2) they facilitate the actions of individuals within the structure" (Nahapiet & Ghoshal, 1998, pp. 244). This categorisation of social capital is important as it draws on the notion of social capital as an asset, which is useful of analysis at multiple levels, from a structural system down to an individual's perceptions.

2.3 Firm-level Social Capital

2.3.1 Organisational social capital

The previous section served to demonstrate the theory that underpins the broad concept of social capital. In recent times, scholars have expanded the social capital concept further to include social capital of the firm or as it is sometimes referred to, organisational social capital (Molina-Morales et al, 2010; Lins et al, 2017; Ko, 2019; Llanos-Contreras et al, 2021; Yang et al, 2021). Such research posits that firms have their own social capital, which influences a range of different outcomes at an organisational level. Scholars have also defined social capital in specific relation to corporations. This thesis adopts the definition of organisational social capital proposed by Gabbay and Leenders (1999, p.3):

> “Social capital is the implicit and tangible set of resources available, by virtue of individual relationships, to assist a corporate player in goal attainment.”

Gabbay and Leender’s (1999) definition is appropriate given the scope of this research for three reasons. A central aim of this thesis is to assess the influence of the connections of the board of directors on firm performance. The definition recognises that social capital is sustained through individual relationships, i.e the interlocks between directors (Nicholson et al, 2004). Second, the definition recognises that individual relationships have some impact on the firm or ‘corporate player’. Third the definition resonates with the resource-based view of the board of the firm and recognises that social capital is itself a resource to be used for the benefit of the firm.

Research on the social capital of firms is rapidly growing. Two separate strands of research have emerged when it comes to analysing social capital of the firm. The first of the two takes Corporate Social Responsibility (CSR) as a proxy for firm social capital (e.g Amiraslani et al, 2017; Servaes and Tamayo, 2017; Hasan et al, 2020; Mkuua and Yusof, 2020). The second stream is concerned largely with the social capital of the board of directors - most commonly measured through board

interlocks (e.g Barosso-Castro et al, 2016; Ferris et al, 2017; Goncalves and Rossoni, 2020; Johnson et al, 2013; Sauerwald et al, 2016).

2.3.1.1 Social capital as CSR

Recently, researchers have introduced Corporate Social Responsibility (CSR) as a proxy for firm social capital. World Business Council for Sustainable Development (2000), define CSR as "the commitment of a business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve the quality of life." Using CSR as a proxy for firm social capital is justified within the literature because of the shared characteristics between the two concepts: civic engagement, shared beliefs, and co-operation between the firm and its stakeholders (Lins, Servaes & Tamayo, 2017). Indeed researchers report that firms can build social capital and trust through CSR investments (Sacconi and Degli Antoni, 2011). Moreover, it is reported that it is a commonly held belief amongst corporate managers that CSR can help to build social capital (Servaes and Tamayo, 2017). Scholars who follow in this vein propose that CSR is a source of social capital, and the more invested in CSR initiatives the greater the social capital return capital return. Lins, Servaes and Tamayo (2017) use information on firms' CSR ratings from the MSCI ESG Stats Database, which has data on around 3,000 of the largest publicly traded companies. From the database, they construct a net CSR measure that adds strengths and subtracts concerns. They then use this score as the proxy for firm-social capital. However, this is a young field of research, to my knowledge, the fist paper which uses CSR as a proxy for firm social capital was published in 2017 (Lins, Servaes & Tamayo, 2017), although it has inspired a recent flurry of research in that direction (e.g Amiraslani et al, 2017; Hasan et al, 2020; Mkuu and Yusof, 2020).

2.3.1.2 Social capital of the board of directors

The second and more established method of measuring firm social capital examines the social capital of the board of directors. Research on the social capital of the board of directors is situated within the broader corporate governance literature which is dedicated to analysing the role of the board of directors in relation to the firm (Carpenter and Westphal, 2001; Hendry and Kiel, 2004; Pugliese et al., 2009; Ruigrok et al., 2006) and, in particular, their influence on performance (Dalton and Dalton, 2011). Many studies in this area have tried to analyse whether or not board social capital can provide a reliable source of advantage for firms (Kim, 2007; Kim and Cannella, 2008; Kor and Sundaramurthy, 2009; Barosso-Castro et al, 2016; Zona et al, 2018).

There are two main types of board social capital discussed within the literature. The first is internal social capital. Internal social capital refers to ties and relations with other people within the same organisation (Barosso-castro et al, 2016; Cuevas-Rodríguez et al, 2014; Kim, 2007). Putnam's bonding vs bridging analogy is useful here. Internal social capital can be thought of as similar to

bonding social capital, as it serves to facilitate cooperation between a group with a shared characteristic, i.e. membership of the same board. Bonding social capital is thought to foster particularised trust which is useful in a situation where colleagues need to share their expertise and knowledge, as directors may only be willing to do this with people whom they trust (Kim and Cannella, 2008; Offstein et al., 2005). Barosso-castro et al (2016) state: "Board internal social capital sources lie in ties and relationships between directors on the board, deploying a bonding function". This definition implies that internal social capital: i) exists between directors on the same board, ii) resides within relationships, and iii) facilitates good inter-relationships.

External social capital is the second, more established, form of board social capital - indeed much of the research in literature refers to external social capital using the term board social capital. The term external social capital was first coined by Kim (2005). A relatively new concept in social capital research, it has been defined in a consistent way across the existing literature. Barosso-castro (2016) defines external social capital as: "the degree to which board members have outside connections with the environment and the potential resources arising from those connections, which may be sources of competitive advantage for the firm". This definition is in keeping with the basis of the concept which was first proposed by Kim (2005).

2.3.1.2.1 Measuring board social capital

In a review of the composition of board of directors, Johnson et al (2013) examines the different themes under which scholars have chosen to measure board social capital. The measures can be broadly split into: ties to entities, personal relationships and status/prestige.

Of these different streams, ties to other entities is the best developed and most valued within the literature. This strand of research looks at board social capital in terms of numbers of director ties and director interlocks. The term board interlock refers to a director holding a directorship on multiple boards at once. Typically, researchers measure board social capital as the number of external directorship ties board members hold with other firms (Haynes and Hillman, 2010; Kor and Sundaramurthy, 2009; Tian et al., 2011; Wincent et al., 2009). For example, if one director at the focal firm holds external directorship at another two firms, this equals a score of two. The total score is the aggregate number of external directorships held by the focal firm's directors. Other scholars divide the number of external directorship ties by the size of the board to account for the fact that larger boards naturally have more ties (Barroso-Castro et al 2016; Kiel and Nicholson, 2006). Within the literature, it seems that board interlocks are the most valued source of board social capital (Hillman and Dalziel, 2003; Kor and Sundaramurthy, 2009; Tian et al., 2011). However, it should be noted, although interlocks are the most valued source of social capital between firms in the literature, they are not a perfect measure. Interlocks alone cannot capture the full complexity of inter-

firm networks (Davis and Powell, 1992). When research captures interlocks alone, it should be acknowledged that it neglects many of the other sources of social capital.

Social capital in the form of personal relationships is also thought to have an influence on the behaviour of the board of directors. Personal relationships between those on the board has been argued to affect the dynamics of the group and the incentives of the directors which can have positive or negative effects. Personal relationships have been measured in a number of ways, such as: time spent serving on the board together (Barroso-Castro et al, 2016), prior relationships with board members (Stevenson and Radin, 2009) and appointment by CEO (Frankforter et al., 2000).

Prestige and social status have also been used as a measure of social capital. Prestige has been measured in a number of ways, for example, attending an elite school or university (Bond et al, 2010) or experience at prominent firms (Chen, Hambrick, & Pollock, 2008). Scholars have also used an index of status in past research to determine board members status (Westphal & Khanna, 2003).

The vast differences in the ways in which board social capital has been measured are reflective of a multifaceted concept. However, research on the different dimensions of board social capital would indicate that the impact of the different dimensions is not completely independent of one another (Johnson, 2013). For example, personal relationships may moderate the effect of ties to other entities, as shown by (Barroso-Castro et al, 2016). While there exist multiple measured of board social capital – ties to other firms in the form of interlocks remain the most valued source of board social capital (Barroso-Castro et al, 2016; Hillman and Dalziel, 2003; Kor and Sundaramurthy, 2009; Tian et al., 2011).

2.4 The role of social capital in corporate governance

2.4.1 Defining corporate governance

This section first defines corporate governance and discusses the role of the board of directors. The section then reviews the principal theories of corporate governance. Each of the separate theories of sheds light on some aspect of governance but does not capture the theoretical basis of corporate governance in totality.

Before analysis can take place as to how social capital of the board of directors might influence the performance of the firm, it is important first to establish the role and function of the board itself. Corporate boards have been the subject of much research in multiple fields. The corporate governance literature has long focused on the relationship between the management of the firm and the board of directors (Madhani, 2017). Corporate governance can be viewed widely as the organisational controls that monitor the behaviour of management and delineate their powers (Charreaux, 1997; Madhani, 2017). Corporate governance is defined by Claessens (2006) p.93 as

> "a set of mechanisms through which firms operate when ownership is separated from management"

The definition refers to the separation of ownership and control which is at the heart of much of the corporate governance literature. Corresponding to this definition, good corporate governance should help the facilitation of resolution of conflicts between minority and majority shareholders, executives and shareholders, and between shareholders and stakeholders (Madhani, 2017).

It is the objective of a good corporate governance framework to ensure the maximum possible returns to the shareholders, while protecting the interests of multiple stakeholder groups, like the firm's suppliers, customers, employees and wider society (Becht et al, 2003). Dalton et al (1998) identify several critical roles of the board such as appointing a CEO, monitoring management, advising and offering counsel, and procuring resources. When corporate governance is done well, it should be geared towards long-term value creation and creating a sustainable, long-term, competitive advantage (Charan, 1998; Madhani, 2007).

2.4.2 Theories of corporate governance

2.4.2.1 Agency theory

There are two main frameworks when it comes to understanding the role of the board of directors – agency theory and the resource-based view. Agency theory which is one of the oldest theories in the management and economics literature (Daily, Dalton, & Rajagopalan, 2003). Agency theory is based on the premise that central to firms is the relationship between management and shareholders (Jensen and Meckling, 1976) - given the different interests of these two groups, there is the potential for conflict.

According to the agency theory, it is the central purpose of the board to act as a third-party, monitoring the management to ensure that the best interests of the shareholders are appropriately represented (Bathala and Rao, 1995; Brennen and Solomon, 2008; Bushman and Smith, 2001; Healy, Hutton, & Palepu, 1999; Vitolla et al, 2020). Scholars have posed a number of different remedies to the agency problem which potentially alleviate some of the associated issues. For example, Rosenstein and Wyatt (1990) found that the inclusion of more outside and independent directors may help to ensure that the board functions properly. There is relative agreement amongst scholars that outside directors are important that board must be balanced and also contain inside-directors that harbour the industry-specific knowledge key to making good strategic decisions. Proponents of agency theory also suggest that there should be separation of the roles of CEO and chairman of the board. Scholars pose that the combination of these roles, referred to as CEO duality, may conflicts of interest as information can be subjectively filtered by the CEO (Jensen, 1993). Other suggested

remedies to the agency problem include management ownership (Jensen and Meckling, 1976) and executive compensation (Core, Holthausenand and Larcker, 1999).

Despite maintaining its position as the dominant theory of corporate governance, agency theory is not immune to criticism. Perrow (1986) duly criticised the theory on the grounds that it focuses solely on the role of the indiscretions of management while ignoring the potential misdemeanours of the firm's ownership. Similarly, stewardship theory emphasises that managers are largely trustworthy and treating them as such should reduce costs for the firm (Abdullah and Valentine, 2009).

2.4.2.2 Resource based view

The other most prominent perspective on the role of the board is the resource-based view (RBV). According to the resource-based view, it is the job of the board to attract and obtain external resources for the firm (Pfeffer and Salancik, 1978). The RBV maintains that the board is an important link between the firm and the resources needed to perform at a maximum level (Pfeffer and Salancik, 1978; Madhani, 2017). Hence, the board is vitally important because of how it links the firm to the external environment. According to the resource-based view, the composition and structure of the board can be viewed as a response to the firm's external environment (Hillman et al. 2000).

In the resource-based view, the board is a valuable asset, which can add value to the firm (Zhou, 2018). Dalton and Daily (1999) theorise that board members supply strategic resources, networking, and information which help to offer a long-term sustainable advantage to firms. The directors themselves are resources as they are involved directly in decision making which affects the profitability and value of the firm. The value of the directors is correlated to the access to the valuable resources and knowledge that they can bring to the firm (Gales and Kesner, 1994). The resources that board members bring to a firm are wide-ranging and often unique. As a unique source of knowledge, directors can create a sustainable, competitive advantage for firms. The expertise the board of directors can bring to a firm, ranges from business and financial sector knowledge (Kakabadse et al., 2001) to strategic expertise (Golden and Zajac, 2001) and governance knowledge (Khanna and Palepu, 2004; Madhani, 2017).

Moreover, from the resource dependency perspective directors can signal legitimacy and prestige to their external environment, creating value for the firm (Pferer and Salancik, 1978). It follows from the resource dependence perspective that it is of value to the firm to recruit well connected board members who possess industry specific knowledge. Under this view, the board can be viewed as unique, tacit, and socially complex (Hart, 1995).

To conclude, there exists a complex relationship between the board of directors and the firm. Scholars have posed multiple theories to explain the relation of the board as part of a wider corporate governance mechanism to outcomes at the firm-level. It is clear that the board of directors performs several functions for the firm simultaneously (Madhani, 2017). The diverse theories proposed by

scholars demonstrates the difficulty of producing on theory which is valid for any time and situation (Madhani, 2017), and is indicative that the role and function of the board must be properly contextualised. The theory which fits a situation best, is likely the result of the interaction of a range of variables, from factors specific to the firm and the directors themselves, but also the social norms of where a firm is situated.

2.4.2.3 Stewardship theory

A third perspective through which to understand the role of the board of directors is Stewardship theory. Stewardship theory was introduced to the management literature by Davis, Schoorman and Donaldson (1997) as a response to agency theory. While the agency theorists argue that managerial actions often depart from those required to maximise shareholder returns (Berle and Means 1932; Pratt and Zeckhauser 1985), stewardship theory poses that stewards, in this context management, are motivated to act in the best interests of their principals, the shareholders (Donaldson and Davis, 1989). The theory broadly suggests that agents can be good stewards of the firm, and if entrusted, will act in the best interest of the owners (Davis et al, 1997). The theory poses that given a choice between self-serving behaviour or pro-organisational behaviour, a stewards behaviour will not depart from the interests of the organisation. The theory is grounded in a psychological approach, which recognises that managers intrinsic need for achievement is fulfilled by performing to the best of their ability in their role. It follows that the stewardship perceives greater utility in cooperative rather than self-serving behaviour, and thus their behaviour can be considered rational (Davis et al, 1997).

It is motivation that is the biggest driver of differentiation between stewardship theory and agency theory. Agency theory views the directors as largely self-interested and financially motivated. Conversely, under the lens of stewardship theory, it is posed that the central motivation of directors is internal, for example the need for self-actualisation, achievements and progress. Because of these fundamental differences in motivation, differences also arise regarding the efficacy of corporate governance mechanisms when viewed through the lens of the stewardship theory. Advocates of the stewardship theories suggest that management is motivated if they have control over their work (Hernandez, 2012) and to extract the maximum benefit of a steward for the firm their autonomy should be extended, by governance mechanisms rather than focusing on monitoring (Davis et al, 2007). Conversely agency theory suggests that it is of most benefit to try and align the interests of the directors with the firm using often costly strategies – for example, ensuring the directors own a sufficient stake in the company. Stewardship theory has been critiqued that it does not realistically depict the way individuals think and behave (Chrisman, 2019). The theory fails to account for instances where managers do not act as good stewards (Madhani, 2017).

Summary

There exists a complex relationship between the board of directors and firm performance. Scholars have posed multiple theories to explain the relation of the board as part of a wider corporate governance mechanism to outcomes at the firm-level. The diverse theories proposed by scholars demonstrates the difficulty of producing on theory which is valid for any time and situation (Madhani, 2017). It is clear that the board of directors performs several functions for the firm simultaneously (Madhani, 2017).

This study examines the relationship of board social capital relative to firm performance. In the past scholars have generally tried to use either agency theory or resource dependence theory to explain the influence of social capital on firm performance. This research argues that to gain a full understanding of the influence of board social capital on firm performance, theories of corporate governance should be considered as complementary to one another rather than mutually exclusive. The theory which most readily explains the impact of board social capital on firm performance is likely contingent on a number of factors – one of such factors being the firms external environment.

2.5 Board social capital and outcomes for the firm

2.5.1 How social capital influences the firm: theory

The last section served to provide a broad outline of the relation and role of the board of directors to the organization. Following that discussion, I now analyse how the social capital of the board of directors may affect their performance. I start by outlining the two main theories of how board social capital influences the firm. Subsequently, I review the empirical literature on the relationship between board social capital and firm-level outcomes.

Resource dependence view of board social capital

There are two main theories of how board social capital influence outcomes for the firm. The resource dependence perspective is the dominant theory as to why board social capital may be beneficial to firms. Resource dependence scholars characterise the firm as an open system, which depends upon reciprocal exchanges with other firms to procure critical resources (Pfeffer & Salancik, 1978; Davis & Cobb, 2010; Hillman et al., 2009; Wry, Cobb, & Aldrich, 2013). Resource dependence scholars take the perspective that a critical function of the board is to provide resources for the firm (Boyd, 1990; Daily and Dalton, 1994; Gales and Kesner, 1994; Hillman and Dalziel, 2003). Within this theory, resources are defined broadly as "anything that could be thought of as a strength or weakness of a given firm" (Wernerfelt, 1984, p. 172).

Pfeffer and Salancik (1978) laid the foundations of the resource dependence theory, they state that: “when an organisation appoints an individual to a board it expects the individual will come to support the organisation, will concern himself with its problems, will variably present it to others, and will try to aid it” (Pfeffer and Salancik, 1978, p. 163). According to Pfeffer and Salancik (1978), boards provide four primary benefits: (a) information in the form of advice and counsel, (b) access to

channels of information between the firm and environmental contingencies, (c) preferential access to resources, and (d) legitimacy (Hillman et al, 2009). These benefits have since been robustly supported within the empirical literature in a number of different contexts (Hillman et al, 2009).

Each of the four proposed benefits of the resource dependence theory have a clear resonance with director board social capital. Board social capital has been shown to provide increased access to advice and counsel. For example, Connelly et al (2011) demonstrate this in the context of firm expansion - directors with ties to firms which have already expanded into China are able to replicate some of the strategies in the focal organisation which improves the success rate of the focal firms. Moreover, scholars have found that directors with greater social capital are able to provide a channel for communication back and forth between the external environment (Carpenter and Westphal, 2001; Barosso-Castro, 2016). Board social capital has been shown to improve access to resources; indeed, it has been demonstrated that directors with ties to private equity deals will increase the likelihood of private equity deals for the focal firm (Stuart and Yim, 2010). Board social capital has also been shown to improve the perceived legitimacy of decisions made by boards connected to other established firms (Kiel and Nicholson, 2006). In summation, the resource dependence theory offers a thorough explanation of the advantages of board social capital. As documented, many of the initial empirical studies into board social capital have supported this theory - these will be discussed in more depth latterly.

Agency view of board social capital

Monitoring management is well established within corporate governance literature as a key role of the board. Specifically, it is the responsibility of the board to monitor managers on behalf of the shareholders — Agency theory details how this structure can lead to potential conflicts due to the separation of ownership and control in organisations (Berle and Means, 1932). Agency theorists view the primary function of boards to be the monitoring management, "the agents", in order to protect the interest of the owners, the "principals" (Eisenhardt, 1989; Hillman and Dalziel, 2003).

The agency perspective on board interlocks posits that, given the opportunity, board members will act on their own private interests rather than in the best interest of shareholders - this generates agency costs such as reduced performance (Jensen & Meckling, 1976). According to this theory, directors are self-interested and will act accordingly when the environment allows. Connections to different boards through interlocks will create pressure on the directors to conform to the norms and values of their elite social group / informal network (Koenig and Gogel, 1981; Windolf and Beyer, 1996), subsequently directors will be increasingly concerned with cohesion within their social group, potentially at the cost of performing their director/monitoring duties with the expected rigour.

In a literature review of agency theory, Dalton et al (2007) find that interlocks inhibit effective monitoring. If two separate directors are both on the board of firm A and firm B this may cause an independence problem. Such a problem is furthered if these board members are CEOs of their respective companies. In such a scenario, directors may be less likely to monitor effectively as they try to maintain their own social status and network cohesion (Zona et al, 2018), ultimately serving the needs of the CEO rather than the shareholders (Core, Holthausen, & Larcker, 1999).

Because of impaired monitoring, created by the agency problem, board interlocks may have a range of negative consequences such as: to heightened CEO power (Fich & White, 2003; Finkelstein, 1992), increased executive pay (Geletkanycz, Boyd, & Finkelstein, 2001), and takeover defence tactics, such as poison pills (D'Aveni & Kesner, 1993; Davis, 1991). This leads to a conclusion amongst scholars of the agency perspective, that that board social capital reduces firm performance (Fich, 2005; Perry & Peyer, 2005; Rosenstein & Wyatt, 1994).

Over-boarding theory of board social capital

A key marker of board social capital is connections with other firms. Sitting on too many boards simultaneously, sometimes referred to as "over-boarding" (Harris and Shimizu, 2004; Ocasio, 1997), is another theory of why board social capital might have a negative influence on firms. Given that directors have a limited amount of attention and time, the increased responsibility which comes with sitting on multiple boards means that it the attention given to each individual post is reduced (Finkelstein and Mooney, 2003; Harris and Shimizu, 2004; Kor and Sundaramurthy, 2009). In sum, this may lead to a failure to properly govern as the director does not have enough time and attention to devote fully to multiple organisations they serve.

Board social capital and collusion

The collusive potential of interlocks also has potential implications for firm performance. It is widely believed that board interlocks may have the *potential* to facilitate corruption; however, there is a lack of good evidence for this happening. Fear of the collusive potential of interlocks led to the 1914 Clayton Act in the United States which made interlocks among competitors illegal. Despite the long-standing US legislation, in the European Union, interlocking directorships between competitors are still generally allowed. Buch-Hansen (2014) reviewed the existing literature which links interlocks to collusive activity and concluded that the evidence for collusion actually taking place was weak. Given the lack of existing evidence of collusion taking place through interlocks it is unknown the extent to which it might have an influence on firm performance

2.5.2 Empirical evidence: board social capital and firm performance

The empirical evidence on the effect of board social capital on firm performance has been mixed. It is important to differentiate between the different ways in which board social capital has been

measured in the literature and also the various proxies used to capture differences in firm performance. I analyse the extant empirical literature, differentiating between 'external' and 'internal' board social capital.

2.5.2.1 External board social capital and firm performance

Using a panel data from non-financial firms listed on the Oslo Stock Exchange Bøhren and Strøm (2010) find that there is a strong and positive link between board social capital and firm performance. Their measure for board social capital takes account of the information centrality concept, and measures both direct and indirect links board members hold with other firms. Moreover, they measure firm performance in three ways, Tobin's Q, return on assets and return on sales. The relationship between interlocks and performance is significant for both the proxy of Tobin's Q and return on sales. Kim (2007) also found a positive relationship between Tobin's Q - a widely used measure of firm value - and director social capital, using time-series data and a sample of 473 Korean publicly traded companies. However, rather than examining the impact of director interlocks, Kim investigated the potential value of social capital generated by membership in external economic associations, affiliation with government institutions, and Elite School Network. All three of the social capital proxies were positively and significantly linked to higher firm value. Interestingly, Ferris et al (2003) ask the reverse of this question - does firm performance influence the number of boards which the directors sit at? They claim to find support for their hypotheses that higher firm performance leads to a higher number of directorships. The causality of the claim, however, is questionable given that they use cross-sectional data from 1995, and many subsequent studies have found the reverse to be true using panel data.

In a longitudinal sample of U.S high technology firms, Kor and Sundaramurthy (2009) find that when outside directors have multiple board memberships, firm growth, calculated as the increase in percentage of annual sales, is increased. Firm growth is a unique choice of measure within the literature. It is perhaps questionable given that it does not accurately reflect a firm's ability to achieve profitability or an increase in overall firm value. Moreover, as it only measures profitability, it does not reveal how interlocks have influenced the board's ability to monitor management and the rise or fall of costs.

Unlike other studies in this domain, rather than measuring the influence of social capital on performance Carpenter and Westphal (2001) examine how external network ties determine a board's ability to contribute to the strategic decision-making process. The dependent variable here is not performance but rather directors perceived ability to contribute. The research shows that board ties boost perceived ability of individuals to contribute to decision making when then the firms are strategically related. The study was conducted through surveys, and interestingly it shows that director's themselves value interlocks as a valued source of knowledge.

There is also significant evidence that board social capital may have a negative influence on firms. Typically, papers which find a negative relationship use the agency perspective as their theoretical underpinning. In a sample of the 125 largest, non-financial Korean firms, Lee, Choi and Kim (2012) find support for their hypotheses that outside directors' social capital has a negative impact on return on assets. Rather than using interlocks as a measure of social capital they instead measure social capital by assessing if directors went to the same school or university. This measure is problematic - it does not account for the different times that directors may have gone to the same school or university; therefore, it is not a definite indication that a personal or professional relationship exists. The paper omits other, more established, methods of measuring director social capital such as interlocks.

Jackling and Joh (2009) test the resource-dependency theory expecting to find a positive relationship between interlocks and performance. However, contrary to their hypotheses, they find a statistically significant, negative relationship between interlocks and both return on assets and Tobin's Q. Given that this result was derived from an exclusively Indian sample, it is possible that the high proportion of family run businesses will have in some way inhibited the social capital and networking benefits normally attained from board interlocks. Similarly, Devos et al (2009) find a correlation between a greater number of interlocks and lower performance when measured by return on assets and Tobin's Q. Moreover, they find that markets tend to react negatively to the announcement of directors who are appointed when those directors are interlocked to other firms. This supports the notion that investors view interlocks negatively, and that they perhaps indicate weak monitoring and entrenched management.

In a panel of large U.S industrial firms from 1989 to 1995, Fich and Shivdasani (2006) find that organisations where 50% or more of the board are interlocked to 2 or more firms, have lower return on assets and lower return on sales. Through analysis of longitudinal data, the study casts doubt on the notion that poorly performing firms are more likely to appoint more directors suggesting that the causality is the inverse - multiple interlocks lead to poor performance. They attribute the poorer performance to boards members being too busy to function properly.

2.5.2.2 Internal social capital and firm performance

The influence of the board's internal social capital on firm performance is the youngest strand of board social capital research. Internal social capital should foster trust between board members; trust is vitally important given that boards are groups (Finkelstein and Mooney, 2003). Trust allows a group to function effectively, and it is essential in allowing group members to share information with each other.

In a sample of US public companies, Stevenson and Radin (2009) found that based upon survey responses, the existence of prior and strong current relationships to those on the same board was a better predictor of influence than human capital. This demonstrates that personal relationships within the context of the board determine the outcome of decision making and the influence that individuals have within the board. This is a good indicator of the importance of this type of social capital research. More recently, Barosso-Castro et al (2016) have investigated the phenomenon of internal board social capital. They pose that external and internal social capital must be studied together as internal social capital has a moderating effect on external social capital.

Some scholars have theorised that too much internal social capital may have negative consequences in some settings (Kim, 2005; Reagans and Zuckerman, 2001). When there is too much internal social capital, there is a chance that group members become overly-close, to a point where the group becomes cliquey, and there is a lack of criticality. Barroso-Castro et al (2016) posit that this seems unlikely in the context of boards given that boards only meet relatively few times a year so there is not enough time for such a high level of internal social capital to be generated. As it stands, there is a lack of any good evidence that internal social capital has a direct, negative influence on firm performance.

2.5.2.3 Research which finds mixed evidence

It is clear from the literature that there are two primary schools of thought when it comes to board social capital - one which promotes its benefits and the other which views it as a hindrance to firm performance. As of yet, it is unclear why there lie two starkly opposing groups of studies which have each found the direct opposite in their empirical results. The opposing sets of results and the supposed unreliability of board social capital to act as a predictor of firm performance has been a criticism of research in this field. Recently, a small number of more nuanced papers, chiefly, Zona et al (2018) and Barroso-Castro et al (2016), have been developed that go some way to reconciling these competing perspectives. By taking account of interaction terms, they have conducted empirical work, which may partially explain the disparity in findings on the effect of interlocks on firm performance.

Barroso-Castro et al (2016) find that within a sample of Spanish firms, interlocks are useful up to a certain point where the negatives then outweigh the benefits. This curvilinear relationship between interlocks and performance is moderated by what they term ‘internal social capital'. Internal social capital refers to the relationships and trust between members of the same board. Barosso-castro (2016) theorise that internal social capital is built up by the time directors spend working together, i.e. how long they have served on the same board. An increase in internal social capital is theorised to improve working relations - directors who trust one another are more likely to freely exchange important information and knowledge (Kim and Cannella, 2008; Offstein et al., 2005). Ultimately, Barosso-castro et al (2016) find evidence that internal social capital moderates the effects generated

by interlocks on the firm's performance. Internal social capital intensifies the benefits of interlocks when its level is low and reduces the adverse effects caused by an excess of external social capital.

Zona et al (2018) similarly take account of potential interaction variables and find that within a sample of Italian firms, board interlocks may exert either a positive or a negative effect on firm performance. This is dependent mainly on the firm's relative resources. Board interlocks increase firm performance in resource restricted firms, especially in cases where the ties link them to resource-rich firms. They also find the reverse of this is true, that interlocks decrease the performance of the resource-rich firm when the interlocked partners are resource constrained. Taking firm's relative resources as a moderator bridges the two normally competing perspectives on board interlocks – agency theory and the resource-based view - and gives an insight into why other papers may differ in perspective from one another. Combined, Barroso-Castro et al (2016) and Zona et al (2018) mark the first steps towards a better contextualised relationship between board social capital and firm performance.

2.5.3 Board social capital summary and analysis

My conceptualisation of board social capital within this thesis relates to the early theoretical work of both Bourdieu and Coleman. Bourdieu's conceptualisation of board social capital centres around the resources which are attained from institutionalised relationships or membership of a group. The emphasis that Bourdieu places on institutionalised relationships which are derived from membership of a group echo the emphasis placed on the formalised social capital in my own research. One way this manifests is in my operationalisation of board social capital. Rather than focusing on informal social relationships, i.e relationships with friends or neighbours, my research focuses on institutionalised relationships, specifically, corporate board interlocks. Bourdieu's focus on resources also resonates with the resource-based view of board social capital which is central to this research. In this thesis social capital is viewed as the resources available by virtue of corporate relationships. A central proposition of this research is that board social capital leads to increased firm performance. This is again concurrent with theory of Bourdieu who states that social capital, like other forms of capital, leads to economic capital.

Where my conceptualisation of social capital differs from Bourdieu is that I focus on outcomes for the group, in this case the firm, rather than the individual. The focus on groups and in particular networks align with Coleman's view of social capital. Within my research, while I measure the social capital of individual directors, this is aggregated to the board (group) level and outcomes are also measured as the level of the firm (group) rather than that of the individual director.

While the classical theoretical literature which laid the groundwork for the roots of the concept of social capital scholars have understood the concept by categorising its various forms. Most notable of all the social capital conceptualisations is that of Putnam. Putnam differentiates between what he terms ‘bonding’ and ‘bridging’ social capital. While bonding social capital is social capital exists between those of the same group; bridging social capital joins those who are in separate groups. Board social capital in my own research is measured as director interlocks, or external directorship ties as it is sometimes known. As my conceptualisation of board social capital focuses on social capital as a resource which ties directors to those outside of the organisation, my research follows the bridging perspective of social capital rather than the bonding view.

As discussed in section 2.2.2, definitions of social capital commonly revolve around one or more of the following three elements: networks (of families, friends, communities, groups), norms of reciprocity (shared norms, values, and behaviours) and trust (in other people and institutions). My view of social capital revolves primarily around the social network component of social capital. More specifically, I focus on the formal and institutional networks. Such a conceptualisation of social capital deviates from the view of social capital posed by scholars like Woolcock (1998) and Putnam (1995) who focus on trust and reciprocity as central aspects of social capital, and instead follows the definition of social capital posed by Gabbay and Leenders (1999, p.3):

> “Social capital is the implicit and tangible set of resources available, by virtue of individual relationships, to assist a corporate player in goal attainment.”

As stated in section 2.3 this definition is appropriate for this research for three central reasons. First the definition recognises that board social capital has an impact on the corporate player, in this case the firm. Second the definition states social capital is a resource which can be used to attain an advantage– this resonates with the resource based view of social capital posed in this research. Third, the definition recognises that social capital is embedded in relationships, i.e the interlocks between directors (Nicholson et al, 2004). One caveat is that the definition does not specify whether the relationships through which the resources are available are informal/social or formal/institutionalised. My research focuses solely on formal relationships which occur through director interlocks.

This type of formal board social capital is distinct from other forms of social capital a board may accumulate. There are three fundamental ways which is different from other forms of board social capital. First, it focuses on relationships with those outside of the firm. This is in contrast to what is termed as ‘internal social capital’ (Barroso-Castro et al, 2016), which considers the relationships between directors on the same firm. Second it considers only relationships to firm directors rather than relationships to other stakeholders like other firm employees, shareholders, or government

officials. Finally, this type of social capital is distinct from other forms of social capital as it considers only relationships with other directors which exist through an institutionalised connections, i.e board interlocks.

I focus on the formal board social capital of the board rather than other forms of social capital or relationships an organisation may accumulate for three reasons. First, this study is situated within the corporate governance literature and considers the influence of informal institutions on the effectiveness of the board of directors. As the thesis is concerned with how informal institutions and social norms influence the efficacy of corporate governance mechanisms, it is important to study the social capital of the board of directors rather than the firm itself.

Secondly, by focusing on external social capital, I focus on connections to those outside the firm. This is congruent with the resource-based view of board social capital which considers how directors forge links with the firm's external environment, enabling greater access to knowledge and resources.

Finally, focusing on other forms of board social capital, formal or informal, is very challenging due to the availability and completeness of the data. My thesis includes 37,109 firm-year observations on firms and their respective boards spanning 57 countries. There is not available or complete data on other forms of social capital, for example, directorships friendships, past working relationships, political connections, or club membership. Such data would likely need to be hand collected and it would be very difficult to verify the completeness or the accuracy. Moreover, while likely that directors may share friendships with directors of other firms, this does not consist of a working relationship and likely does not manifest in the same level of knowledge sharing. Similarly, as it is not formally recognisable to others, the reputational benefits that occur from such a relationship are likely not as great or at least of a different type.

2.5.4 Research gap and intended contribution

In recent studies, the introduction of interaction variables, like internal social capital and relative firm resources, have added a more nuanced perspective to the literature. However, it remains somewhat unclear how studies arrived at different conclusions as to the effect of social capital on organisational performance; particularly as many of these studies follow similar research designs and have used the same variables to measure both social capital (board interlocks), and firm performance (Tobin's Q, return of assets). One potential reason that the study's results are discrepant is that they focus on different contexts for example: 72 United States high technology firms (Kor and Sundamurthy, 2009) or 145 Italian manufacturing firms (Zona et al, 2018), 125 large Korean firms (Lee, Choi and Kim (2012). As the the past literature commonly focuses on single country, single industry studies the impact of the firm's national environment has been ignored. It is possible that the businesses

environment, and national informal institutions influence the relationship between board social capital and firm performance. By taking a larger multinational sample my research design allows me to tease out why board social capital may have different effects in different contexts. In particular, I look at how informal institutions may shape the relationship between board social capital and firm performance.

Within the wider corporate governance literature, two main paradigms have emerged when it comes to the level of analysis (Kumar and Zattoni, 2013). The first of the two tend to focus solely on country-level variables, while the second focuses exclusively on firm-level variables. These two separate levels of analysis have rarely been merged, and there is still little understanding of how they might interact. Scholars who focus on the country level view, generally build their arguments on the grounds that countries have unique formal and informal institutions which have a strong influence on the way in which organisations are run and governed (Kumar and Zattoni, 2013). Studies which follow this stream of research have been duly criticised on the grounds that they are over-contextualised and ignore variables specific to the firm (Kumar and Zattoni, 2013) - clear precedence is given to the context in which these firms operate rather than the factors unique to individual firms. The second stream of research takes the opposite view, analysing firm-level variables related to corporate governance while ignoring the national context, and country-specific variables. In contrast, such studies build an under-contextualised view of corporate governance, ignoring the national environment. It is clear that there is a need for studies which bridge this gap and there has been a call within the literature for studies which recognise the coexistence both micro and macro-level variables in corporate governance research (Bamberger, 2008; Minichilli et al, 2018; Kumar and Zattoni, 2019; Stathopoulos and Talaulicar, 2020). Addressing theoretical specificity in management research, Edward and Barry (2010) duly criticise the extant management that the majority of the time there is no consideration of the conditions which may influence the hypothesized relationship.

This trend within the wider corporate governance literature is also present within literature on board social capital. To my knowledge, all of the existing studies on board social capital focus exclusively on single country contexts. By default, the potential impact of country-specific variables, have been omitted from the analysis as. In a systematic review of board interlocks, Lamb and Roundy (2016), identified that 75% of all the articles which were identified on interlocks used companies solely from the U.S. No country other than the U.S was identified as being the focus of more than two studies. The lack of cross-national studies which take account of the national context as a potential influence on the relationship between board social capital and performance represents an important gap in our understanding of the efficacy of corporate governance mechanisms.

Researchers in this field have studied firm-level variables and board characteristics but ignored the firm external environment, making the implicit assumption that institutions or social norms do not

influence the effectiveness of the board (Zattoni et al, 2020). This research gap is significant, as it is clear that both firm-level variables and the firms external environment interact to influence outcomes for the firm (Kumar and Zattoni, 2019; Stathopoulos and Talaulicar, 2020), but we do not yet know how. Taking a longitudinal, cross-national sample of firms will allow for an initial insight into how the relationship between firm social capital and firm performance may interact with country specific-variables and give us a better idea of the causal mechanisms driving these differences. The addition of interaction variables helps to better specify the conditions under which the hypothesised relationship is found.

This research aims to provide an initial understanding of how the wider business and social environment, in part, determines the impact which board social capital has on firm performance.

The first study examines how corruption and generalised trust influence the relationship between board social capital and firm performance. There is clear rationale to study both corruption and generalised trust relative to social capital. Corruption is a cultural trait and a social norm. Corruption is a disruptive force, which subverts moral norms - presenting the board of directors with unique challenges. Similarly, the level of generalised trust is revealing of social norms within a country and is thought to influence corporate practises.

2.6 Conclusion

In the first section of the chapter, I introduce the origins of the social capital concept and how it has been defined and categorised by social capital theorists. In the second section, I define and discuss the concept of organisational social capital and analyse the various forms of social capital organisations may accumulate. I then define the term board social capital and provided an over-view of how the construct has been measured in past empirical research. In the third section I discuss the role of the board of directors and the principal theories of corporate governance – this lends context to the discussion of board social capital. In section four, I review the concept of board social capital and theoretical perspectives of how it influences outcomes at the level of the firm. I have aimed to demonstrate the key arguments and theory surrounding how board social capital might have a reliable on firm performance. In addition to an overview of the theoretical arguments, I have provided a thorough analysis of the existing empirical literature, differences in methodology and the often-contrasting results. Finally, I identify important gaps in the literature, most notably the absence of any research which attempts to use the firm’s external environment to contextualise the relationship between board social capital and firm performance.

3 Chapter 3 – Study 1: Board social capital and firm performance – the role of country-level corruption and generalised trust

3.1 Introduction

This chapter addresses the relationship between board social capital and firm performance in a cross-national sample of firms, while taking account of the interaction effect country-level corruption and country-level generalised trust.

The first section of this chapter addresses the concept of corruption. I discuss how researchers have categorised the various forms which corruption takes before defining the term. I then discuss the various measures of corruption employed within the empirical literature. I also discuss the difficulty of measuring corruption at the cross-national level, and the implications of relying on a measure of perceived corruption rather than a direct measure corruption itself. The section then addresses the effect of corruption on outcomes at the firm-level before I finally formulate hypothesis regarding the relationship of board social capital, country-level corruption (measured using perceived corruption) and firm performance.

The second section of this chapter provides discourse on generalised trust. I define generalised trust before discussing the theory which underpins the concept. Next, I discuss how generalised trust is measured in the extant literature. Subsequently, I analyse literature which attempts to formulate a causal link between generalised trust and business outcomes. Finally, I formulate and present hypotheses on the relationship between board social capital, generalised trust and firm performance.

In the third section, I outline my research design. This starts by discussing my approach to sample selection and data collection procedures, before then discussing variable measurement, the empirical research model, and statistical and econometric issues.

The final section starts by providing descriptive statistics and correlation coefficients. I then present and discuss the results of my multivariate analysis including the main results and sensitivity tests, before concluding the chapter.

3.2 Corruption

Corruption is a complex phenomenon; it comes in a variety of forms and innumerable contexts. The causes and effects of corruption emerged as a topic of academic research over twenty years ago. This body of research has proliferated as our understanding of corruption has advanced - research now

tends to look at the structural, cultural, and economic roots of corruption rather than viewing it purely as a moral failure (Lopez and Santos, 2014).

This section of the literature review will first evaluate how scholars have chosen to conceptualise different types and forms of corruption. I then provide a comprehensive assessment of the multiple definitions of corruption, with a view to arriving at a working definition which is compatible with my research objectives. Subsequently, I provide a comprehensive assessment of the multiple definitions of corruption, with a view to arriving at a working definition which is compatible with my research objectives. I then examine how corruption has been operationalised within the literature. This discussion will then lead on to the formulation of hypotheses of how corruption interacts with relationship between social capital on firm performance.

3.2.1 Typologies of corruption

Scholars have frequently delineated between different forms of corruption. In this section, I provide an overview of the most prominent corruption typologies. It is essential that research which addresses corruption recognises the diverse forms in which it presents. Recognising corruption as a heterogenous phenomenon which exists in a number of distinct manifestations is essential for analysis as it allows researchers to specify which type of corruption they are addressing. Outlining first the various typologies of corruption, lends context to the following section, allowing for the definitions to be categorised by the type of corruption which they address.

In his book Republic Lost, Lessig (2011) distinguishes between "venal" and "institutional" corruption. Venal corruption involves actors who know what they are doing is illegal or/and immoral and are aware that they must conceal their activities (Lessig, 2011). It is common to find venal corruption defined as a public sector phenomenon (Wallis, 2006), for example, politicians who deviate from proper behaviour to accumulate private gains. However, venal corruption can also take place in the private sector, for example, when business cheat their shareholders, employees, or customers by knowingly violating laws (Youngdahl, 2017). Alternatively, institutional corruption, is less visible but often more problematic. Although generally not illegal, it involves systemic gaming of societies' rules (Youngdahl, 2011). Lessig (2013, p.553) states:

> "Institutional corruption is manifest when there is a systemic and strategic influence which is legal, or even currently ethical, that undermines the institution's effectiveness by diverting it from its purpose or weakening its ability to achieve its purpose, including, to the extent relevant to its purpose, weakening either the public's trust in that institution or the institution's inherent trustworthiness".

An example, of institutional corruption, is the tax avoidance strategies of corporations such as Apple and Starbucks (Youngdahl, 2017). Although technically legal, most would agree that aggressive tax avoidance underpinned by sophisticated legal and financial strategies violates the intent of the law and public trust. Together, venal and institutional corruption subvert moral norms and erode trust. In countries where corruption is prevalent, ethical decision making and the principles for judging actions become distorted.

The distinction between venal and institutional corruption bears some similarities to Zyglidopoulos (2016) delineation between first and second order corruption. Zyglidopoulos (2016, p. 1) states:

> "First-order corruption is the abuse of power by either individuals or groups for private gain given a system of existing rules or norms, whereas second-order corruption is the abuse of power by individuals or groups in that they change the existing rules or norms to unfairly benefit from them."

This is an important distinction. It shows why a strict definition of corruption as a deviation from formal rules is too limited in scope to effectively assess corruption. Those in power can unfairly change or write rules in order to facilitate their own engagement in corruption. Ultimately, second order corruption is more deleterious to society than first order as it can also be concealed behind complex rules and processes or even laws which makes detection and eradication very difficult (Zyglidopoulos, 2016).

Corruption can also be broadly categorised based on what is being exchanged, in this view, corruption is either economic or social. Economic corruption involves the exchange of cash or material goods in a market like situation (Andvig & Fjeldstad, 2001). This is a constricted perception of corruption as it excludes anything out with a material bribe. Social corruption, or social exchange, on the other hand, is a more all-encompassing way of viewing corruption. Social corruption can be viewed as an embedded element of clientelism (Andvig & Fjeldstad, 2001). While clientelism may involve an exchange of cash or tangible assets, it is not limited to this alone, as it takes on a wider cultural and social significance. Any form of unjust favouritism, be it grounded in on nepotism, ethnicity or other grounds are all variants of social corruption (Medard, 1998).

Perhaps the most common categorisation of corruption is the distinction between grand and petty (Meehan and Tacconi, 2017). The distinction between grand and petty is the scale of the transactions. For example, large-scale embezzlement or bribery, which would likely be associated with the upper tiers of government or the upper management of large organisations constitutes grand corruption. On the other hand, petty corruption occurs at a smaller scale. It often occurs in the form of relatively

small but illicit payments to low-mid level public officials by citizens in order to speed up the delivery of services and avoid fines.

3.2.2 Definitions of corruption

The search for a conceptually robust definition of corruption has troubled scholars for decades and there exists an ever-growing number of definitions for corruption, which vary significantly. The lack of one, standardised definition of corruption is indicative as to wide-ranging perspectives on what corruption is. To evaluate definitions of corruption, I split them broadly by the themes outlined in the previous section using past scholars' typologies of corruption.

Nye (1967, p.416) provides one of the most frequently cited definitions of corruption: "behaviour that deviates from the formal duties of a public role (elective or appointive) because of private-regarding (personal, close family, private clique) wealth or status gains." Nye's definition refers exclusively to the role of public officials and hence does not apply to the private sector. His focus on formal roles is also worth noting. It is possible that formal rules or duties, could be altered in order to benefit privately – this has been conceptualised as second-order corruption (Zyglidopoulos, 2016). Nye's definition does not take account of this and therefore excludes second-order corruption. Moreover, the definition excludes violations of norms as typically norms are not formally recognised. The definition is not useful in many contexts, particularly in nations where there is a lack of formal rules for public officials or formal rules are either already skewed in favour of those in power.

Some definitions of corruption are theoretically underpinned the principal-agent problem (Rose, 2018). In reference to corruption, Klitgaard (1988, p. 24) "in terms of the divergence between the principal's or the public's interests and those of the agent or civil servant: corruption occurs when an agent betrays a principal's interests in pursuit of her own." The problem with this definition is the ambiguity of betrayal (Philp, 2014). What exactly constitutes betrayal is very much open to interpretation and will be influenced by a range of different factors including social and cultural norms – because of this, the definition is not robust or useful for the cross-national study of corruption.

The World Bank, state that: "corruption is the abuse of public power for private benefit (or profit)". This definition is relatively broad in the sense that 'private benefit' could be interpreted in a number of ways and is not limited to the direct gain of cash or material assets. However, the definition refers exclusively to public-sector corruption. As this research considers the effect of corruption on outcomes for for-profit firms, the definition is to narrow in scope for these purposes. There are a number of widely cited definitions which are less specific and encompass both public and private sector corruption. Anand, Ashforth, and Joshi (2004) define corruption as "misuse of an organisational position or authority for personal gain" (p. 40). This definition suffers from the lack

of specificity as to what actually constitutes misuse. Moreover, it is left unsaid who gets to determine exactly what is misuse. Under this definition, you could argue that an employee making a personal call or browsing the on company time be deemed a misuse of their position and therefore corruption.

The most common of the definitions in this vein is by Transparency International (2017) who state that: "the abuse of entrusted power for private gain," Criticisms of this definition include that it infers that there is some ideal use of "entrusted power" which beckons the question of how far must one go before it becomes "abuse" (Rose, 2018). Rose (2018) argues that within the definition the use of "entrusted power" is also problematic as it excludes instances where power is taken by force rather than entrusted, for example, in North Korea.

Ultimately, a completely robust definition of corruption remains elusive – this is perhaps inevitable given that there is not full agreement as to actually what constitutes corruption as a concept. Indeed, scholars must choose a definition which suits the type or types of corruption they want to study, which is suited to both the relevant unit of analyses and broader context. For the purposes of this research, I will follow the definition of Transparency International (2017): "the abuse of entrusted power for private gain,". This is in keeping with the view that will be proposed in this research, which is that at the crux of the concept of corruption is a power or authority which is abused. Transparency International's definition does not refer solely to corruption in terms of the state but could equally be applied to private sector organisations. This is important given the scope of the research is to include private and public corruption. The definition also makes clear that the person abusing the power is engaging in actions that go beyond their position. Moreover, the person is benefiting in some way privately at the cost of the organisation. It is essential that the definition is not overly narrow because there is much variation within the phenomenon of corruption, particularly when considered at an international level. What is considered ethical business practice varies significantly across nations (Okleshen and Hoyt, 1996), as cultural and social notions of loyalty, trust and morality influence how the act of corruption is perceived (Vogel, 1992).

3.2.3 Antecedents of corruption

Understanding the antecedents of corruption, allows us to understand the environments where corruption flourishes. The understanding of the multiple factors which allow for corruption to take place subsequently allow for a better understanding of the mechanisms of how corruption influences the relationship between social capital and firm performance. Once viewed primarily as the result of moral decay, scholars have now a broad indication of the factors which may give rise to corruption. These factors are many and varied. Research utilising the perceived level of corruption has been fruitful in its attempts to determine the country-level variables which may lead to corruption.

Having free press is thought to deter corruption effectively. The logic for this is people are more likely to commit corrupt deeds when the chances of getting caught are lower. A free press, of course, acts as a deterrent by shining a light on past cases of corruption and thus discouraging other potential actors from engaging in it. Moreover, a free press itself may allow journalists to act to uncover corruption themselves giving increasing the chances of corruption being detected and again helping to deter people from committing the phenomenon. Over time, multiple studies have used regression to support this claim (Chowdhury, 2004; Freille, Haque, & Kneller, 2007). The most convincing of these is Freille, Haque, & Kneller (2007) who answer some potential criticism of the previous papers by using time-series data with multiple data points for each country. They show that restrictions to press freedom are robustly related to higher corruption while controlling for a number of other factors.

The judiciary system is also thought to influence corruption. Some studies have found that while controlling for a number of other factors, that the quality of the judiciary system has a positive and significant relationship with the level of perceived corruption (Ades and Di Tella, 1996; Brunetti, Kisunko and Weder, 1997). Corruption tends to be greater in countries where judicial institutions not independent of political influences or are not well developed (Ades and Di Tella, 1996) - this is likely a two-way relationship. Firstly, public officials feel like they are less likely to be caught because on the influence they can exert over the system and secondly, they are less likely to be deterred because of a lower prevalence of others being found guilty.

Democracy is also thought to hold an influence on corruption, but there has been some level of debate amongst scholars regarding the exact nature of the relationship (Harris-White &White, 1996; Treisman, 2000; Sung, 2004). Most quantitative empirical literature, which looks at cross-national trends in corruption typically finds a correlation linear correlation between democracy and lower corruption (Goldsmith, 1999; Sandholtz and Koetzle, 2000; Brunetti and Weder, 2003; Chowdhury, 2004), although Treisman (2000) is an exception to this rule. This could be read as showing the effectiveness of democracy in aiding in creating transparent and accountable governance. It is possible though that this is not a direct influence, however. Better functioning democracies are linked to higher wages (Rodrik, 1999). Given higher wages, there may be less motivation for public officials to turn to corrupt acts for personal gain (Van Rijckeghem and Weder, 2001). Secondly, democracy tends to lead towards a more prominent public sector, fuller employment and higher engagement in politics amongst the general public (Frey and Stutzer, 2001; Boix, 2001; Sung, 2004). A more engaged public is one that is more likely to monitor officials and ask for them to be held to account over corruption. Also, where there is higher employment and prosperity, corruption should generally decrease. Indeed, GDP per capita is the most robust predictor of perceived corruption. Notably, Treisman (2000) does not find a statistically significant relationship between democracy and

corruption while controlling for GDP per capita. This may be because democracy acts indirectly in increasing GDP per capita thus its significance is reduced.

The bureaucratic side of the state and its performance is another institutional determinant of corruption. Dahlström, Lapuente, and Jan Teorell (2012) find that: "meritocratic recruitment of public employees exerts a significant influence on curbing corruption even when controlling for the impact of most standard political variables" (pp. 65). The mechanism for this is that merit recruited bureaucrats, as well as elected politicians, will have different chains of interests. Politicians are accountable to voters, while bureaucrats to their professional peers - this increases the chance they will expose corruption by the other type. There is also an argument that merit-based recruitment will lead to a higher standard of staff and that this can reduce corruption (Evans and Rauch, 1996). Similarly, paying bureaucrats enough will curb their need or desire to engage in corruption to boost their earnings as their salary is already sufficient (Dahlström, Lapuente, and Jan Teorell, 2012; Rijckeghem and Weder, 1997).

Inequality is another antecedent of corruption. Inequality influences corruption through a number of mechanisms. Corruption is often viewed in terms of motivations and opportunities (Klitgaard, 1988; Rose-Ackerman, 1999). As income inequality increases rich people have comparatively more to lose through fair political and judicial processes. With greater resources, the rich also have more opportunity to influence through legitimate and illegitimate means – for example through bribery, lobbying or using connections. Inequality too means that the poor will be comparatively poorer. When the poor are poorer, and the middle classes are thinner, it is harder for these groups to organise and hold the rich to account (McCarthy and Zald, 1977; Tarrow 1994). Moreover, in high-inequality societies, the large numbers of poor are more likely to be deprived of basic public services such as education and health care than in low-inequality countries. Hence, they are more likely to rely on petty corruption or to be the targets of bureaucratic extortion in their efforts to secure basic services. Although the amount of their actual kickback payments may be small because of their limited ability to pay, the poor will perceive corruption levels to be very high and will come to see corruption as an appropriate form of behavior. Cooper et al (2013) quantify the negative effects of income disparity: for example, higher inequality decreases measures of well-being in the bottom 20 percent of earners. This causes a withdrawal from civic life, which has a cascading effect across all parts of the income distribution curve.

The bulk of empirical evidence supports a negative relationship between inequality and social capital (Costa and Kahn, 2003; Robison and Siles, 1999; Rupasingha, Goetz, and Freshwater, 2000; Uslaner and Brown, 2005). These findings also hold in cross-national studies. A key example is Knack and Keefer’s (1997) study of 29 market economies, which finds countries with greater economic equality have higher levels of trust and civic norms. Similarly, Hooghe et al (2009) found higher levels of

trust in European countries with more equal incomes. While there is strong support for a negative relationship between inequality and social capital, there is also some conflicting evidence. For example, Portes and Vickstrom (2011) find that the negative effects of inequality disappear when control variables are included for geographic region.

3.2.4 Measures of corruption

To understand the literature on how corruption influences outcomes at the firm-level, it is necessary to first understand how the concept has been operationalised within the empirical literature. The issue of measurement is fundamental within the literature, as it determines researcher's findings regarding the influence of corruption on firms and the wider economy. The earliest research on corruption was entirely theoretical (e.g Leys, 1965; Caiden and Caiden, 1977; Huntingdon, 1968; Leff, 1964; Rose-Ackerman, 1978), however, in the 1990s empirical research on the concept began to flourish with the introduction of data-sets on the cross-country perception based measures of corruption (Sequeira, 2012). Despite much recent work on the topic, the measurement of corruption remains a controversial issue - its clandestine nature means that there is predictably a lack of reliable direct measures. In this short section, I first outline the attempts which scholars have made to directly capture corruption before providing analysis of the dominant mode of capturing corruption at the country-level – perception-based measures, and the methodological and ethical issues associated with their use.

1.1.1.1. Direct measures

In rare instances where scholars have tried to capture corruption directly, avoiding the use of perception-based measures, they have used approaches such as conviction statistics (Glaeser and Saks, 2006) and field experiments (Winters & Weitz-Shapiro, 2012). These measures, however, are fraught with several problems both theoretically and practically. Conviction statistics are inherently problematic as they as they tend to measure the willingness and ability of law enforcement to prosecute rather than the prevalence of corruption. Moreover, some forms of corruption operate within the parameters of the law, for example, large corporations using aggressive tax avoidance schemes. Field experiments are also problematic given that they are difficult to conduct, particularly in Western nations where the prevalence of corruption is lower. The costs associated with field experiments which investigate corruption is also preventative.

1.1.1.2. Perception Based Measures

As corruption is very difficult or even impossible to capture directly with sufficient scale and reliability, the vast majority of corruption research has relied on a combination of expert-based indices and surveys of the general public. Common perception indices include the Corruption Perception Index, the Bribe Payers Index, the Global Corruption Barometer – all of which are produced by Transparency International (Heywood, 2015). Other indicators include the Business

Environment and Enterprise Performance Surveys (BEEPS) and the Control of Corruption element in the World Bank Group's Worldwide Governance Indicators (WGI). While these various indicators have undoubtedly helped to raise awareness of corruption (Heywood, 2015), as well as providing the backbone for much academic research which makes cross-national comparisons in corruption, these indices all come with many well documented methodological and ethical concerns.

Given the design of this study, I provide an outline of the perception-based corruption measures which provide continued global coverage of the phenomenon over the period of 2005 – 2015, namely the Corruption Perception Index and the Control of Corruption Indicator. Other perception-based measures of corruption do exist and are outlined in the table below, however, they do not fulfil the criteria of global coverage over the specified timeframe.

Table 2: Summary of Corruption Measures. Adapted from: OPM (2007)

Index/Survey Source	**Definition of corruption measured**	**Information Sources**	**Coverage**	**Interpretation**
Corruption Perception Index (CPI)	Perceived corruption (composite) and some measures of control	Statistical summary of expert assessments (e.g expatriate business executives, senior business leaders, and in-counrty experts)	Almost global – dependant on having sufficient sources. Annual though not all data sources annual.	Cross-sectional ranking of perception of corruption focusing on business environment
World Governance Indicator (WGI) / Control of Corruption Indicator (CCI)	Perceived corruption (composite) and some business and public opinion survey evidence and corruption control assessment	Statistical summary of enterprises, citizen and expert survey respondents. (Similar sources to CPI but with some survey evidence)	Almost global Bi-annual though not all data sources bi-annual.	Cross-sectional ranking of perception of corruption. Cross-sectional ranking of perception of corruption. Focus somewhat wider

				than business environment focus of the CPI.
Bribe Payers Index (BPI)	Perceived willingness of companies from different countries to pay bribes when abroad.	Business experts	28 largest exporting economies. Every 3 years from 1999 – 2011.	Ranking of perceived willingness to pay bribes in different countries.
World Bank Enterprise Survey WBES)	Bribe payments by firms	Surveys of businesses	62 countries, various years	Quantitative comparisons of bribe prevalence and cost
Business Environment and Enterprise Performance Survey (BEEPS)	Perceived corruption	Surveys of firms – quant and qual data	Around 12,000 enterprises in 29 countries from Eastern Europe and Central Asia	Assesses the ease of starting and conducting businesses in the follow
Global Corruption Barometer	General public's perceptions and experience of corruption.	Survey of general public	114,000 people in 107 countries Results annually	Expierience of corruption of the general public – suitable for comparisons over time.

The Corruption Perception Index (CPI) produced by Transparency International is the most widely used quantitative measure of corruption. As titled, the CPI measures the perceived level of corruption rather than reported or prosecuted cases involving corruption. The CPI, provides coverage of 180 countries around the world. It is a composite index, calculated using data from a number of institutions while taking into account previous CPI scores. The CPI has been running since 1995 and continues to publish data annually. Countries are each given a single score between 1 and 100, with greater scores indicative of lower levels of perceived corruption.

Similar to Transparency International's Corruption Perception Index, the World Bank created the Worldwide Governance Indicator (WGI), with its purpose being to improve on some elements of the CPI (Kaufmann et al. 1999). The Control of Corruption Index is built on similar foundations to the CPI – it does not represent the view of its founders rather it is an amalgamation of numerous other sources. Indeed, as the strategy of combining various sources is to create on corruption index is used both by Transparency International and World Bank. The WGI includes data on over 200 countries and territories over the period of 1996 – 2017. Moreover, it focuses on six dimensions of governance, one of which is 'control of corruption' – which they define as the exercise of public power for private gain. The WGI, weights each of the 31 sources based upon a number of factors, rating countries for each of the six dimensions, with scores ranging from -2.5 to 2.5. Moreover, the WGI provides annual updates, which is useful given the longitudinal nature of this research, and is designed to facilitate comparison over a sustained time-period.

While the CPI focuses on corruption in the public sector exclusively, the WGI examines both public and private corruption. This is due to in methodology which incorporates sources on data on corruption at the household level, from data from both experts and opinion polls. There are also differences in the weighting of the various dimensions between the WGI and the CPI. While the CPI weights each available source equally for each country, the WGI weighs available sources differently. The diverse range of respondents include individuals and domestic firms with direct knowledge of the governance situation (Kaufmann et al, 2011). As well as first-hand accounts, the WGI is also comprised of the views of commercial business information providers and country analysts at major multilateral development agencies such as the European Bank for Reconstruction and Development. Non-governmental bodies also contribute data such as Reporters Without Borders, Freedom House, and the Bertelsmann Foundation (Kaufmann et al, 2011). The wide range of sources and large data set used by the WGI means that it provides coverage of more countries than other corruption indexes like the Corruption Perception Index (CPI). While other well-known, perception-based measures of corruption such as the CPI, focus solely on the public sector, the WGI accounts for both public and private corruption in its methodology.

However, there are some key differences between the two indices. First, unlike the CPI, the CCI uses not only expert surveys but also public opinion polls. Scholars have argued that this makes the CCI, better suited to capturing everyday corruption (Shukhova and Nisnevich, 2017). Secondly, while the CPI has a restriction on the minimum number of sources for a country to be included, while the CCI, has no such restriction, and measures corruption in every country where at least one source exists. In doing so the CCI is arguably less robust than the CPI as it assumes that there is a linear association between corruption and the various data sources used (Shukhova and Nisnevich, 2017).

There are also multiple issues and controversies which are common to both the CPI and CCI in empirical academic work. First, they assign a single score to each country. This has drawn due criticism on the ground that a single measure does not adequately capture a phenomenon which is as multifaceted and complex as corruption – as demonstrated by the previous section of this chapter, which outlined the various categorisations of corruption. Moreover, research has suggested that different forms of corruption are not perfectly correlated, for example, Heath et al (2016) found a difference in the level of perceived street-level corruption and perceived political corruption. Reducing corruption to a single-dimension omits that different types of corruption may exist in the same country at different levels.

Moreover, the perception-based indicators of corruption likely more readily pick-up some forms of corruption over others. For example, perceptions of grand or political corruption are potentially more unreliable than perceptions of petty every-day corruption given that the majority of people will have no experience of the former. The CPI attempts to capture grand, political corruption as part of its analysis, but the reality is very little, if any, people who submit perceptions to the CPI will have real experience of this. The ratings for the CPI are also disproportionately drawn from developed western countries; this may have a negative impact on the reliability and imbue the index with a level of western bias given the raters greater familiarity with certain cultures (Treisman, 2007). Cross-national differences in perceptions of corruption could also reflect the socially encouraged level of cynicism (Treisman, 2007) – high levels of perceived corruption in a country documented by respondents might be the result of evaluating to a high ethical standard, rather than the actual level of corruption being high when compared with other countries.

Critics have also emphasised that both the CPI and CCI are, of course, based on perceptions rather than experience (Rose and Peiffer, 2012). There has been considerable debate to whether or not perceptions of corruption are reflective of reality (Heath, 2016; Philp 2006, Weber Abramo 2008, Andersson and Heywood, 2009). Scholars have pointed out that high profile media cases (Golden and Picci, 2005), growth in GDP (Schrank, 2007), politically motivated accusations and anti-corruption campaigns (Treisman, 2007) can all skew perceptions of corruption. Donchev & Ujhelyi (2014) argue that other variables thought to be related to corruption, such as economic development

or democratic institutions, systematically bias perception-based indices of corruption. Treisman (2007, p.212) is a proponent of this theory, stating: "it could be that the widely used subjective indexes are capturing not observations of the frequency of corruption, but inferences made by experts and survey respondents on the basis of conventional understandings of corruption's causes".

Given the covert nature of corruption, it seems virtually impossible to demonstrate objectively how accurate or inaccurate perception based measured of corruption are. It is a debate which is unlikely ever to be solved entirely. There is no doubt that there are issues attached to the CPI, but these have likely been over-stated by some researchers. Many of these issues are inherent in utilising perceptions in order to understand a phenomenon. Charron (2016) offers a systematic analysis of the CPI, reviewing it using survey data from over 85,000 participants. Contrary to what many scholars have suggested, the review suggests that the CPI remarkably highly correlated with actual reported corruption, as well as citizen perceptions of corruption (Charron, 2016).

In study 1 of this thesis, I use perceptions of corruption, namely the corruption perception index and the control of corruption indicator, to measure actual corruption. While using perceptions indices to measure corruption is a common and well-established practise within the literature (e.g Thakur et al, 2021; Chen et al. 2015; Fan, Titman, and Twite 2012; Lee and David 2009; Mazzi, Slack, Tsalavoutas, 2018), it is to be noted there is much debate about the extent to which perceptions of corruption accurately mirror actual corruption (e.g Donchev & Ujhelyi, 2014) . I follow the perspective, of Charron (2016) who puts forth that corruption perception indices do correlate closely with actual corruption. Despite this, the caveat remains that the empirical conclusions reached by this study rely on perceptions of corruption rather than corruption itself

3.2.5 Corruption and firm performance

Two main bodies of literature have emerged when it comes to the influence of corruption on economic outcomes. The first strand of this literature is extensively developed and documents the relationship between corruption and economic growth at the country-level (Gupta & Abed, 2002; Leite & Weidmann, 1999; Mo, 2001; Del Monte & Papagni, 2001; Hessami, 2014; Baldi, et al, 2016; Hessami & Silke, 2016). These researchers generally reach the conclusion that corruption has a negative effect on a number of economic indicators, including: growth rates, private investment, and public expenditure (Jain, 2020). From this perspective corruption constitutes a serious impediment to economic growth, and research has consistently and frequently demonstrated that that lower perceptions of corruption is highly correlated with increased economic development (Ades and Di Tella, 1999; Treisman, 2003).

The second strand of research which has emerged uses data on corruption to explain firms' financial performance. Using country-level data, it has been well corruption supresses GDP growth, however,

the literature on the impact of corruption on the performance of firms is more mixed. Two main hypotheses have emerged regarding the influence of corruption on firm performance. The first of these two hypothesis suggests that corruption may 'grease the wheels' and have a positive impact on firm development by giving the possibility to overcome bureaucratic barriers and surpass timely process (Wei, 1998). Conversely, the "sand the wheels" hypothesis suggests the alternate outcome, that corruption has a negative effect on firm performance. There are a number of reasons why corruption may lead to poorer firm performance. It is likely that no one theory fully explains why this relationship occurs but rather that there exists multiple mechanisms through which corruption may cause poorer performance (Van Vu et al, 2018). Scholars have suggested that corruption lowers firm performance and efficiency through amplifying uncertainty (De Rosa, Gooroochurn, & Görg, 2016; Shleifer & Vishny, 1993), imposing supplementary costs (Fisman & Svensson, 2007), increasing management misbehaviour (Thakur et al, 2021) distorting competition (Wei, 2000), and decreasing the economic growth rate (Murphy, Shleifer and Vishny, 1991).

The literature which considers the impact of corruption on firm performance is relatively new but fast growing. Research in this burgeoning field can be categorised according to a few key characteristics. Two the key aspects of differentiation between these studies are context and the operationalisation of corruption. Much of the existing research pertains to samples of firms from single countries (Hallward-Driemeier et al, 2006; Sharma and Mitra, 2015; De Waldemar, 2012; Nguyen et al, 2016). Research which addresses the relationship between corruption and firm performance within a single country often employ the World Bank's Enterprise Survey as the source of the corruption data (e.g Sharma and Mitra, 2015; Martins, 2020; De Waldemar, 2012). The Enterprise Survey is a firm-level survey of a representative sample of an economy's private sector and the survey purports to capture a wide range of variables from finance and performance measures through to bribery.

More recently and more closely aligned with my own research, scholars have researched the impact of corruption on firm performance using cross-national samples of firms (Petrou, 2014; Lee and David, 2009; Nur-tegin and Jakee, 2020; Williams and Perez, 2016). Studies which examine corruption in a cross-national sample typically use perception-based measures of corruption such as Transparency International's Corruption Perception Index or the World Banks Control of Corruption Index (Thakur et al, 2021; Chen et al. 2015; Fan, Titman, and Twite 2012; Lee and David 2009).

In this section, I provide an overview and analysis of the literature which has considered the impact of corruption on firm performance on a cross-national sample of firms. I exclude the single country studies from this literature review given the divergence in methodological approach. After reviewing research which examines the effect of corruption on performance directly, I review literature which

assesses how corruption may interact with other firm or board-level variables to determine firm performance.

Commonly, scholars have sought to understand the relationship between corruption and firm value. Using firm-level data from 46 countries, Lee and David (2009) analysis shows that firms from more corrupt countries trade at lower market multiples. The pose three theories as to why this relationship might occur. First, corruption may lower the level and quality of government services which has a direct effect on corporate activities. Second, corruption can reduce investment and have a detrimental impact on growth. Third, countries which have greater corruption often have less protection for shareholders – as such, shareholders will demand a higher rate of return to compensate for this risk. Similarly, Thakur et al (2020) also examine the effect of corruption on firm value. Using panel data with firms from 16 emerging economies, the authors report that there is a negative relationship between corruption and firm value, measured by Tobin's Q. These findings were corroborated by Burns et al (2021) who also reports that country-level corruption has a negative impact on firm value.

While mostly researchers within this field measure corruption as a uniform force, Nurtegin and Jakee (2020) explore the relationship between multiple different forms of corruption and firm performance. In a sample of firms from 136 countries, they investigate the influence of 40 different forms of corruption on firm performance, measured by sales growth, and conclude that corruption is considerably more often harmful than beneficial. Martins et al (2020) also investigates the effect of corruption on sales growth. In a sample of firms located in 117 countries also conclude that corruption largely harms firm performance.

Asiedu and Freeman (2009) investigate the impact of corruption on investment growth. In a sample of firms from 81 countries, they find that corruption has an adverse effect on growth for transition countries but has no significant impact for firms in Latin America and Sub-Saharan Africa. While in a sample of banks from 37 countries, Petrou (2014) report that the pervasiveness of corruption has a negative effect on firm performance. The authors theorise that this relationship exists because in countries with high corruption banks suffer high bribing costs.

As demonstrated, the majority of the extant, cross-national research on the impact of corruption on firm performance finds that corruption has a negative effect on a range out performance metrics on firms like firm value, return on investments, and sales growth. However, there is also cross-national empirical research which argues that under certain circumstances corruption may have a positive impact on firm performance. In a sample of firms from 43 countries, Dreher and Gassebrier (2013) report that corruption facilitates firm entry in highly regulated economies. They argue that while corruption may not be beneficial on the whole, there are circumstances where corruption may be beneficial. Specifically, they argue that corruption is likely only beneficial where there are excessive

regulations. Williams and Perez (2016) also investigate contexts where corruption, and in particular bribery, may be of benefit to firms. Using data from the World Bank Enterprise Survey, and a sample of firms from 132 countries, the authors find that paying corrupt officials enhances firm performance. The conjecture that paying bribes allows firms to compensate the formal institutional imperfections that exist in developing economies. Olney (2016) also considers how corruption may be beneficial to firms in specific contexts. In a sample of firms from 69 developing countries, they report that corruption increases the likelihood that a firm self-selects into export markets.

In summary, the majority of cross-national research on the impact of corruption on firm performance generally supports the hypothesis that corruption is deleterious to firm performance. However, there are exceptions to this rule, but such findings are limited to specific contexts, for example, facilitating firm entry to highly regulated economies (Dreher and Gassebrier, 2013), or when there is direct access to bribing corrupt officials (Williams and Perez, 2016). There are other contextual factors which might strengthen or weaken the impact which corruption has on firm performance. Indeed, some recent work within this stream of literature has sought to understand the firm-level factors which might strengthen or reduce the effect of corruption on firm performance.

Zhou and Peng (2012) investigate the relationship of bribery on firm growth. In sample of firms from 48 countries, they report that bribery hurts growth for SMEs but not large firms. The authors posit this is because small firms are forced to engage in bribery while large firms are more likely to engage in strategic bribery, resulting in favourable treatment from officials. Similiarly, Paunov (2016) also differentiates the effect of corruption based on the size of the firm. Researching the effect of corruption on innovation in a sample of firms from 48 countries, Paunov (2016) finds that corruption thwarts small firms' effort to obtain quality certificates but has no effect on larger or exporting firms. Martins et al (2020) also finds that the negative effect of corruption is reduced for large or exporting firms. Conversely, in a sample of Greek firms, Athanasouli et al. (2012) investigate the relationship between corruption and firm performance, reporting that corruption is more detrimental to large firms.

Similar to this study, scholars have also explored how corporate governance practises and board-level variables might interact with corruption. In a sample of firms from developed countries, Donadelli et al (2014) investigate the relationship between country-level corruption and firm performance. Their findings indicate that overall, firms situated in countries with greater levels of corruption display relatively low returns. Importantly, they also investigate the interaction effect of corruption on the relationship between board characteristics (size and independent directors) and firm performance. Their findings suggest also that corruption exacerbates agency conflicts between managers and owners. The negative association between board size and firm performance is found to be stronger in corruption sensitive industries. They posit that the greater the size of the board, the

greater chance that the firm will engage in corrupt activities, and subsequently have worse performance. On the other hand, they report that number of independent directors has a positive effect on performance. They theorise that independent directors ensure control over the managers and internal directors, reducing corrupt activities. Moreover, they report the positive effect of independent directors stronger in corruption sensitive industries.

This section has served to demonstrate there is a developing field of research dedicated to analysing the impact of corruption on the performance of firms. Analysis of the extant literature shows that research broadly supports the notion that corruption has a negative impact on firm performance, with some limited exceptions. Recent research in this field has also shown that certain firm-level factors (e.g firm size and exports) and board-level factors (independent directors and board size) interact with the effect of corruption on firm performance. This thesis extends research in this field by investigating how corruption interacts with the relationship between board social capital and firm performance.

3.2.6 Board social capital, country-level corruption, and firm performance – hypotheses development

A substantial body of literature has shown the value that an effective board can bring to the firm, for example, strategic guidance (Ruigrok et al., 2006), connection to stakeholders (Burt, 1980) and legitimacy (Hillman and Dalziel, 2003). Much organisational research has shown that it has been a strategy of board of directors, to grow their networks through interlocks, to reduce the potential negative influence of uncertainty on performance (Beckman, Haunschild, and Phillips, 2004; Boyd, 1990; Martin et al, 2015; Pfeffer, 1972; Podolny, 1994).

In a theoretical paper, Kim and Cannella (2008) suggest that board social capital is especially important for firms who operate in unstable environments. This theoretical assertion has since been tested empirically with evidence showing that board social capital can 1) act as a mechanism to reduce uncertainty and 2) act as a mechanism to enhance a firm's performance when confronted with uncertainty (Martin et al, 2015). Interlocks do this by allowing firms network centrality which then through providing information and control enhance a firm's ability to predict future events. In essence, the benefits achieved through board social capital such as increased access to information, enhanced capabilities, and learning (Gulati, 2000; Podolny, 2001; Zaheer and Bell, 2005) will be *most* useful when confronted by greater uncertainty (Martin et al, 2015).

Uncertainty has been defined as the difficulty in predicting future outcomes (Martin et al, 2015). One of the key sources of uncertainty for organisations is the environment from which they operate in, including political and macro-economic factors (Beckman et al, 2004). Corruption creates

environmental uncertainty (Rodriguez et al, 2005; Campos, 1999; Wei, 1997). It does so through multiple different mechanisms. Where corruption exists, it is more likely that laws and informal policies may be subject to unpredictable and varied interpretation (Ahlstrom & Bruton, 2001), this type of ambiguity makes it much harder for firms to make strategic decisions because of the uncertainty it creates. Together, venal and institutional corruption subvert moral norms and erode trust. In countries where corruption is prevalent, ethical decision making and the principles for judging actions become distorted, which itself creates environmental uncertainty. Perception of corruption are also closely linked to uncertainty in the environment – research on perceptions of corruption show that where perceived corruption is high, countries tend to have lower quality judiciary systems, less stable political institutions, and unpredictable inflation (Treisman, 2007).

General economic uncertainty and corruption in the environment are closely linked. Economic uncertainty lowers the predictability of the outcomes of economic activities. As the value of future economic activities is less predictable, this shifts the focus from the uncertain future to the present - which then gives rise to an environment which is conducive of bribing (Goel and Ram, 2013). The arbitrariness of bribing brings further uncertainty to the environment as the prevalence and size of bribes depends on the ability and willingness of agents/officials to extract maximal bribes (Banerjee, 1997; Levy, 1989). Organisations must protect themselves from uncertainty in the environment to function efficiently (Thomson, 1967). Organisations can manage uncertainty in the environment through interdependence. Pfeffer and Salancik (1978) state: “When situations of exchange and competition are uncertain and problematic, organisations attempt to establish linkage with elements in their environment to access resources, to stabilise outcomes, and to avert organisational control.” Interlocking directorate is one critical way in which interorganisational linkages can be created (Martin et al, 2015).

Board social capital provides firms with access to resources and information they would not otherwise be able to obtain - this increased access to information becomes significantly more impactful in countries dense with corruption because of the higher levels of uncertainty prevalent in these nations. Board social capital can provide the focal firm with information about the other organisation, such as their strategic plans (Davis, 1996; Boyd, 1990). They also provide communication between firms about similar problems they are facing as a result of the external environment, and they will be more likely to become allies – sharing perspectives and problems (Thompson, 1967). Essentially, networks allow firms to adapt more quickly through gathering information from additional sources. For example, board social capital will enable firms to gather information about industry or country-specific knowledge, best practices, and how to adapt and respond appropriately to challenges caused by corruption.

Board social capital is most likely to be beneficial in countries where the rate of perceived corruption is higher, this is because, in these countries, firms face a higher level of uncertainty. In countries where uncertainty is high, access to increased resources and different information is likely to be more important hence social capital generated through interlocks in likely to be of a higher value to firms.

H1: Board social capital is positively related to firm performance
H2: There is a positive interaction effect of country-level corruption on the relationship between board social capital and firm performance

3.3 Generalised trust

This section first outlines the theoretical foundations of the concept of generalised trust and how it has been defined in the literature. I subsequently discuss its operationalisation in empirical work. I then provide analysis of the literature which relates generalised trust to outcomes at the firm level. The section concludes with the formulation of a hypothesis regarding the influence of generalised trust on the relationship between board social capital and firm performance.

3.3.1 The foundations of generalised trust

Distinct schools of thoughts regarding trust have emerged from the sociological and psychological viewpoint. From the sociological viewpoint, trust is perceived as a property of collective units, as it pertains to relations within in groups rather than individual psychological states (Lewis and Weigart, 1985). In contrast, the psychological perspective of trust asserts that is sustained through our personal relationships with others, focusing on the willingness of one person to rely on another party (Simpson, 2007).

The distinction between the sociological and psychological interpretation of trust are reflected in the ways in which trust has been categorised in the literature. Two primary, different types of trust have emerged as topics of interest for scholars - particularised trust and generalised trust. Particularised trust, is related the psychological interpretation of trust, and refers to trust extended towards people the individual knows from everyday interactions – for example, trust towards family members or friends (Freitag and Traunmuller, 2009). Conversely, generalised trust, is related to sociological foundations of trust, is defined as "a rather abstract attitude toward people in general, encompassing those beyond immediate familiarity, including strangers (people one randomly meets in the street, fellow citizens, foreigners, etc)" (Freitag and Traunmuller, 2009, p2). People who exhibit greater levels of generalised trust, are thought to believe that most people share common values, and as a result, are more willing to trust in people, regardless of characteristics like their social standing or even personality (Fukuyama, 1995; Uslaner, 2002).

There is a literature which considers the determinants of generalised trust in individuals. The literature on the antecedents of trust in individuals can be split into two broad camps (Uslaner, 2008). The cultural perspective views that trust is relatively fixed after we move into adulthood (Uslaner, 2002; Dohmen et al, 2012), and is shaped largely by our early experiences such as: childhood socioeconomic status, imitation, and parental socialization (Dohmen et al., 2012; Guiso et al., 2006; Petersen and Aarøe, 2015; Dawson, 2019). Hence, in this perspective trust is part of our cultural heritage which is transmitted from one generation to the next (Uslaner, 2002). On the other hand, the experiential perspective, asserts that trust remains open to environmental influences throughout life (Dawson, 2019). In this view, the institutions which we live under as adults may shape our proclivity towards trusting behaviour (Dinesen, 2013). Proponents of the experiential perspective state the experiences we have as adults may also change our attitudes towards trust, for example, being victim of a malicious crime. Following the experiential perspective, Uslaner (2006) suggests that many the institutions and demographic conditions we live under have a quantifiable impact on our proclivity to trust – he finds inequality has the greatest impact on reducing trust. Scholars of this perspective argue that generalised trust lies at the foundation of social connectedness, reciprocity, confidence in institutions and democracy itself (Delhey et al, 2011; Inglehart, 1999; Putnam, 2000).

Following other recent research on the impact of generalised trust on corporate behaviour (e.g Hartlieb et al; 2020), trust is defined in this research as the "willingness to rely on another part" (Doney et al, 1998, p, 604). There is relatively wide agreement as to what generalised trust means in the sociological literature, for example, for Uslaner (2002) states generalised trust concerns trust in other people, and Carl and Billari (2014 p.1) state: "generalised trust refers to trust of other members of society". Generalised trust is differentiated from other forms of trust most markedly by the lack of a specific recipient of the trust itself (Frederickson, 2019). Scholars of generalised trust, predominantly argue that the concept is rooted in collective norms (Fukuyama, 1996; Putnam, 2000; Frederickson, 2019), with patterns of trust varying by society but remaining relatively stable over time.

Social norm theory is closely interwoven into the fabric of the concept of generalised trust. Uslaner (2002) posits that generalised trust relies on the notion that other people within the same moral community will act according to familiar norms. This perception supports the notion that trusting attitudes are formed from socialisation in childhood (Frederikson, 2019). Generalised trust is thought to be of utility to society, as demonstrated by its many positive associations within the literature – there is a debate around causality but that will be explored latterly. Luhmann (1979) proposes the argument that a society cannot properly function without some degree of trust, as the alternative to trust is chaos and paralysing fear. In essence, generalised trust gives us a basis to assess the trustworthiness of others, when information of trustworthiness is not available (Yamagishi, 2001), allowing us to make positive inferences about the character of others without first establishing a

personal relationship. The result is that generalised trust promotes harmonious social relations within societies and institutions (Izogo et al, 2020). From this perspective, we see that much of the theory concerning generalised trust, emphasises its functional qualities, aiding in a functioning of society. Generalised trust is thought to be positively associated with a number of positive outcomes at the individual level, for example, prosocial behaviours such as volunteering and charity work (Bekkers, 2012; Uslaner, 2002), longer life expectancy (Barefoot et al., 1998), improved life satisfaction and physical health (Barefoot et al., 1998) and cooperative relationships (Ostrom, 2000). Generalised trust is also associated with positive societal level outcomes such as thriving democracies (Putnam, 1993; Tavits, 2006) and economic growth (Knack and Keefer, 1997; Algan & Cahuc, 2010; Zak and Knack, 2001).

Why does trust have an economic pay-off? Arrow (1974) explained that because of asymmetric information and incomplete contracts, trust features in almost every economic transaction. From this perspective, trust and reciprocity exist side by side, and depress transaction costs; improving economic efficiency. Indeed, empirical research supports the research of Arrow (1974), showing that trust does indeed reduce transaction costs (Butter and Mosch, 2003; Hendrikse et al, 2015), and can act as a substitute to formal monitoring mechanisms. The need for trust for the success in market-based is great, as the control mechanisms in these markets are incomplete (Kanagaretnam et al, 2014). Henceforth, business relationships built on trust, potentially avoid the costs associated with developing incentives and expensive monitoring mechanisms.

3.3.2 Measurement of generalised trust

Despite the ongoing debate in the regarding both the determinants and consequences of generalised trust, one thing has remained relatively stable within the empirical literature – it's measurement. It is useful to document the measurement approaches taken by scholars as they tell us much about the nature of the concept itself.

The classic measurement of generalised trust was developed by Rosenberg (1956) as part of the Guttman scale. Within the literature, it is commonly referred to as the "most-people trust question" (Robbins, 2019) and its original formulation is: "Some people say that most people can be trusted. Others say you can't be too careful in your dealings with people. How do you feel about it?". The question is usually accompanied by a dichotomous scale with the two alternatives "You can't be too careful" and "Most people can be trusted." Slight adaptations to the wording of this question have occurred over time but the underlying principle has remained constant. Moreover, since it's inception, the most-people trust question has been utilised in a number of well-known national and international surveys, for example: US General Social Survey, The World Values Survey, and European Social Survey.

This measure of generalised has endured since the 1950s, demonstrating a perennial appeal to researchers. Uslaner (2002) puts forth that most researchers agree that the question captures optimism and unconditional faith in strangers and unknown others. In his view, the question captures the trust one for has another, regardless of the person who is being trusted, the situation, or the conditions in which the trust is placed (Robbins, 2019). However, it is important to assess the evidence whether or not the questions measures what it truly purports to – a question of internally validity. One criticism of the question is its wording – Nannestad (2008 p.417) notes: "If trust is considered a three-way relationship—as in the encapsulated interest concept, where A trusts some specific B with respect to some specific x—it is obvious that the trust question is seriously underspecified B is specified only as "most people," and x is not specified at all." This lack of standardisation means that results between individuals might not be readily compared as individuals are left to fill in the blanks on their own – "who is interpreted to be most people". People in their community or wider society? Moreover, participants must make assumptions about the situation, x. It is fathomable a person might trust 'most people' in one scenario but not in another.

The dichotomous scale presented with the most-people trust question is an area of contention. Uslaner (2012) argues that the binary option is appropriate as it encourages participants to engage with the question attentively, while longer scales invite participants to engage in satisficing behaviour. Further, Uslaner (2012) states while generalised trust may in itself not be a dichotomous attitude – using an extended scale may encourage participants to stray towards to the middle of the scale. The advice of Uslaner (2012), has since been contradicted by Lundmark et al (2016) who argue that generalised trust is best measured on a 7 or 11 point scale, arguing that such a scale improves the validity of the instrument.

Broadly, however, there has been support for the effectiveness of the question over other forms of measurement. Empirical research has shown that test-retest stability at the aggregate level – by this measurement, levels of generalised trust have remained relatively stable across different countries over time – this is in keeping with the theory on the subject. Moreover, correlation with other concepts theoretically related to generalised trust, suggests that the measure does somewhat accurately capture the construct across groups and countries (Nannestad, 2008; Dinesen, 2011)

The other commonly deployed measure of generalised trust relates to experimental research designs. Experimental work on generalised trust most frequently uses the "trust game" or "investment game", designed by Berg et al (1995). By varying the knowledge the players have of one another these games aim to create sistuations where trust is more or less generalised (Nannestad, 2008). The main problem with such games is their external validity. In many instances researchers employing these studies use convenience or snowball sampling. Moreover, often these experiments are conducted on students or

on participants who share a certain common characteristic, for example, willingness to self-select to take part in the experiment itself. In addition to this, the cost and time associated with setting up experimental research means that the samples are, as you would expect, far smaller than in research which employs a survey methodology.

3.3.3 Review of empirical literature on trust on business outcomes

There is a mature body of research which considers generalized trust as a determinant of country-level outcomes (Nannested, 2008; Uslaner, 2003; Tov and Diener, 2013; Paxton, 2007), and, in particular, economic development (Algan and Cahuc, 2010; Beugelsdijk and Schaik, 2004; Guiso et al, 2011; Zack and Knack, 2001; Beugelsdijk et al, 2004). These studies come from the field of economics and generally a positive association between generalised trust and economic growth (Algan and Cahuc, 2014; Knack and Keefer, 1997; Zac and Kneek, 2001, Beugelsdijk et al, 2004). In addition to the research on country-level generalised trust and country-level outcomes, there is long-standing and well-developed body of literature in the field on management which considers how trust within organisations influences a variety of outcomes. Scholars who have studied trust within organisations have generally employed it as a predictor of outcomes such as: firm performance (Allen et al, 2018; Davis et al, 2000; Dirks. 2000; Friedlander 1970; Kegan and Rubenstein, 1973), organisational citizenship behaviour (Coxen et al, 2016; Konovsky and Pugh, 1994; McAllister, 1995; Robinson, 1996), and job satisfaction (Dalati et al, 2017; Driscoll, 1978; Muchinsky, 1977). In a review of the role of trust in organisational settings, Dirks and Ferrin (2001 p.451) state that: trust operates in a straightforward manner: “Higher levels of trust are expected to result in more positive attitudes, higher levels of cooperation and other forms of workplace behaviour, and superior levels of performance.” Similiarly, in a recent review on the impact of organisational trust, Rahayuningsih (2019) concludes that trust within organisation leads to a number positive outcomes such as effective communication, innovation, willingness to share ideas, and work performance. Broadly, these positive outcomes are underpinned by the premise that trust has a critical role in strengthening working relationships. Within the stream of literature which attempts to capture trust at an organisational level, scholars tend to measure directly the trust of individuals within organisations, most commonly employing a survey methodology.

More recently scholars have turned their attention to attention to how generalised trust, or societal trust as it is often referred to, operates as a social norm which has consequences on various corporate and financial outcomes. The first research in this stream considered how generalised trust effects the investment decisions of individuals. Guiso et al (2004), was among the first scholars to conduct a study in this vein. In an Italian sample, they find that societal trust is positively associated with financial development and participation in the stock markets. Following the work of Guiso et al (2004), scholars began to turn their attention to the impact of societal generalised trust on firm-level behaviour (Guan et al, 2020). In a sample of firms from 25 countries, Kanagaretnam et al (2018a)

examine the effect of societal trust on corporate tax avoidance. Their research finds that societal trust is negatively associated with tax avoidance and these results remain robust to a battery of controls. They theorise that trust acts as a social contract, and managers are likely to reciprocate the trust that society places in them. As a result, managers in high trust societies refrain from tax avoidance, as it would violate social norms in the area and they risk being shunned by those in their community. Trust is frequently linked with a lower incidence of management indiscretions within the literature.

Li et al (2017) also find that generalised trust influences ethicality, finding that in a longitudinal sample of Chinese firms, find that firms headquartered in areas with high social trust tend to have smaller stock crash risks. The authors theorise that social trust leads to honest behaviours among management, reducing their proclivity towards hoarding bad news and subsequently reducing the chance of stock price crashes. Also in a sample of Chinese firms, Dong et al (2018) report that social trust is negatively associated with corporate misbehaviour - similarly to Li et al (2017), they theorise that in areas where social trust is high, the consequences for deviating from appropriate behaviour is higher and thus good social norms promote proper behaviour from management

In a sample of US firms, Hilary and Huang (2015) similarly see societal trust as a mechanism for reducing moral hazard. The research finds that firms situated in counties with higher levels of trust suffer less from agency problems and display higher valuations and profit. They state that trust acts as an informal monitoring mechanism, reducing the proclivity of individuals towards unethical behaviour which may harm the firm. Jha et al (2019) also investigate the influence of trust on firm's financial reporting. They find that firms in US counties imbued with higher levels of trust are less likely to engage in earnings management. From these findings we can infer that managers in US counties with higher levels of trust are more likely to behave in-line with the social norms in their area and exhibit honest in their own workplace.

In addition to the single-country studies on the link between generalised trust and corporate (mis)behaviour, researchers have examined this link in a cross-national setting. In a cross-country sample, Guan et al (2020) investigate the influence of societal trust on management earnings forecast. They find that managers in high-trust countries are more likely to issue earnings forecasts, because in high-trust countries these are more likely to be viewed as a credible source of information about the firm. Similarly, in a cross-country sample, Pevzner et al (2015) find that corporate earnings announcements from firms in countries with higher levels of generalised trust are viewed as more credible and therefore result in stronger market reactions. In essence, investors perceptions about the trustworthiness of managers is bolstered when the firm is situated in a high trust environment. In a sample of firms from 43 countries, Nanda and Wysocki (2011) examine the influence of societal trust on firms' financial disclosures. They find that there is a positive association between societal trust and measures of voluntary accounting quality. The underlying theory being, in high trust

societies, investors are more trusting of management. Hartlieb et al (2020) investigate the influence of generalised trust on cost-stickiness behaviour. Using a sample of firms from 44 countries, the scholars find that generalised trust increases cost stickiness. The rationale for the result is that managers in countries with higher levels of trust are more optimistic and are committed to stable, long-term employment relationships. Moreover, they conjecture that managers in high-trust societies behave less opportunistically.

Generalised trust has also been reported to reduce risk taking and improve management coordination. In a sample of firms spanning 44 countries, Ho et al (2020) find that societal trust is negatively relate to corporate default risk. They theorise that trusting societal norms induce trusting behaviour in firms and reduce moral hazards. Kanagaretnam et al (2018) also investigate the relationship between generalised trust and firm risk taking - in a sample of bank from 40 countries, they demonstrate that banks in countries with higher societal trust exhibit lower risk taking, and as a result suffered fewer financial troubles in the 2008 financial crisis. Also, in a cross-national sample, Kanagaretnam et al (2018b) links societal trust and CEO compensation. They find empirical support for the hypothesis that societal trust improves managerial coordination and somewhat reduces the need to use renumeration to incentivise performance.

As well as a reduction in agency financial reporting, and improper management, and an increased sense of firm credibility and trustworthiness, generalised trust has also been linked to increased output and innovation. In a set of panel data pertaining to observation from 29 countries, Brockman et al (2018) show that firms in high-trust countries are able to produce higher levels of joint output, measured in terms of co-owned patents. The research shows that societal trust has a positive influence on the efficiency of innovation as high levels of trust reduces opportunism during collaboration and lower coordination costs. Meng et al (2020) also investigate societal trust relative to innovation. From analysis of panel data from firms in 72 countries, they find evidence that firms from countries with higher levels of trust invest more in R&D. The authors attribute this relationship to the theory that higher trust reduces monitoring and transaction costs. Reducing the time and money associated with monitoring allows for more investment in R&D.

Finally, social trust has also been linked to CSR behaviour, in a longitudinal sample of Chinese firms Chen and Wan (2020) report that social trust is positively associated with CSR behaviour. Their underlying thesis is that societal trust is a social norm which guides managers towards valuing their stakeholders. The importance they place on relationships with stakeholders manifests in CSR activities.

To summarise, we see from the literature that generalised trust is associated with ethicality (Hilary and Hui, 2015; Jha et al, 2018; Ho et al 2020). This manifests in a number of forms such as decreasing

tax avoidance (Kanagaretnam et al, 2018a), engagement with CSR (Chen and Wan, 2019), smaller risk of stock market crash from hoarding bad news (Li et al, 2017), lessening the risk of corporate misbehaviour (Dong et al, 2018) and lowering the likelihood of earnings management by management (Jha et al, 2018). As firms situated in high-trust societies behave more ethically, they are viewed as more credible by investors (Pevzner et al, 2015).

To conclude, the literature on trust on business related outcomes can be split broadly into three main streams. The first considers trust at a country-level generalised trust and examines the influence which it has on country-level variables - most commonly economic growth. The second considers trust within organisations and examines outcomes at the firm level. The third stream, and most recent development within the literature, combines aspects of both the previous streams, combining measures of societal or country-level measures of generalised trust with firm-level outcomes, and demonstrates that generalised trust at the country-level is associated with a range of positive outcomes for the firm – mostly as a consequence of heightened ethicality these firms display.

3.3.4 Board social capital, generalised trust, and firm performance – hypothesis development

One way to understand the different types of trust organisations may accumulate is to examine different sources of trust as defined by Amiraslani et al (2017). Amiraslani et al (2017) makes the distinction between 'endowed trust' and 'earned trust'. Earned trust is "internally 'generated' through a firm's own investment in social capital" (Amiraslani et al 2017, pp. 2). On the other hand, endowed trust is defined as: "externally 'acquired' trust that a firm enjoys from being located in a high-trust society/environment…". Earned trust can be generated through investment in social capital, for example, recruiting well-connected directors to the firm's board. Endowed trust, however, is a stock of social capital, which the firm cannot alter – it is determined by the society in which they are situated (Servaes and Tamayo, 2017). As discussed in the previous section, researchers have associated multiple positive outcomes for firms and economies which experience high levels of endowed trust. Indeed, there is evidence that country-level generalised trust shapes individual and corporate behaviours, particularly pertaining to ethicality.

Investors make inferences abouts firm character based upon factors specific to the firm but also social norms of the area in which it is situated (Hilary and Hui, 2009; Jiang et al, 2018; Zolotoy et al 2019). A firm may accumulate social capital or trust, from multiple sources. One way to understand the different types of trust organisations may accumulate is to examine different sources of trust as defined by Amiraslani et al (2017). Amiraslani et al (2017) makes the distinction between 'endowed trust' and 'earned trust'. Earned trust is "internally 'generated' through a firm's own investment in social capital" (Amiraslani et al 2017, pp. 2). On the other hand, endowed trust is defined as: "externally 'acquired' trust that a firm enjoys from being located in a high-trust

society/environment…". From this perspective, we can see that earned trust can be generated through investment in social capital, for example, recruiting well-connected directors to the firm's board. Endowed trust, however, is a stock of social capital, which the firm cannot alter – it is determined by the society in which they are situated (Servaes and Tamayo, 2017). Researchers have associated multiple positive outcomes for firms and economies which experience high levels of endowed trust – for example: decreasing tax avoidance (Kanagaretnam et al, 2018a), engagement with CSR (Chen and Wan, 2019), smaller risk of stock market crash from hoarding bad news (Li et al, 2015), lessening the risk of corporate misbehaviour (Dong et al, 2018) and lowering the likelihood of earnings management by management (Jha et al, 2018). Additionally, Pevzner et al (2015) demonstrates that firms imbued with trust from being located in more trusting societies are perceived as more credible by investors.

There is good reason to expect that investor reliance on a firms internally generated social capital is reduced when that firm has a high level of endowed trust. Lins et al (2017) demonstrate that trust between a firm and both its stakeholders and investors, built through investments in social capital, pays off when the overall level of trust in corporations and markets is lower. In other words, where an organisation has lower levels of endowed trust, social capital of the firm becomes more important. In a similar vein, Zolotoy et al (2019) reports that certain social norms where a firm is headquartered attenuate the positive effect of CSR. In short, when there are external factors which signal the character of the firm, investor reliance on firm-specific signals of legitimacy, such as board social capital, are reduced.

H3: Country-level generalised trust has a negative interaction effect on the relationship between board social capital and firm performance

3.4 Research design

The previous section provides a review of the literature on the impact of corruption and generalised trust on corporate outcomes, presents three hypotheses. This section details the research design, used to test those hypotheses. First, the section covers the approach to sample selection and data collection. Second, the chapter outlines variable measurement: providing a detailed account of the measurement of the dependent variable, firm performance and the key explanatory variables, board social capital, corruption and generalised trust. Subsequently, there is discussion of the various controls used in the study. Finally, the chapter outlines the empirical research models used to test the hypotheses, and the econometric and statistical issues which arise from the choice of methods employed.

3.4.1 Research philosophy

All academic research is underpinned by ontological and epistemological commitments. These commitments substantively shape the approach of the researcher when formulating and subsequently engaging with research questions. Ontology is the study of being and is concerned with the nature and existence and structure of reality (Crotty, 2020). Ontology captures a set of philosophical assumptions that the researcher has about the way the world. At opposing ends of the ontological spectrum stands objectivism and subjectivism. The researcher's standpoint is one objectivism. Crotty (1993) states that an objectivist position holds central that "social entities exist as meaningful reality external to those social actors who are concerned with their existence" (Saunders, 2012, p,31). For example, as an objectivist my understanding is that board social capital can be understood as an objective entity, which boards can possess to varying extents. In this sense, the adoption of an objectivist philosophy assumes that board social capital is something which may be measured empirically.

Epistemology is the study of assumptions that underlie the science of knowledge, what constitutes acceptable knowledge and what is the best way of creating such knowledge. The researcher is a positivist – concerned with the collection of data on an observable reality. The perspective of positivism assumes that there is an objective realty which exists independently of the knower (Holton, 1993) and that this objective reality can be accurately perceived through human senses (Clark, 1998). Within the positivist paradigm, truth is not dependant on belief, but on the relation of belief to facts present in an objective, external reality (Clark, 1998).

Positivist and interpretivism are opposing epistemological standpoints. For interpretivists, there is a belief that reality is multiple and relative (Hudson and Ozanne, 1998). Moreover, it is assumed that knowledge, which is gathered, is socially constructed rather than objectively fixed, or determined. My research is built on the assumptions of positivism. The epistemological assumptions of positivism shape the aims, content, and processes of this research. As a positivist, I am concerned with the collection of data about an observable reality.

The perspective of positivism assumes that there is an objective reality which exists independently of the knower (Holten, 1993), and that is objective reality can be accurately perceived through human senses (Clark, 1998). Within the positivist paradigm, there is the assumption that truth is not dependent on belief but on the relation of belief to facts present in an objective, external reality (Clark, 1998).

In my research, I take the position of a 'detached positive', this means to be, as far as possible, external to the process of data collection. This is possible because my choice of methods, I use

secondary quantitative data, which primarily concerns information drawn from financial and businesses databases.

My objectivist and positivist stance influenced the methods employed in this thesis. The research paradigm chosen in quantitative and deductive in nature. The deductive approach is typical for quantitative research where hypotheses are first derived from the literature before being subsequently tested. Given the aim of this research is to primarily test existing theories rather than develop new ones a deductive approach is appropriate. Again, this method is congruent with my positivist epistemology as it assumes the variables within the study are identifiable and objectively measurable.

The primary aims of study 1 is to understand the influence of board social capital on firm performance while examining the interaction effect of perceived corruption and generalised trust on this relationship. Given the research question, a quantitative research paradigm is appropriate. Only through quantitative data is it possible to measure firm market performance for cross-national sample of firms. Moreover, the extensive literature of quantitative research in this field has given rise to well-developed quantitative measures for the constructs in this study. Adoption of these measures within this thesis helps to ensure validity.

To summarise, I take an objective, positivist perspective and view myself as detached from the object of the study. The belief that science can produce objective knowledge rests on two central assumptions: first, the ontological assumption that there is an objective reality, and secondly, that it is possible to remove subjective bias in the assessment of that reality. These epistemological assumptions shape the research design of this study and determine the way in which data is collected and subsequently analysed.

3.4.2 Sample selection process and data collection

The starting point for the sample is all firms which are listed in the BoardEx organisational summary documents. BoardEx is an organisation which collects data on public, private and not-for-profit firms from around the world. BoardEx data is collected from credible, published sources and verified by a team of analysts (BoardEx, 2021). The BoardEx database cannot be edited by users. I obtained the data from the University of Glasgow who hold a license to download BoardEx data.

The BoardEx data provides data from which the board-level variables are constructed. BoardEx organisational summary documents are split by region: North America, Europe and the Rest of the World. The data from the three documents were combined to give the starting point to the sample. The documents from BoardEx cover the period from 1999 – 2017, although level of coverage varies

in terms of region and time (in the earlier years of BoardEx, coverage for the rest of the world was significantly less comprehensive than North America and Europe).

The BoardEx organisational summary files are longitudinal and structured so that each row represents one director in a given year. There is a range of information about each director such as their name, firm ID, gender, role name, and number of firms which they are interlocked to. I then collapse this data in STATA by year and firm ID. This then changes the rows to firm-year observations rather than director-year observations. I then use coding on STATA to generate board-level variables from the data, such as: the number of directors on the board, the total number of director interlocks, the average number of interlocks, and whether or not there is CEO duality.

The second stage of the sample selection process is matching the BoardEx data with Datastream. The unique company-level identifier data on BoardEx is "Company ID". However, this identifier is unique to BoardEx and thus cannot easily be used to match the data with other databases. Matching firms between the two databases was a two-step process. First, both of the databases use ISIN as an identifier. I use the ISIN on both databases to automatically match firms. However, in some cases, an ISIN was not provided in one or both databases. To overcome this, I ran a name recognition programme implementing the Levenstein algorhythm, which matched the names of firms on Datastream to the name of firms on BoardEx. I subsequently manually checked all of the matches, making any necessary adjustments to ensure the quality of the matching procedure.

Once firms from both databases were matched, I removed firm-year observations from outside the specified sample date range. The sample starts in 2005. The reason for this is that the availability of data on BoardEx for firms from the rest of the world is sparse before that point. The sample stops in 2015 – this is because for the performance measures I need data 3 years ahead – for the performance measures I have data up to 2018.

In line with prior literature (e.g Mazzi, Slack, & Tsalavoutas, 2018; Barroso-Castro et al, 2017), financial firms are removed from the sample. Financial firms are excluded from the sample because they operate under unique regulations (Barn-hart et al., 1994) and have different balance sheet structures (Barroso-Castro et al, 2017). Moreover, financial firms are not suited to some of the measures used in this study, for example, Tobin's Q (Lins, 2003). I also exclude firm-year observations with missing Datastream accounting data.

I drop firm year observations for which there is not country-level corruption, generalised trust, or human development index data available. The number of firm-year observations removed due to lack of country-level data is relatively small: 414, given the overall size of the sample. Moreover, the firms-year observations which have been removed because of lack of country-level data are largely

from under-developed economies. Finally, I eliminate firm-year observations which report negative common equity (Datastream item: WC07220). Removing firms with negative common equity ensures that the return on equity ratio can be accurately interpreted. This process results in a longitudinal sample consisting of 37,109 firm-year observations corresponding to 7,479 firms across 57 countries.

Table 3: Sample selection process

236,549 firm year observations	**The sample starts with firms with data listed in BoardEx 'Board Summary' documents for the regions of North America, Europe and the rest of the world. This data covers the period 1999 – 2017.**
(-85,948) **150,601 firm year observations**	Firms listed on BoardEx which could not be matched to Datastream were dropped from the sample. I match the BoardEx data with Datastream. First, I use the ISIN as a common identifier to automatically match firms on the two databases. Second, I matched firms for which couldn't be matched by ISIN using a name recognition program implementing the Levenshtein algorithm. I subsequently reviewed these suggested matches by hand, accepting or rejecting the pairing.
(-53,833) **96,768 firm year observations**	Drop firm year observations from outside of the specified sample date range (2005 – 2015<u>6</u>).
(-15,017) **67,075 firm year observations**	Drop firm-year observations related to financial firms
(-25,330) **41,675 firm year observations**	Drop firm year observations with missing Datastream data
(-414) **41,229 firm year observations**	Drop firm year observations with missing data on corruption from Transparency International (i.e., CPI_Score is missing). The firms removed due to lack of country-level corruption data are mostly from under-developed economies.
(-953) **40,722 firm year observations**	Drop firm year observations with missing generalised trust values. The firms removed due to lack of country-level generalised trust data are mostly from under-developed economies.

(-1,132) observations **39,590 firm year observations**	Drop firm year observations with negative equity
(-2,105) observation **37,109**	Drop firm year observations from India and Philippines
37,109 firm year observations	**Total firm year observations for the period 2005 – 2015 across 59 countries**

3.4.3 Variable Measurement

The aim of this research is to examine the influence of board social capital on firm performance. More specifically, the study investigates the interaction effect of country-level corruption (measured by perceived corruption) and generalised trust on the relationship between board social capital and firm performance.

The following regression model is used:

$$FP = \beta 0 + \beta 1(\textit{board social capital})it + \beta 2(\textit{board social capital} \text{ x } \textit{corruption})it + \beta 3(\textit{board social capital} \text{ x } \textit{generalised trust})it + \beta 4(controls)it + \varepsilon it$$

3.4.3.1 Measurement of the Dependent Variable – Firm Performance

In order to test the hypotheses derived from the literature, I compute two proxies of firm market performance. I measure firm performance using two different computations of Tobin's Q. Compared with operating-based measures of firm performance, market-based measures are said to be more forward looking (Devers et al, 2007) and less readily manipulated by management (Kaczmarek et al, 2012; Decktop, 1897). Researchers have recommended that in corporate governance research – measuring firm performance using Tobin's Q is preferable to other measures (Willim, 2015). Moreover, much of the prior research which addresses the relationship between board social capital and firm performance also uses Tobin's Q as the firm performance proxy (e.g Kim, 2007; Kor and Sundaramurthy, 2009; Jackling and Johl, 2009; Devos et al, 2009). The data for all of the financial variables proxies were downloaded directly from Datastream.

Tobins Q

I also use two different calculations of Tobin's Q as proxies for firm market performance. Tobins Q was developed by James Tobin (1967), in theory, a Tobin's Q ratio of above 1 indicates that the market value is greater than the value of the companies recorded assets (Alghifari et al, 2013). Tobin's

Q captures the growth opportunities of the company and reflects the value of organisations tangible and intangible assets (Kaczmarek, Kimino, S & Pye, 2012). Tobin's Q is considered within the literature as a good measure of firm value, as it captures market and investor perceptions of the company' past, current and future performance, unlike accounting-based measures which are suited towards measuring the past internal efficiency of firms (Kaczmarek, Kimino, S & Pye, 2012).

Following Jackling and Johl (2009), Drakos and Bekiris (2010), and Marinova et al (2016), the first Tobin's Q measure, *tq1*, is measured as the ratio of market value of equity and debt divided by total assets. Following Busco et al (2019), The second Tobin's Q measure, *tq2*, is measured as Market Value (MV) per total assets.

3.4.3.2 Measurement of Board Social Capital

Board social capital

Board social capital is defined as "the degree to which board members have outside connections with the environment and the potential resources arising from those connections, which may be sources of competitive advantage for the firm" (Barosso-castro, 2016, pp.7). In line with past research, I measure board social capital (bsc) as the number of external directorship ties board members hold with other organisations (Haynes and Hillman, 2010; Kor and Sundaramurthy, 2009; Tian et al., 2011). Measuring directorship ties is a simple process. For example, if one director at the focal firm holds external directorship at another two firms, this equals a score of two. The score of all the directors are added together giving a cumulative total before dividing by the total numbers of members on the board of the focal firm. This method takes into account that larger boards are more likely to have more ties to other firms (Barroso-Castro, 2016). The higher the score, the more connected the board is to other firms and thus the higher the level of board social capital.

Total interlocks

I use total interlocks (interlocks) as an alternative measure of board social capital. Total interlocks is calculated as the number of external directorship ties board members hold with other organisations in each year (Zona et al, 2018). This measure does not take into account that larger boards are more likely to have more interlocks, rather it measures purely the number of directorship ties to other firms.

3.4.3.3 Measurement of country-level variables

This section outlines the country-level variables used in this study. I discuss the various secondary sources used and their methodologies. There are two main country-level constructs which I measure, corruption (measured by perceived corruption) and generalised trust. I use two proxies for corruption, and two proxies for generalised trust. This helps to ensure content validity - the merits of the approach are discussed in more detail later.

Corruption

In order to measure corruption in this study, I rely on two measures of perceived corruption. It is important to note that perceived corruption is distinct from actual corruption. There is a discussion of this in section 3.2.4.

Corruption Perception Index (CPI)

Two variables within this study capture perceptions of corruption. The first, corruption, is an adapted version of the Corruption Perception Index by Transparency International, which measures perceptions of corruption at the national-level. For the purposes of this research, corruption is calculated for each country, in each year as: 100 – Corruption Perception Index Score. Computing corruption in this way assigns higher scores to countries with greater corruption and vice versa – this makes interpreting coefficients more straight forward. There is a full discussion of the CPI in section 3.2.4 which addresses the measurement of corruption, and the methodological and ethical issues associated with the use of perception-based measures.

Control of Corruption Indicator

For the purposes of robustness, this study also uses the World Bank Control of Corruption Indicator (cc) as an alternative measure of corruption perception. The World Bank (2020) states that: “Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests”. The WGI is a project of the World Bank and has coverage of over two hundred countries and territories, measuring six aspect of governance – one of which pertains specifically to corruption – this dimension is referred to as ‘control of corruption’. The WGI defines control of corruption as: “capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and private interests” (Kaufmann et al, 2011, p. 223). The WGI, weights each of the 31 sources based upon a number of factors, rating countries for each of the six dimensions, with scores ranging from -2.5 to 2.5. To compute the variable cc which represents the Control of Corruption score, I perform

the following calculation, I multiply the Control of Corruption score by -1. This helps the interpretation of the regression as it means that countries with greater levels of perceived corruption are assigned higher scores. There is a more detailed discussion of the WGI in section 3.2.4 which provides analysis pertaining to the measurement of corruption, and the methodological and ethical issues associated with the use of perception-based measures.

Generalised Trust

World Value Survey

Generalised trust describes basic and unspecified trust towards others in a society (Nannestad 2008; Paxton 2007; Son and Feng; 2019; Stolle 1998; Uslaner 2008a; Yamagishi and Yamagishi 1994). Generalised trust is viewed within the literature as a powerful measure of social cohesion and positive social norms within a society (Bjornskov, 2003; Moore & Kawachi, 2017; Twenge et al. 2014; Walsh et al. 2015). It gives an insight into honesty and trust as cultural and social norms.

Generalised trust is measured by the question:
"V24. Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people? (Code one answer):
1 Most people can be trusted.
2 Need to be very careful." (World Value Survey, pp.3, 2012)

Put simply, the question measures the extent that a person trusts others knowing nothing of their characteristics. Taken as an aggregate measure it is revealing of the extent to which citizens within a society trust one another. The question measures social capital as: "the average propensity to act to a given set of norms or values" (Bjornskov, 2003, pp. 11). This measure of generalised trust is long standing and the most commonly used social trust indicator within international research (Twenge et al. 2014; Walsh et al. 2015)

The data for this variable is taken from the World Values Survey (WVS). The WVS is a worldwide investigation of socio-cultural and political change. It has carried out representative national surveys of the basic values and beliefs of citizens in more than 65 societies containing almost 80 per cent of the world's population. The WVS is made up of "a global network of social scientists… led by a team of international scholars, with the WVS Association and WVSA Secretariat headquartered in Vienna, Austria." (WVS, 2019). The WVS is conducted every 4 years and, importantly, the methodology never changes so it allows for comparisons over time. The WVS is the largest, non-commercial, cross-national, time series investigation of human beliefs and values - thus far, interviews have taken place with nearly 400,000 respondents (WVS, 2019).

The European Social Survey

For the purposes of robustness, this study also uses data from The European Social Survey (ESS), to construct an alternative measure of generalised trust. The ESS is: "academically driven cross-national survey that has been conducted across Europe since its establishment in 2001" (ESS, 2020). The ESS is considered to be of the highest international standards in survey reliability (Reeskens and Hooghe, 2008). Much like the WVS, the ESS asks participants:

"Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?"

However, unlike the WVS, candidates are given a 10 point scale on with responses ranging from "0 = You can't be to too careful" to "10 = Most people can be trusted" (ESS, 2020). A score is then calculated for each country by taking the mean value of respondents from each country. The ESS uses the same question to measure generalised trust as the WVS and broadly the same methodology. The only substantial difference between the WVS and ESS is the level of coverage provided – the WVS provides data for most of the world, while the ESS only provides data for European countries.

3.4.3.4 Measurement of Control Variables

In addition to the main variables tested in the study, I control for a number of other variables which have been previously been associated with firm performance in the empirical literature. As this study looks at the impact of board social capital on performance it is important to control for other variables which may also influence firm performance. The control variables within this study can be broadly categorised into three different groups: board-level, accounting, and country-level.

The introduction of a number of control variables helps to mitigate potential concerns around internal validity. Internal validity refers to the extent to which a causal relationship between the variables within the study can be established (Winter, 2000). By introducing control variables at the board, firm, and country-level, which have been linked to firm performance in the extant literature, the design reduces concerns related to internal validity.

Board level controls

This study uses three controls at the board level, each of which has been associated with firm performance in past empirical literature: Board size, CEO Duality and Proportion of non-executive directors on board. The data for all of the board-level variables was gathered from BoardEx.

Board size

The first control variable used in this study is board size (boardsize) which is measured as the total number of directors on the board. Past empirical literature has shown that large boards may have a negative effect on firm performance (Guest, 2009; Jensen, 1993), as larger boards are more likely to suffer from problems relating to coordination and communication due to their size (Lipton and Lorsch, 1992). However, the impact of board size on firm performance may differ by country, as the function of the board may differ dependent on culture and legislative setting board plays different functions (Guest, 2009). Indeed, some recent research on Asian firms has found that board size is positively correlated with firm performance (Johl, Kaur and Cooper, 2015; Danoshana & Ravivathani, 2019). Given the disparity within the literature, it appears that Board size does often influence firm performance, although the sign of this effect is not consistent and may be dependent on other factors such as national context.

CEO duality

CEO duality (ceo_dua) is another control used in this study. CEO duality occurs when the same person is both CEO and chairman of the board. Board leadership structure and CEO duality is one of the most controversial topics within corporate governance. Agency theorists often argue that the combining the roles of CEO and chairperson may reduce board independence and lead to less effective monitoring (Daily and Dalton, 1993; Jensen, 1993). Alternatively, some scholars have argued that there are benefits to CEO duality, for example, the combination of these roles may lead to more unified and strong leadership (Lam and Lee, 2008). Ultimately the past theoretical and empirical literature on CEO duality is mixed, it is not clear what effect CEO duality has on organisations. The influence of CEO duality may vary depending on organisational characteristics and business environment (Faleye, 2004).

Proportion of non-executive directors on board

Proportion of non-executive directors on board (outside) is used as a control variable in this study. outside is calculated by the ratio of Independent NED on Board to the Non independent directors. Independent directors are thought to play an important role company's board. As independent directors, it is theorised that they should be less influenced by management or insiders, and their presence helps to maximise the chance that the board acts in the best interest of shareholders (Fuzi et al, 2016). Scholars have investigated the relationship between board independence in single country studies in China (Liu et al, 2015), India (Black and Khanna, 2007), Korea (Black and Kim, 2012), and the U.K (Dahya and McConnell, 2007) and found a positive relationship between board independence and firm performance. However, Hermalin and Weisbach (2003) reviewed the

literature on the relationship between board independence and firm performance in the context of the US found that it did not wield a significant influence on performance. Given the mixed existing evidence, it appears that the proportion of non-executive directors on board should either have a positive and significant or non-significant relationship with firm performance.

Firm-level controls

This study uses five controls at the firm level, each of which has been associated with firm performance in past empirical literature: Firm size, Leverage, Liquidity, Industry classification and International sales percentage. The data for all of the firm-level controls was downloaded directly from Datastream.

Firm size

Firm size (size) is used as a control variable in this study. Firm size is measured as the natural logarithm of total assets in hundreds of USD: log(tausd100). The majority of studies which investigate the link between firm size and performance find a positive association between these two variables (Dogan, 2013; Lee, 2009). There are many reasons why firm size is positively associated with firm performance. First, a firm's performance is a key determinant of its size (Shah et al, 2016), firms who perform well are able to grow. Secondly, larger firms benefit from increased access to resources and are allowed to benefit from economies of scale in a way which smaller firms usually cannot. For all of the performance proxies, a positive relationship with firm size is expected.

Leverage

Leverage (lev) is also used as a control variable in this study. Leverage is measured as the ratio between total debt and book value of equity (Aggarwal et al., 2019; Florio and Leoni, 2017). However, the existing literature is mixed on the impact of leverage on firm performance. Many studies have found a negative relationship between leverage and firm performance (Chen 2004; Tian and Zeitun, 2007; Salawu, 2007), while others have reported a positive relationship (Azeez, 2015). Within the literature there is relatively widespread agreement that the effect of leverage on firm performance is ambiguous (Ibhagui & Olokoyo, 2018).

Liquidity

Liquidity (liq) is another control variable used in this study. Liquidity is measured as the ratio between current assets and current liabilities. Liquidity measures the organisations ability to meet payment obligations (Saleem and Rehman, 2011). There is limited empirical work on the relationship between firm performance. Saleem and Rehman (2011) provide an initial study into the relationship

between liquidity and firm performance and find a significant and positive relationship between liquidity and ROA but no significant relation to ROE. Because of the lack of research on the relationship between liquidity and firm performance, it is not known what relationship is expected.

Industry classification

I also control for the industry classification. I classify firms based on Industry Classification Benchmark (ICB). The ICB uses a system of 11 different industries, 10 of which are represented in this study (financials are excluded). Within the corporate governance literature, it is common for studies to control for the influence of industry (Filatotchev, 2019; Shapiro et al; 2015). It has been suggested that a firm's choice of industry explains 15 – 20% of its profit level (Short, 2009). I also expect that industry will have a clear effect on the firm performance proxies, given the different required level of assets required to generate income in different industries. Henceforth, it is important to control for exogenous industry effects.

International sales percentage

International sales percentage (intsales) is the final control variable used in this study. International sales percentage is measures as percentage of international sales of total sales (Vithessonthi & Racela, 2016) and is indicative of a firm's level of involvement in international markets proportionate to their size. There is little agreement amongst scholars as to the effect of international sales percentage on firm performance and the empirical literature has yielded mix results (Vithessonthi & Racela, 2016). In summary, the existing literature is not clear on the effect of internationalisation of firm performance and therefore, it is not known what relationship is expected.

Country-level control

The Human Development Index

To avoid the corruption and social capital proxies capturing other country-level factors that may have an influence on firm performance I control for level of development using The Human Development Index (HDI_score). The Human Development Index was created by the United Nations and is a "summary measure of average achievement in key dimensions of human development" (United Nations, 2020). Past research has used the HDI as a measure of socioeconomic development (Salah, 2018). Researchers have found that country-level factors such as size of country, the institutional framework, economic and legal differences can all have an impact on firm strategy and therefore firm performance (Bamiatzi et al 2016; Makino *et al.*, 2004; Tong *et al.*, 2008). Indeed, it has been argued that level of development within a country has an influence on firm strategy and growth

(Peng, 2003, Tong et al., 2008; Majumdar & Bhattacharjee, 2014). Past literature has demonstrated a negative association between HDI and firm performance, attributing this to firms in less developed countries having the opportunity to achieve greater gains (Salah, 2018). Therefore, I expect a negative relationship between HDI_score and firm performance.

Validity of variable measurement

The measurement of variable is central to the study and the testing of the hypotheses derived from the literature. The thesis assumes that the constructs used to measure the variables have a high degree of construct validity. Construct validity relates to whether or not the measures capture what they purport to (Bagozzi and Phillips, 1991). These assumptions are made based upon reference to past literature and adopting measures from past empirical research. However, the degree of construct validity is hard to verify given the abstract nature of the concepts within the research such as trust.

Specifically, there are questions over how well proxies of firm performance such Tobin's Q what they purport to. To reduce the concerns around construct validity, I use two different computations of the dependent variable, firm performance, and two measure of each of the key explanatory variables in my sensitivity testing.

3.4.4 Empirical research model

The aim of this research is to examine the influence of board social capital on firm performance. The study investigates the interaction effect of country-level corruption and generalised trust on the relationship between board social capital and firm performance. The coefficient of the interaction term shows the effect that corruption and generalised trust have on the relationship between board social capital and firm performance. All of the regressions are run four times, once with each of the Tobin's Q measures taken at t+2, and again with each of the Tobin's Q measure taken at the average of t+1,2,3.

3.4.4.1 Statistical properties and econometric issues

Univariate analysis

Univariate analysis examines the correlation between the dependent and the individual independent variables. I run both parametric and non-parametric tests on the data. For the result of parametric tests to be valid the data must follow a normal distribution. Alternatively, the result of non-parametric tests do not rely on upon any particular data distribution to be considered valid.

I split my sample based on corruption, generalised trust and international sales percentage, creating sub-sample groups. I compare the observed means of the independent samples using t-test and also Mann-Whitney's test, which is a non-parametric equivalent of the t-test. While the t-test examines difference in mean, the Mann-Whitney test compares the difference in median values. I order the key variables by year and run the Cuzick test, which is a non-parametric test for trends across ordered groups (Cuzick, 1985). This allows for an insight into the trend in each of the key variables over the course of the sample period.

I test the correlation between all pairs of variables using both Pearson's correlation test which is parametric and Spearman's correlation test which is a non-parametric equivalent. The correlation between variables is denoted by the coefficient, which operates on a scale of –1 to 1. Positive values signal a positive relationship between the variables, while negative values signal a negative relationship. The closer the value is to ± 1 the stronger the association is between the variables, with a value of ± 1 signalling a perfect correlation. This initial investigation into the relationship between variables provides a first assessment of the relationship between the individual independent and dependent variables.

Multivariate analysis

This study uses multivariate regression, which is used when the value of the dependent variable is hypothesised to depend on multiple independent variables. Multiple regression allows for understanding about the effect of each individual explanatory variable on the dependent variable by holding the effect of the other variables constant (Mehmetoglu and Jakobson, 2017). For the results of multiple regression to be valid, there is a range of criteria for which the data must fulfil. If the assumptions are not met, the results of the regression may be bias (Pedzahur, 1997). Osborne, Christensen, and Gunter (2001) state that many articles fail to report having tested that their data fulfils the various assumptions which underlie multiple regression. It is essential that the assumptions of multiple regression are met in order to provide reliable results, hence next I discuss these key assumptions and outline the methods for checking the data.

Linearity

The first assumption of linear regression is linearity - the relationship between the dependent (Y) and independent (X) variables must be linear (Osborne, 2002). In cases when the relationship is not linear, the regression analysis will underestimate the relationship between the independent variable and the dependent variable. Multiple regression is sensitive to outliers, and these can cause a violation of the linearity assumption. One way the effect of outliers is reduced in this study is through the use of winsorisation. The linearity assumption can also be tested through the use of scatter plots.

From visual inspection of scatter plots, it is possible to ascertain whether the data should be transformed (Zarembka, 1990).

Homoscedasticity

Homoscedasticity means that the variance of errors is the same across all levels of the IV (Osborne, 2002). When the variance of errors is not the same across all levels of the IV, the assumption of homoscedasticity is violated, and heteroscedasticity exists. However, slight heteroscedasticity is thought to have little effect on significant tests, while more pronounced heteroscedasticity can distort findings and increase the chance of a Type 1 error (Tabachnick and Fidell, 1996).

In STATA homoscedasticity can be tested for using the Breusch-Pagan test and White's test. These tests are often used in conjunction with visual examination of a plot of the standardised residuals. If inspection of the graph and tests indicates that heteroscedasticity exists at a unacceptable level, there are 2 main methods to address the issue. First, it may be useful to transform the variables. Second, STATA gives the option to use robust standard errors which gives more trustworthy results than standard OLS under conditions of heteroscedasticity.

No Multicollinearity

Multiple regression assumes that there is little or no multicollinearity in the data. Multicollinearity exists when two or more of the independent variables are highly correlated with one another. If highly correlated explanatory variables are present within the data, this may lead to inefficient coefficient estimates. I use two methods to investigate multicollinearity within my independent variables. Bivariate correlations are checked using Pearson and Spearman's rank correlation coefficients. Kumari (2008) states that if the pairwise correlation between any two regressors is above 0.8 then multicollinearity is a problem.

Given that my research design involves interaction between two pairs of the independent variables: board social capital & corruption, and board social capital and generalised trust – there is the potential for multicollinearity. There is debate in the literature as to the extent to which the perceived multicollinearity problem amongst interaction terms is an issue. Disatnik & Liron (2016) argue that researchers should not be concerned with multicollinearity when deciding how to run and interpret regression moderated multiple regression (MMR). However, other scholars, for example, Irwin and McClelland (2001) suggest that multicollinearity may present as an issue and support the idea of mean centring variables prior to the computing of interaction effects. As a response to this debate in the literature I re-run my regression with mean centred variables in the robustness testing section –

an approach which is commonly employed within the literature when multicollinearity caused by interaction terms is viewed as a potential issue (e.g Barrosso-Castro et al, 2016).

3.4.4.2 Statistical techniques

Unbalanced Panel Data

The study uses panel data to investigate the relationship between firm performance and a range of explanatory variables. Panel data refers to data which contain time series observations of a number of unique entities (Hsiao, 2007), in this case firms. There are a number of advantages to using panel data, rather than cross-sectional data. First, panel data allows for more accurate inference of model parameters (Hsiao, 2007). Panel data gives more degrees of freedom than cross-sectional data, the efficiency of econometric estimates are improved (Hsiao et al. 1995). Panel data also reduced potential issues pertaining to reliability. Reliability refers to consistency of measurement (Drost, 2011), indeed measures can be viewed as reliable when independent and dependent variables show a stable relationship over time. As the study uses multiple observations made on the same firms over a number of years this helps to ensure reliability.

All of the continuous board-level and accounting variables were winsorised at the top and bottom 1%. Winsorization is a commonly used technique in accounting research to reduce the influence of extreme values on the coefficient estimates (Leone et al, 2019).

The relationship between board social capital and firm performance, as well as the interaction effects of corruption and generalised trust are tested through the following model:

$$\text{Firm Performance} = \beta 0 + \beta 1\text{bsc} + \beta 2\text{bsc x gen\_trust} + \beta 3\text{gen\_trust} + \beta 4\text{cor} + \beta 5\text{bsc x cor} + \beta 6\text{boardsize} + \beta 7\text{outside} + \beta 8\text{ceo\_dua} + \beta 9\text{size} + \beta 12\text{lev} + \beta\ 13\text{liq} + \beta\text{intsaleperc} + \text{accounting standard dummies} + \text{industry dummies} + \text{year dummies}$$

As discussed, multiple regression assumes that the independent variables are not highly correlated with one another. I use three methods to investigate multicollinearity within my independent variables. Bivariate correlations are checked using Pearson and Spearman's rank correlation coefficients. Kumari (2008) states that if the pairwise correlation between any two regressors is above 0.8 then multicollinearity is a problem.

Another methodological issue which is oft present within corporate governance research is endogeneity. It has been suggested that corporate governance research which utilises OLS regression analysis can lead to endogeneity between corporate governance variables and firm performance (Rutledge et al, 2016; Wintoki et al, 2012).

Endogeneity is another issue which may influence the validity of results of the regression. Abdallah et al (2015) state that within quantitative business and management research endogeneity is a major methodological issue. Broadly, endogeneity can be defined as: "a correlation between the explanatory variables and the error term in a regression" (Roberts and Whited (2013, p. 493). Endogeneity may arise from multiple possible sources, Wintoki et al (2010) categorises these sources as: dynamic endogeneity, simultaneity, and unobserved heterogeneity (Schultz, 2010).

Dynamic endogeneity exists if explanatory variables are determined by past realisations of the dependent variable (Yixiang, 2011). For example, past firm performance influencing current corporate governance structure. There are theoretical reasons for why this might happen, for example, if a firm has poor performance, one potential course of action is hiring new board members which changes the corporate governance structure. Simultaneous endogeneity occurs when contemporaneous realisations of the dependent and one or more explanatory effect each other (Abdallah et al, 2015). For example, while this thesis tests the hypothesis that board-level variables influence firm performance, it is also plausible that firm performance effects the board-level variables. Changes in current or expected firm performance may lead to changes in the personnel on the board, potentially altering the level of board social capital. Unobserved heterogeneity is present when the relationship between two or more variables is affected by an unobserved factor (Schultz, 2010). For example, in corporate governance literature researchers often attempt to determine a link between governance and performance. However, there may be firm specific characteristics which are not controlled for, that determine both the firm's governance structure and performance. In other words, there are variables which are missing from the equation specific to the firm because they're hard to capture or quantify, for example, the personality of board members or the CEO.

It is clear that endogeneity is an issue which must be considered in the design of this research. Ullah et al (2018) suggests that around 90% of papers published in top journals fail to adequately address endogeneity bias. There are, however, multiple possible approaches to deal with endogeneity bias and prevent the possible outcome of spurious results (Schultz, 2010). The corporate governance literature indicates that when analysing the board of directors many variables may be determined endogenously which complicates the empirical analysis (Johnson et al, 2013; Kwon and Adler, 2014; Linck et al, 2008).

The potential for endogeneity between the firms board structure and firm performance, which may be the effect of simultaneity, inverse causality or the omission of variables (Hermalin and Weisbach, 1998; Barosso-Castro et al, 2018). The longitudinal nature of the sample and the lag between the dependent and independent variables helps to control for both observed and unobserved time-constrained variables (Kor and Sundarmurthy, 2009). Non-observable heterogeneity arises as a result of the omission of explanatory variables from the model (Kim and Lin, 2010; Kor and Sundarmurthy, 2009). The second step in addressing non-observable heterogeneity is to carry out a thorough literature review and include all the variables which support the concept being studied (Barroso-Castro et al, 2016). As a result of carrying out a comprehensive literature review of studies in this area I identify and include in the study a number of controls which take into account board structure, characteristics of the firm, the firm's external environment and the setting in which it is operating. Moreover, I run additional sensitivity tests where I add further controls pertaining to the firm's external environment.

Conclusion

This study investigates the interaction effect of country-level corruption and generalised trust on the relationship between board social capital and firm performance. In this section I have outlined how data was collected and matched from different sources. I discuss why observations were removed from the sample, and provide a description of my sample split by industry classification and year. This section covers the measurement of the dependent, independent and control variables. For the dependent and each of the key explanatory variables, the section provides a definition, data source and details of the formula used where applicable. The section then addresses the econometric assumptions at the foundations of regression analysis. There is also discussion the issue of endogeneity in corporate governance studies. Finally, the section discusses the approach to data collection and sample selection.

3.5 Data analysis and Discussion

3.5.1 Descriptive Statistics

The univariate analysis examines descriptive statistics for each of the variables. The sample is an unbalanced panel consisting of 37,109 firm-year observations from 7,164 unique firms, with observations from 2005 – 2015. As is typical of research which links corporate governance to firm performance (e.g Geletkayncz and Boyd, 2011; Haynes and Hillman, 2010; Barosso-Castro et al, 2016), the research recognises a time lag effect. In this research, I employ various time lags between the predictor and dependent variables stretching from 1 to 3 years – as such, I have financial data up to the year 2018. Table 4 provides variable definitions while the descriptive statistics are presented in Table 5.

Table 4: Variable definition

Label	**Description**	**Source**
Tobins's Q	Tobin's Q, a market performance proxy, measured as the ratio of market value of equity and debt divided by total assets.	Market value of equity (MV) Debt (WC03255) Total assets (WC02999)
Tobin's Q (t+1)	The market performance proxy, measured as tq (t+1).	Market value of equity (MV) Debt (WC03255) Total assets (WC02999)
Tobin's Q (t+2)	The market performance proxy, measured as tq (t+2).	Market value of equity (MV) Debt (WC03255) Total assets (WC02999)
Tobin's Q (t+3)	The market performance proxy, measured as tq (t+3).	Market value of equity (MV) Debt (WC03255) Total assets (WC02999)
Tobin's Q (alternate proxy)	An alternative Tobin's Q (tq2) calculation, measured as Market Value (MV) per total assets (ta100).	Market value of equity (MV) Total assets (WC02999)
Tobin's Q (alternate proxy, t+1)	An alternative market performance proxy, measured at tq2 (t+1)	Market value of equity (MV) Total assets (WC02999)
Tobin's Q (alternate proxy, t+2)	An alternative market performance proxy, measured at tq2 (t+2)	Market value of equity (MV) Total assets (WC02999)
Tobin's Q (alternate proxy, t+3)	An alternative market performance proxy, measured at tq2 (t+3)	Market value of equity (MV) Total assets (WC02999)
Board social capital	Board social capital, measured at the firm level the formula:	The data for the construction of variable was gathered

	Total number of Director Interlocks / Total Number of Directors.	from BoardEx 'Board Summary' file.
Generalised trust	Generalised trust, measured at the country level. The variable was measured by the answers to the question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" Respondents who replied "Most people can be trusted" were coded as 1. Respondents who replied "Can't be too careful" were coded as 0. An aggregate value is calculated at the country level with higher values indicating higher levels of generalised trust.	World Value Survey. Question -V23 "Most people can be trusted?"
Generalised trust (alternate proxy)	An alternative measure of generalised trust, for the European countries within the sample. The variable was measured by the answers to the question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" Respondents replied on a scale from 10 indicating that "Most people can be trusted" to 1 indicating that "Can't be too careful". An aggregate value is calculated at the country level with higher values	European Social Survey

	indicating higher levels of generalised trust.	
Corruption (perceptions of)	Corruption is measured using the Corruption Perception Index (CPI). This measure captures perceptions of corruption which as discussed is distinct from actual corruption. As in Mazzi et al (2019), the value of the CPI score of each country was subtracted from the largest possible value, 100. This makes the results easier to interpret – the higher the score, higher the perceived corruption in a country and vice versa.	Transparency International
Corruption (perceptions of) (alternate measure)	The Control of Corruption estimate is an alternative corruption measure. This measure captures perceptions of corruption which as discussed is distinct from actual corruption. Countries are assigned a score in each year ranging from -2.5 to 2.5. To make the values easier to interpret, I multiplied the values of the control of control of corruption estimate by -1. Higher scores are indicative of greater levels of perceived corruption.	World Bank
CEO duality	Firm CEO duality. Dummy variable equal to 1 in firm year observations where the CEO also holds the position of the chairman of the board and 0 otherwise.	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.
Board social capital (alternate measure)	Total Interlocks, calculated as the sum total of the number of interlocks directors in one firm have with other organisations	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.

Number of outside directors on the board	Non-executive director on board, calculated as the number of non-executive directors on the board of the firm.	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.
Board size	The total number of directors on the board of the firm	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.
Proportion of outside directors	Percentage of outside directors on the focal firm's board. Measured as the ratio between non-executive directors and the total number of directors.	BoardEx The data for the construction of variable was gathered from BoardEx 'Board Summary' file. The variable was computed in STATA.
Total assets (ta)	Total Assets measured in local currency	Total Assets (WC02999)
Total assets ta100	Total Assets measured in local currency divided by 100	Total Assets (WC02999.
tausd	Total Assets in U.S Dollars	Total Assets U.S Dollars (WC07230)
tausd100	Total Assets in hundreds of U.S Dollars. Measured as the ratio: taus / 100.	Total Assets U.S Dollars (WC07230)
Firm size	Firm size, measured as the natural logarithm of total assets in hundreds of USD. log(tausd100)	Total Assets U.S Dollars (WC07230)
Liqudity	Liquidity, measured as the ratio between current assets and current liabilities	Current assets (WC02201) Current liabilities (WC03101)
Leverage	Leverage, measured as the ratio between total debt and book value of equity	Total debt (WC03255) Common Equity (WC07220)
International sales percentage	Percentage of international sales of total sales	intsales (WC08731)
Market value	The index market value, calculated as the sum of the share price multiplied by the number of	Market Value (MV)

	ordinary shares in issue for each index constituent.	
Debt	Total debt measured in local currency	debt (WC03255)
Human Development Index score	Human development index – A composite index measuring average achievement in human development. A higher score is equal to higher levels of development.	United Nations. Development Reports

***Table** 5: Summary statistics for dependent and independent vars (N, mean, median, min, max)*

Variable	N	Mean	SD	Median	Min	Max
Tobin's Q	37109	1.21	1.26	0.87	0.04	10.36
Tobin's Q (t+1)	37109	1.18	1.24	0.85	0.04	10.36
Tobin's Q (t+2)	37109	1.16	1.22	0.84	0.04	10.36
Tobin's Q (t+3)	37109	1.16	1.28	0.83	0.03	11.29
Tobin's Q (t+1,2,3)	37109	3.51	3.47	2.57	0.11	32.01
Tobin's Q (alternate proxy)	37109	1	1.29	0.64	0	10.07
Tobin's Q (alternate proxy, t+1)	37109	0.97	1.26	0.61	0	10.07
Tobin's Q (alternate proxy, t+2)	37109	0.94	1.24	0.6	0	10.07
Tobin's Q (alternate proxy, t+3)	37109	0.94	1.28	0.59	0	11
Tobin's Q (alternate proxy, t+1,2,3)	37109	2.85	3.53	1.87	0	31.14
Board social capital	37109	3.45	1.85	3	1	11.25
Board social capital, alternate proxy	37109	29.13	19.2	24	6	96
Corruption	37109	26.54	12.92	25	8	74
Corruption, alternate proxy	37109	-1.43	0.63	-1.46	-2.26	0.92
Generalised trust	37109	0.42	0.14	0.39	0.07	0.86
Generalised trust, alternate proxy	12369	5.25	0.66	5.34	3.6	6.84
Board size	37109	8.32	2.86	8	3	20
Proportion of outside directors	37109	56.94	26.3	60	0	100
CEO duality	37109	0.17	0.37	0	0	1
Firm size	37109	13.47	2.07	13.49	5.41	19.9
Leverage	37109	72.03	2203.03	0.42	0	2.73E+05
Liquidity	37109	2.78	26.32	1.71	-1220.68	4759.4
Market value	37109	4.82E+07	1.65E+09	5.15E+05	0	2.25E+11
Debt	37109	2.93E+07	2.19E+08	1.36E+05	0	2.45E+09
International sales percentage	37109	34.01	34.56	24.15	0	100
Human Development Index	37109	0.89	0.05	0.91	0.56	0.94

All continuous board-level and accounting variables have been winsorised at 1% and 99%

Firm performance

Firm market performance is measured using two proxies: Tobin's Q and Tobin's Q (alternate proxy). The mean (median) value of Tobin's Q is 1.21 (0.87), as the mean is greater than the median this indicates that the data is positively skewed. The minimum value is 0.04 and the maximum value is 10.36. The mean (median) value of Tobin's Q (alternate proxy) is 1.00 (0.64), as the mean is greater than the median this indicates that the data is positively skewed. The minimum value is 0 and the maximum value is 10.07. Skewness has implications for the subsequent testing of the data. Where skewness exists, the assumption of normality is violated. Where the assumption of normality is violated, parametric tests may provide spurious results. As a response to the violation of normality in the dependent variable, non-parametric tests are used alongside their parametric equivalents throughout the analysis.

Board social capital

The mean (median) value of board social capital is 3.50 (3.00) respectively, these values are comparable with other recent studies (e.g Barroso-Castro, 2016). As the mean is greater than the median this indicates the data is positively skewed. Board social capital has minimum value of 1 and maximum value of 25. The maximum value of social capital is higher than in previous studies - this is a result of the larger and more internationally diverse sample in this research – past research on board social capital has focused exclusively on single country studies and use fewer firm-year observations.

The mean (median) value of Board social capital (alternate proxy) is 29.1 (24.00). As the mean is greater than the median this indicates that the data is positively skewed. The maximum value of interlocks is 96, while the minimum value is 6.

Country-level variables

I measure both country-level corruption and country-level generalised trust. For each of these constructs I use two proxies. In line with prior research which assesses the influence of country-level variables on firm-level corporate behaviour (e.g Kanagaretnam et al, 2018a; Guan et al, 2020; Hartlieb et al, 2020), corruption and generalised trust values are based on the country of domicile of each firm in the sample.

Corruption

I measure corruption using two measures of corruption perception: Corruption (cpi) and Corruption (alternate proxy, cci). Corruption is measured on a scale of 1 – 100. The mean (median) value is 26.54 (25.00). The maximum value is 74 while the minimum value is 8. cc is measured on a scale of -2.5 to 2.5. For my alternate corruption proxy, the mean (median) value is -1.43 (-1.46). The maximum value is 0.92, while the minimum value is -2.26.

Generalised trust

I measure generalised trust using two measures: Generalised trust and Generalised trust (alternate proxy). The mean (median) value of Generalised trust is 0.42 (0.39). The maximum and minimum value of Generalised trust are 0.86 and 0.07 respectively.

Unfortunately, to my knowledge, other than the IVS, there is no other global survey of generalised trust. My Generalised trust (alternate proxy) is constructed using data from the European social survey (ESS). As the ESS provides data for only European country, there is fewer observations for Generalised trust (alternate proxy) than the other variables in the study. Values for Generalised trust (alternate proxy) range between 0 – 10, higher scores are indicative of higher generalised trust within a country. The mean (median) value of Generalised trust (alternate proxy) is 5.25 (5.34). The maximum and minimum value of Generalised trust (alternate proxy) are 3.60 and 6.84 respectively.

Table 6: Total number of observations by industry and year

	Total	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Technology	4318	328	331	351	350	343	376	415	434	447	461	482
Telecommunication	1740	115	128	140	143	143	162	177	177	178	187	190
Health Care	3502	231	253	262	247	250	326	329	346	372	411	475
Reall Estate	791	16	19	27	34	31	54	58	69	131	167	185
Consumer Discretionary	7088	413	439	475	510	512	644	689	731	832	875	968
Consumer Staples	2511	123	135	152	154	168	217	245	283	330	338	366
Industrials	8794	457	503	606	641	654	830	902	953	1062	1073	1113
Basic Materials	3610	130	155	199	230	260	355	406	443	479	477	476
Energy	3118	123	158	187	228	227	290	318	350	398	421	418
Utilities	1637	69	79	96	99	111	152	172	183	218	225	233
Total	37109	2005	2200	2495	2636	2699	3406	3711	3969	4447	4635	4906

Table 6 provides a summary of the make-up of the sample by industry and year. The industry grouping for each firm was determined by the ICB classification. There are 11 different ICB classifications, 10 of which are represented in this sample as financials are excluded. Firms in the sample belong to the following industries: Technology (12% of the sample), Telecommunications (5% of the sample), Heath Care (9% of the sample), Real Estate (2% of the sample), Consumer Discretionary (18% of the sample), Consumer Staples (7% of the sample), Industrials (23% of the sample), Basic Materials (10% of the sample), Energy (8% of the sample) and Utilities (4% of the sample). Table 3 also shows the distribution of the sample across years. The year 2005 has the fewest number of observations (2005) while 2015 has the greatest number of observations (4906). The number of firm-year observations increases across the course of the sample, this can be attributed to the coverage of BoardEx increasing over time, particularly in regions outside of North America and EU.

Table 7: Total number of observations and means of key variables by country

Country	N	Tobin's Q (t+2)	Tobin's Q (alternate proxy, t+2)	Board social capital	Generalised trust	Corruption
Argentina	12	0.37	0.02	11.17	0.23	66.83
Australia	2,539	1.59	1.4	7.2	0.51	15.99
Austria	202	0.92	0.65	3.24	0.34	23.42
Belgium	328	1.32	1.09	4.21	0.32	26.15
Brazil	432	1.09	0.74	5.6	0.07	59.89
Canada	2,101	1.19	0.96	3.45	0.45	15.66
Chile	99	0.96	0.64	9.43	0.13	28.68
China	909	0.71	0.46	5.8	0.6	62.93
Colombia	28	0.82	0.47	6.5	0.07	63.39
Croatia	16	1.47	1.36	1.88	0.2	55.12
Cyprus	16	0.53	0.15	3.44	0.11	36.88
Czech Republic	13	0.28	0.02	2.38	0.27	49.92
Denmark	209	1.7	1.5	5.29	0.64	8.46
Egypt	11	0.75	0.36	7.18	0.2	67.73
Finland	358	1.13	0.88	4.57	0.66	9.51
France	1,788	0.99	0.77	5.43	0.32	29.39
Germany	672	1.22	1.04	2.76	0.39	20.5
Greece	151	1.01	0.65	2.68	0.2	59.38
Hong Kong SAR	1,493	0.45	0.22	7.79	0.46	22.9
Hungary	18	0.26	0	2.06	0.12	48.17
Iceland	21	0.78	0.54	4.67	0.44	17.81
Indonesia	134	0.71	0.39	6.28	0.26	66.46
Italy	365	0.97	0.69	4.2	0.36	55.95
Japan	949	0.29	0.08	3.45	0.39	24.76
Kuwait	1	0.42	0.33	5	0.3	56
Luxembourg	100	1.01	0.68	4.42	0.28	17.05
Malaysia	459	1.23	0.99	7.56	0.09	50.36
Malta	5	3.91	3.8	2.8	0.2	43.2
Mexico	198	1.12	0.8	10.01	0.14	66.92
Morocco	11	0.38	0.22	9.45	0.15	65.09
Netherlands	317	1.18	0.96	3.69	0.58	13.6
New Zealand	127	1.28	1.04	12.65	0.55	8.82
Nigeria	52	1.84	1.63	6.13	0.15	73.62
Norway	362	0.51	0.22	3.83	0.58	13.59
Pakistan	1	0.79	0.67	4	0.24	70
Peru	18	0.89	0.63	11.22	0.08	63.33
Poland	66	0.49	0.25	2.86	0.23	43.14
Portugal	166	0.86	0.47	7.78	0.17	37.73
Qatar	1	0.57	0.11	8	0.21	31
Republic Of Ireland	265	1.25	1	7.74	0.41	25.11
Romania	1	0.61	0.55	3	0.08	54
Russian Federation	199	0.97	0.67	3.42	0.28	72.72
Singapore	665	0.91	0.65	10.9	0.35	12.92
Slovenia	9	1.26	1.23	1.11	0.2	38
South Africa	568	0.41	0.22	8.57	0.22	56.22
Spain	309	1.48	1.14	3.87	0.25	37.94
Sweden	574	0.5	0.3	4.74	0.66	9.55
Switzerland	698	1.58	1.39	4.73	0.6	12.2
Thailand	87	0.5	0.14	14.01	0.34	63.08
Turkey	90	0.8	0.51	3.21	0.12	54.22
Ukraine	3	0.31	0.02	2.33	0.26	73.67
United Kingdom	5,054	1.46	1.29	7.09	0.5	21.06
United States	13,826	1.23	1.02	3.09	0.39	26.68
Uruguay	8	0.57	0.54	10.62	0.21	29.75
Vietnam	5	1.11	0.73	5.2	0.4	69

Table 7 shows descriptive statistics for the countries included in the sample, including the number of observations per country and also the means of the key variables. We can see from that table there is a variation in the sample across countries. The countries with the greatest number of firm year observations are: United States (13,826), United Kingdom (5,054), Australia (2,539), Canada (2,101) and France (1,788). The countries in the sample with the fewest firm year observations generally have less developed economies and include: Uganda (1), Romania (1), Qatar (1), and Kuwait (1).

It is clear that there is large variation in levels of board social capital internationally. Table 7 shows that mean board social capital is highest in Portugal (7.31), Thailand (6.75), New Zealand (6.18), Argentina (5.57) and Peru (5.4). While the five countries with the lowest levels of board social capital are found in Europe: Slovenia (1.38), Japan (1.74), Croatia (1.96), Pakistan (2.0), and Hungary (2.22). There is a small body of research which looks at the socioeconomic drivers of interlocking directors between firms. This research suggests that interlocking directorate are more common in emerging economies rather than in developed economies like the U.K or the U.S (Jackling and Johl, 2009).

There are two main reasons why higher levels of interlocks and therefore higher levels of board social capital are likely to exist in emerging rather than developed economies. First, in emerging economies there is a higher prevalence of family-owned business groups (Ataay, 2016). Business groups are defined as: "a collection of legally separate firms bound together in some formal and/or informal ways" (Granovetter, 2005, p.429). Family-owned business groups tend to dominate corporations in emerging economies, and within these groups directors are often recruited on to the board of directors based on social or familial ties (Kang & Shivdasani, 1995; Khanna & Rivkin, 2001), indeed in emerging economies business groups function, in part, to deal with underdeveloped labour markets and institutional voids. Family-owned business in emerging economies are thought to utilise interlocking directorate as a strategy to coordinate and align the priorities of different organisations (Maman, 1999). Secondly, Jackling and Johl (2009) theorise that the high levels of interlocking directorate within emerging economies can be partially explained by lack of people with the correct level of experience to serve on the board of directors, thus firms have a smaller pool of potential directors to draw on than those in developed economies. A smaller group of eligible candidates means that firms are more likely to share the same directors. In developed economies, and in Europe, there is a wider labour pool and less of a concentration of family-owned business groups.

Table 4 also demonstrates a broad range in levels of generalised trust and perceived corruption within the sample. Brazil, Romania, and Peru have the lowest levels of generalised trust, rating at 0.06, 0.08 and 0.08 respectively, and at the other end of the spectrum Denmark and Finland had the highest levels of generalised trust with scores of 0.65 and 0.66 respectively. This broad range in values of trust is important as it allows the research to test the hypothesis which concerns the interaction effect of trust on the relationship between board social capital and firm performance. The concentration of the highest trust countries in Scandinavia and the lowest trust countries in South America replicates the findings of past research on generalised trust (e.g Delhey and Newton, 2004).

Scandinavian countries, Finland and Sweden also have the lowest level of mean corruption scoring 9.51 and 9.55 respectively. This link between high trust and low corruption is in line with past research which has suggested that corruption erodes social trust (Bjornskov, 2011; Rothstein, 2014). The correlation between trust and corruption is explored in Table 9. At the other end of the spectrum, Ukraine (73.63) and Russia (72.72) have the highest levels of mean corruption.

***Table** 8: Total number of observations and means of key variables by country*

Year	N	Tobin's Q	Tobin's Q (alternate proxy)	Board social capital	Generalised trust	Corruption
2005	2,005	1.47	1.27	4.28	0.38	21.34
2006	2,200	1.27	1.06	4.45	0.38	22.77
2007	2,495	0.93	0.72	4.65	0.38	23.82
2008	2,636	1.09	0.9	4.85	0.38	25.24
2009	2,699	1.22	1.02	4.89	0.38	24.73
2010	3,406	1.12	0.91	5	0.4	26.96
2011	3,711	1.11	0.91	5	0.42	26.55
2012	3,969	1.21	0.98	5.09	0.43	27.65
2013	4,447	1.14	0.91	5.11	0.43	28.96
2014	4,635	1.1	0.86	5.14	0.45	28.78
2015	4,906	1.22	0.98	5.07	0.46	27.86
Cuzick Test		-12.18***	-17.99***	15.86***	53.48***	14.26***

Descriptive statistics provided in Table 8 demonstrate the mean value of each of the key variables in each year of the sample. The table also presents the results of Cuzick test, which is a non-parametric test for trends across ordered groups (Cuzick, 1985). There is a significant negative trend across all of the firm performance proxies, indicating that they decrease over time.

Table 5 shows that there is a significant positive trend in Board social capital. I investigate this trend further in untabulated tests. Based on the results of untabulated tests on Board social capital by country, there is positive and significant trend in the United States, while there is a negative and significant trend in the United Kingdom and Australia. The country level variables, Generalised trust and Corruption, both also show a significant positive trend from 2005 to 2015 – indicating that both corruption and generalised trust increase over this period.

To improve understanding of the underlying data, I estimate the median corruption, generalised trust and internationalisation at any given year. In Tables 6, 7, and 8, I split the sample into sub samples using median value of key variables and generate descriptive statistics for each group.

Table 9: Summary statistics by median corruption (mean, median, standard deviation, mix, max)

By median Corruption	Tobin's Q	Tobin's Q (alternate proxy)	Board social capital	Board social capital (alternate proxy)	Corruption	Corruption (alternate proxy)	Generalised trust	Generalised trust (alternative proxy)	Board size	Proportion of outside directors	CEO Duality	Firm size	Leverage	Liquidity	Market value	Debt	International sales %	Human Development Index
N 0	32757.00	32757.00	32757.00	32757.00	32757.00	32757.00	32757.00	10951.00	32757.00	32757.00	32757.00	32757.00	32757.00	32757.00	32757.00	32757.00	32757.00	32757.00
Mean	1.20	0.99	3.42	28.12	22.47	-1.62	0.43	5.35	8.12	59.07	0.17	13.33	7.87	2.89	14300000.00	20100000.00	34.85	0.91
Median	0.86	0.63	3.00	24.00	24.00	-1.57	0.39	5.36	8.00	64.00	0.00	13.33	0.36	1.75	444540.00	90300.00	25.75	0.91
SD	1.24	1.25	1.82	18.27	6.03	0.29	0.12	0.61	2.74	26.36	0.38	2.08	143.19	28.00	268000000.00	172000000.00	34.86	0.01
Min	0.04	0.00	1.00	6.00	8.00	-2.26	0.09	3.64	3.00	0.00	0.00	5.41	0.00	-1220.68	0.00	0.00	0.00	0.77
Max	10.36	10.07	11.25	96.00	34.00	-0.98	0.86	6.84	20.00	100.00	1.00	19.90	10999.19	4759.40	12600000000.00	2450000000.00	100.00	0.94
N 1	4352.00	4352.00	4352.00	4352.00	4352.00	4352.00	4352.00	1418.00	4352.00	4352.00	4352.00	4352.00	4352.00	4352.00	4352.00	4352.00	4352.00	4352.00
Mean	0.90	0.62	3.69	36.75	57.12	0.05	0.28	4.42	9.84	40.91	0.14	14.46	554.96	1.95	303000000.00	98200000.00	27.63	0.76
Median	0.64	0.29	3.25	30.00	58.00	0.07	0.23	4.39	9.00	40.00	0.00	14.51	1.82	1.44	1615775.00	1418372.00	13.68	0.75
SD	1.06	1.07	2.00	23.78	9.49	0.51	0.19	0.49	3.23	19.45	0.34	1.66	6401.05	2.37	4760000000.00	427000000.00	31.51	0.07
Min	0.04	0.00	1.00	6.00	30.00	-1.34	0.07	3.60	3.00	0.00	0.00	7.78	0.00	0.13	0.00	0.00	0.00	0.56
Max	10.36	10.07	11.25	96.00	74.00	0.92	0.65	5.55	20.00	100.00	1.00	19.77	272516.10	55.90	225000000000.00	2450000000.00	100.00	0.89
t-test	0.30***	0.37***	-0.27***	-8.63***	-34.65***	-1.67***	0.15***	0.93***	-1.72***	18.16***	0.03***	-1.13***	-547.09***	0.94***	-288700000***	-78100000***	7.22***	0.15***
t-stat	15.19	18.45	-9.18	-28.15	-330.00	-320.00	75.21	55.67	-38.08	43.90	5.68	-34.33	-15.44	2.21	-10.85	-22.24	12.97	322.09
Mann-Whitney test	0.22***	0.35***	-0.25***	-6***	-34***	-1.64***	0.16***	0.96***	-1.00***	24***	0***	-1.18***	-1.45***	0.32***	-1171235***	-1328072***	12.08***	0.16***
z-stat	26.96	35.65	-8.35	-22.91	-107.62	-107.27	59.15	48.3	-35.16	48.63	5.68	-34.34	-51.55	20.82	-38.7	-49.58	11.1	106.5

(0 = group with with lower than / equal to median cor. 1 = group with with higher than median cor). *, ** & *** denote significance at 10%, 5% and 1%

Table 9 displays summary statistics for each variable by median corruption. Group 0 are firms from countries with less than median corruption and group 1 are firms from countries with greater than median corruption. I measure median corruption in each year of the sample to avoid firms being incorrectly classified. From inspection, we see that there is large variation in the level of firms in each of the groups (32,757 vs 4,352) – this is reflective that countries with greater corruption tend to have less developed economies (Hessami, 2014; Baldi, Bottasso, Conti, & Piccardo, 2016; Hessami & Silke, 2016), and consequently fewer firm year observations.

First, I inspect the difference in the two performance proxies. The table shows that firms in countries with less corruption have slightly greater Tobin's Q mean (median) difference 0.30 (0.22) (p value of difference 0.01). Firms also have greater Tobin's (alternate proxy) in countries with less corruption mean (median) difference is 0.37 (0.355) (p value of difference, 0.01). Consistent with past research (e.g De Rosa, Gooroochurn, & Görg, 2015; Shleifer & Vishny,1993; Fisman & Svensson, 2007; Thakur et al, 2020; Wei, 2000; Murphy, Shleifer and Vishny, 1991), these results suggest that corruption has a negative effect on firm performance.

The results show that mean (median) Board social capital is greater in countries with more corruption -0.27 (-0.25) (p value of difference 0.01). Mean (median) Board social capital (alternate proxy) is greater in more corrupt countries -8.63 (-6) (p value of difference 0.01). As I conjecture in my hypothesis, it is possible that corruption increases the propensity of board interlocks to have a positive influence on firm performance. Therefore, firms in corrupt countries might be more inclined to recruit interlocked directors than those in less corrupt countries.

The table also shows that where corruption is higher, Generalised trust is lower mean (median) difference 0.15 (0.16), p value of difference 0.01. The difference in mean (median) values is congruent with past research which has suggested that that corruption has a detrimental effect on generalised trust (Bjornskov, 2011; Rothstein, 2014).

Mean (median) Board size is greater in countries with more corruption -01.72 (-1.00), p value of difference <0.01. There is a significantly greater proportion of outside directors in less corrupt countries, mean (median) difference 18.16 (24) (p value of difference <0.01). Higher proportion of non-executive directors on board is often seen as a sign of good corporate governance and has been linked to lower levels of financial reporting problems and corporate fraud (Song and Windram, 2004).

CEOs are less likely to hold the position of the chairman of the board in more corrupt countries, mean (median) difference 0.03 (0.00) (p value of difference <0.01). There are reasons that firms in

more corrupt countries may avoid combining the roles of CEO and board chair. Research has suggested CEO duality may lead to corruption at an organisational level because of a heightened concentration of power in one potentially self-serving individual individual (Syriopoulos & Tsatsaronis, 2006; Tuliao and Chen, 2016).

Table 10: Summary statistics by median generalised trust (mean, median, standard deviation, mix, max)

By median Generalised trust	Tobin's Q	Tobin's Q (alternate proxy)	Board social capital	Board social capital (alternate proxy)	Corruption	Corruption (alternate proxy)	Generalised trust	Generalised trust (alternative proxy)	Board size	Proportion of outside directors	CEO Duality	Firm size	Leverage	Liquidity	Market value	Debt	International sales %	Human Development Index
N 0	5307.00	5307.00	5307.00	5307.00	5307.00	5307.00	5307.00	3078.00	5307.00	5307.00	5307.00	5307.00	5307.00	5307.00	5307.00	5307.00	5307.00	5307.00
Mean	0.99	0.73	4.23	40.07	42.80	-0.69	0.21	4.58	9.55	37.83	0.19	14.12	427.34	1.90	281000000.00	97300000.00	36.77	0.82
Median	0.73	0.44	3.78	34.00	42.00	-0.58	0.22	4.45	9.00	38.00	0.00	14.22	0.93	1.41	963500.00	603173.00	31.63	0.85
SD	1.07	1.09	2.30	24.84	17.51	0.88	0.08	0.49	3.43	21.80	0.39	1.86	5740.72	3.44	4130000000.00	433000000.00	32.95	0.08
Min	0.04	0.00	1.00	6.00	8.00	-2.25	0.07	3.60	3.00	0.00	0.00	7.16	0.00	0.08	0.00	0.00	0.00	0.56
Max	10.36	10.07	11.25	96.00	74.00	0.92	0.35	5.55	20.00	100.00	1.00	19.60	272516.10	142.86	225000000000.00	2450000000.00	100.00	0.91
N 1	31802.00	31802.00	31802.00	31802.00	31802.00	31802.00	31802.00	9291.00	31802.00	31802.00	31802.00	31802.00	31802.00	31802.00	31802.00	31802.00	31802.00	31802.00
Mean	1.19	0.98	3.32	27.30	23.82	-1.55	0.45	5.47	8.12	60.13	0.16	13.36	12.74	2.92	9372460.00	17900000.00	33.55	0.90
Median	0.86	0.63	3.00	23.00	24.00	-1.55	0.39	5.37	8.00	67.00	0.00	13.36	0.37	1.78	465195.00	97858.50	22.82	0.91
SD	1.24	1.26	1.73	17.43	9.60	0.47	0.11	0.56	2.70	25.63	0.37	2.08	374.14	28.40	575000000.00	154000000.00	34.80	0.04
Min	0.04	0.00	1.00	6.00	8.00	-2.26	0.32	4.44	3.00	0.00	0.00	5.41	0.00	-1220.68	0.00	0.00	0.00	0.64
Max	10.36	10.07	11.25	96.00	74.00	0.84	0.86	6.84	20.00	100.00	1.00	19.90	33531.34	4759.40	72900000000.00	2450000000.00	100.00	0.94
t-test	-0.20***	-0.25***	0.91***	12.7***	18.98***	0.86***	-0.24***	-0.86***	1.43***	-22.3***	0.02***	0.76***	414.61***	-1.02***	271627540***	79400000***	3.22***	-0.09***
t-stat	-10.79	-13.46	33.82	46.11	115.50	105.72	-150.00	-78.36	34.24	-59.86	4.35	24.92	12.71	-2.62	11.10	24.65	6.28	-130.00
Mann-Whitney test	-0.12***	-0.19***	0.78***	11***	18***	0.96***	-0.17***	-0.92***	1***	-29***	0***	0.86***	0.56***	-0.36***	498305***	505314.5***	8.81***	-0.06***
z-stat	-15.60	-21.30	28.50	36.20	74.40	61.70	-116.60	-68.80	29.87	-59.72	4.35	25.71	37.75	-26.13	25.28	37.20	9.42	-98.18

(0 = group with with lower than / equal to median gen_trust. 1 = group with with higher than median gen_trust) *, ** & *** denote significance at 10%, 5% and 1%

Table 10 displays summary statistics for each variable by median generalised trust. Group 0 are firms from countries with less than median corruption and group 1 are firms from countries with greater than median generalised trust. I measure median generalised trust in each year of the sample to avoid firms being incorrectly classified. From inspection, we see that there is large variation in the number of firms in each of the groups (5,307 vs 31,802). The greater number of observations in group 1 is reflective of the greater number of firms in my sample from countries which score above the median in generalised trust, like the United States and the United Kingdom.

First, I inspect the difference in the market performance proxies, the table shows that firms in countries with lower trust have lower Tobin's Q mean (median) difference is -0.20 (-0.12) (p value of difference, 0.01). Firms in countries with lower trust also tend to have lower Tobin's Q (alternate proxy), mean (median) difference -0.25 (-0.19) (p value of difference, 0.01). Overall, country-level generalised trust seems to have a positive effect on market performance of firms. This is in line with research which suggests generalised trust is positively associated with economic growth (Algan and Cahuc, 2014; Knack and Keefer, 1997; Zac and Kneek, 2001, Beugelsdijk et al, 2004), and also research which suggests being situated in areas with greater trust improves investors' perceptions of the firm (Pevzner et al, 2015).

The results show that mean (median) Board social capital is greater in countries with less trust 0.91 (0.78) (p value of difference 0.01). Mean (median) Board social capital (alternate proxy) is also greater in countries with lower trust 12.7 (11) (p value of difference 0.01). A potential explanation for this finding is that when firms do not benefit from 'endowed trust' of being in a high trust society, they look for other ways to accumulate trust. One alternate method of accumulating trust or social capital is to recruit well-connected directors to the board.

The table also shows that that where Generalised trust is high, mean (median) corruption is markedly lower, mean difference 18.98 (18.00) (p value of difference, 0.01). This is congruent with past literature which has found that corruption has a deleterious effect on social trust (Bjornskov, 2011; Rothstein, 2014).

There is a higher proportion of outside directors in more trusting countries, mean (median) difference –22.3 (-22.9) (p value of difference <0.01). Non-executives directors on board is often seen as a sign of good corporate governance. It is reasonable that in more trusting countries, there is a greater proportion of outside directors. This is because the more trusting countries tend to be those with better developed economies and larger organisations – research has found that larger firms are more likely to have a higher proportion of non-executive directors (Berry and Perren, 2001)

Less trusting countries have larger board size mean (median) difference 1.43 (1.00) (p value of difference <0.01). Larger board size in less trusting countries could perhaps be explained by resource theory. Inefficient or weak formal institutions are often found in countries with low levels of generalised trust (Freitag and Traunmuller, 2009). As a response to the lower quality of formal institutions, firms may recruit more directors to the board.

There is only a slight difference in CEO duality between the two samples with CEOs marginally more likely to hold the position of the chairman of the board in less trusting countries, mean (median) difference 0.02 (0.00) (p value of difference <0.01).

Table 11: Summary statistics by median international sales percentage (mean, standard deviation, median, mix, max)

By median International sales %	Tobin's Q	Tobin's Q (alternate proxy)	Board social capital	Board social capital (alternate proxy)	Corruption	Corruption (alternate proxy)	Generalised trust	Generalised trust (alternative proxy)	Board size	Proportion of outside directors	CEO Duality	Firm size	Leverage	Liquidity	Market value	Debt	International sales %	Human Development Index
N 0	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00	18559.00
Mean	1.19	0.96	4.65	37.31	28.22	-1.33	0.41	5.14	8.04	58.17	0.16	13.16	98.18	3.16	34900000.00	27400000.00	4.29	0.89
Median	0.83	0.58	4.00	29.00	26.00	-1.41	0.39	5.34	8.00	60.00	0.00	13.11	0.41	1.67	370025.00	81921.00	0.00	0.91
SD	1.28	1.30	3.30	30.61	13.44	0.66	0.13	0.58	2.69	25.18	0.37	2.08	2298.13	35.80	916000000.00	217000000.00	7.06	0.06
Min	0.04	0.00	0.00	0.00	8.00	-2.26	0.07	3.60	3.00	0.00	0.00	6.03	0.00	0.02	0.00	0.00	0.00	0.56
Max	10.36	10.07	25.00	240.00	74.00	0.92	0.86	6.84	20.00	100.00	1.00	19.60	166598.50	4759.40	72900000000.00	2450000000.00	24.17	0.94
N 1	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00	18550.00
Mean	1.14	0.93	5.22	45.37	24.84	-1.52	0.42	5.30	8.61	55.81	0.17	13.78	45.04	2.39	61000000.00	30900000.00	63.75	0.90
Median	0.84	0.62	4.00	34.00	24.00	-1.60	0.39	5.34	8.00	60.00	0.00	13.84	0.43	1.74	694380.00	202308.00	61.97	0.91
SD	1.16	1.18	3.71	38.02	12.10	0.58	0.14	0.69	2.99	27.30	0.37	2.02	2089.54	9.77	2140000000.00	219000000.00	23.92	0.05
Min	0.04	0.00	0.00	0.00	8.00	-2.26	0.07	3.60	3.00	0.00	0.00	5.41	0.00	-1220.68	0.00	0.00	24.18	0.56
Max	10.36	10.07	25.00	240.00	74.00	0.92	0.86	6.84	20.00	100.00	1.00	19.90	272516.10	338.98	225000000000.00	2450000000.00	100.00	0.94
t-test	0.05***	0.03***	-0.58***	-8.06***	3.38***	0.19***	-0.02***	-0.17***	-0.57***	2.35***	0.00	-0.63***	53.14**	0.77***	-26100000.00	-3500000.00	-59.46***	-0.01***
t-stat	3.96	2.69	-15.82	-22.57	25.52	29.07	-11.76	-13.35	-19.34	8.65	-0.45	-29.56	2.34	2.83	-1.53	-1.55	-330.00	-14.60
Mann-Whitney test	-0.01	-0.04	0***	-5***	2***	0.19***	-0.00***	0***	0***	0***	0.00	-0.73***	-0.01	-0.07***	-324355***	-120387***	-61.97***	0.00
z-stat	1.607	-1.053	-16.856	-23.304	27.19	34.509	-8.556	-9.119	-17.682	6.807	-0.45	-29.22	-4.318	-7.006	-25.916	-18.21	-170.02	0.35

(0 = group with with lower than / equal to *median international sales percentage*. 1 = group with higher than median *median international sales percentage)* *, ** & *** denote significance at 10%, 5% and 1%

I also split the sample by International sales percentage. International sales percentage is the ratio of foreign sales to total sales, and is a proxy for the level of internationalisation at the level of the firm. Higher ratios for international sales percentage is indicative of firms which are more international. I investigate whether or not there is significant differences in the key variables when firms are split by median intsalesperc.

Table 11 displays summary statistics for each variable by median intsalesperc. First, I inspect the difference in the two market performance proxies, the table shows that firms with lower international sales percentage have slightly greater mean Tobin's Q, 0.05 (p value of difference, 0.01) and slight lower median Tobin's Q alternate proxy, -0.04 (p value of difference, 0.01). This difference indicates skewness in the data. Similarly, firms with lower intsalesperc have slightly greater mean Tobin's Q, 0.03 (p value of difference, 0.01) and slight lower median Tobin's Q, -0.04 (p value of difference, 0.01). Again, this difference indicates skewness in the data.

Mean (median) Board social capital are significantly greater in firms with higher levels of internationalisation -0.47(-0.36) (p value of difference <0.01) as are mean (median) interlocks -5.70(-5.00) (p value of difference <0.01). This is congruent with past research which has suggested firms may use interlocks as a strategy to gain knowledge when moving into markets abroad (Gonzalez, 2019).

Firms with higher levels of internationalisation are more likely to be headquartered in countries with lower levels of mean (median) corruption 3.38(2.00), (p value of difference <0.01). This is likely because the firms who are more international are from more developed economies which are generally associated with lower levels of corruption than emerging economies.

Table 12: Pearson correlation coefficients and Spearman's rank correlation coefficients

	Tobin's Q	Tobin's Q (alternate proxy)	Board social capital	Board social capital (alternate proxy)	Corruption	Corruption (alternate proxy)	Generalised trust	Generalised trust (alternative proxy)	Board size	Proportion of outside directors	CEO Duality	Firm size	Leverage	Liquidity	Market value	Debt	International sales %	Human Development Index
Tobin's Q	1	0.936***	0.066***	0.021**	0.007	0.006	0.085***	0.022**	-0.056***	0.042***	-0.018**	-0.138***	-0.225***	0.174***	0.099***	-0.201***	0.046***	0.044***
Tobin's Q (alternate proxy)	0.991***	1	0.071***	-0.019**	-0.026***	-0.023**	0.117***	0.052***	-0.128***	0.018**	-0.027***	-0.248***	-0.429***	0.254***	0.017*	-0.368***	0.037***	0.080***
Board social capital	0.040***	0.042***	1	0.782***	-0.030***	-0.013	0.080***	0.112***	-0.053***	0.119***	-0.124***	0.006	-0.079***	-0.092***	-0.015*	-0.033***	0.021**	-0.020**
Board social capital (alternate proxy)	-0.013	-0.029***	0.765***	1	0.072***	0.085***	-0.040***	-0.038***	0.524***	0.158***	-0.028***	0.393***	0.147***	-0.172***	0.344***	0.312***	0.083***	-0.119***
Corruption	-0.048***	-0.066***	-0.100***	0.020**	1	0.948***	-0.549***	-0.770***	0.189***	-0.220***	0.217***	0.082***	0.045***	-0.078***	-0.015*	0.054***	-0.167***	-0.658***
Corruption (alternate proxy)	-0.048***	-0.066***	-0.101***	0.013	0.973***	1	-0.621***	-0.783***	0.186***	-0.233***	0.212***	0.060***	0.032***	-0.085***	-0.033***	0.035***	-0.180***	-0.733***
Generalised trust	0.088***	0.101***	0.038***	-0.063***	-0.479***	-0.510***	1	0.745***	-0.183***	0.274***	-0.224***	-0.092***	-0.096***	0.087***	-0.008	-0.094***	0.121***	0.736***
Generalised trust (alternative proxy)	0.031***	0.042***	0.021**	-0.092***	-0.711***	-0.688***	0.651***	1	-0.226***	0.324***	-0.345***	-0.098***	-0.047***	0.059***	0	-0.062***	0.158***	0.703***
Board size	-0.095***	-0.124***	-0.082***	0.484***	0.231***	0.226***	-0.195***	-0.209***	1	0.124***	0.112***	0.674***	0.360***	-0.160***	0.627***	0.591***	0.119***	-0.196***
Proportion of outside directors	0.012	0.002	0.050***	0.116***	-0.182***	-0.183***	0.262***	0.331***	0.062***	1	-0.125***	0.302***	0.118***	-0.041***	0.317***	0.252***	0.199***	0.189***
CEO Duality	-0.052***	-0.056***	-0.079***	0.019**	0.112***	0.085***	-0.238***	-0.310***	0.150***	-0.126***	1	0.098***	0.034***	-0.008	0.049***	0.069***	-0.006	-0.200***
Firm size	-0.185***	-0.229***	-0.021**	0.378***	0.167***	0.163***	-0.071***	-0.073***	0.639***	0.306***	0.101***	1	0.522***	-0.251***	0.892***	0.871***	0.201***	-0.101***
Leverage	-0.008	-0.017*	0.036***	0.023**	0.029***	0.031***	-0.001	0.003	0.002	0.011	-0.003	0.015*	1	-0.429***	0.407***	0.816***	0.071***	-0.089***
Liquidity	0.037***	0.042***	-0.007	-0.041***	-0.008	-0.008	0	0.002	-0.049***	-0.020**	-0.006	-0.059***	-0.001	1	-0.118***	-0.349***	0.155***	0.123***
Market value	0.100***	0.095***	-0.019**	0.007	0.179***	0.202***	-0.053***	-0.061***	0.042***	-0.002	-0.013	0.117***	0.015*	-0.002	1	0.757***	0.225***	-0.022**
Debt	-0.032***	-0.040***	-0.031***	0.01	0.216***	0.243***	-0.052***	-0.062***	0.072***	-0.011	-0.019**	0.160***	0.048***	-0.004	0.484***	1	0.172***	-0.096***
International sales %	0.012	0.01	0.01	0.087***	-0.158***	-0.169***	0.117***	0.184***	0.104***	0.198***	-0.006	0.210***	-0.016*	-0.001	0.033***	0.013	1	0.185***
Human Development Index	0.074***	0.093***	0.019**	-0.083***	-0.738***	-0.786***	0.648***	0.705***	-0.220***	0.164***	-0.131***	-0.171***	-0.021**	0.009	-0.157***	-0.190***	0.185***	1

3.5.2 Correlation coefficients

I present Pearson correlation coefficients between all variables in Table 12. The relationships between the independent variables as well as the dependent and independent variables were analysed using Pearson correlation coefficients and (Spearman's rank coefficients) for every potential pair of variables in the study. Of particular interest are the relationships between the key variables (i.e Board social capital, Tobin's Q, Tobin's Q (alternate proxy), Generalised trust and Corruption). However, these statistics cannot shed any light on the 2nd and 3rd hypotheses, as those hypotheses consider an interaction effect. These remaining hypotheses are explored in the following section with multivariate analysis.

Board social capital is positively and significantly related to Tobin's Q (0.041; $p<0.01$) and Tobin's Q (alternative proxy) (0.043; $p<0.01$). These results in infer that board social capital is associated with improved market performance. As board social capital is positively and significantly related to firm performance at the 1% level, these results support hypothesis 1.

Board social capital is positively and significantly related to Generalised trust (0.038; $p<0.01$), in other words, in countries with low levels of generalised trust firms are less likely to possess greater board social capital. On the other hand, Corruption is negatively and significantly related to Board social capital (-0.10; $p<0.01$), these results infer that in countries where corruption is higher firms have lower board social capital.

Corruption is negatively and significantly measures of market performance Tobin's Q (0.11; $p<0.01$) and Tobin's Q (alternate proxy) (0.004; $p<0.01$). This result infers that in countries where corruption is higher, firms achieve poorer market performance. This is in line with past research which suggests that corruption has a deleterious effect on firms (e.g Burns et al, 2021; Thakur et al, 2020; Petrou et al, 2014). Conversely, Generalised trust is positively associated market performance proxies Tobin's Q (0.088; $p<0.01$) and Tobin's Q (alternate proxy) (0.101). This association infers that in countries with greater levels of generalised trust firms achieve greater market performance. This result is in line with past research given that economists generally report a positive association between generalised trust and economic growth (Algan and Cahuc, 2014; Knack and Keefer, 1997; Zac and Kneek, 2001, Beugelsdijk et al, 2004).

Generalised trust is negatively associated with Corruption (-0.36; $p<0.01$), lending support for the theory that corruption may erode trust over time (Bjornskov, 2011; Rothstein, 2014).

Table 11 also presents the results of Spearman's rank correlation coefficients. Spearman's rank correlation coefficient is a non-parametric measure of rank correlation. Given the skewness within the dependent variables it is important to also check the correlations using a non-parametric test.

Board social capital is positively and significantly related to Tobin's Q (0.066; $p<0.01$) and Tobin's Q (alternative proxy) (0.071; $p<0.01$). These results in infer that board social capital leads to improved market performance. Again, this lends support for H1.

Board social capital is positively and significantly related to Generalised trust (0.08; $p<0.01$), in other words, in environments with high levels of generalised trust firms are more likely to possess high amounts of board social capital. On the other hand, Corruption is negatively and significantly related to Board social capital (-0.030; $p<0.01$), inferring that in countries where corruption is high, firms have less board social capital.

Corruption is positively associated with Tobin's Q (0.007) at the 1% level and while it is not significantly associated with Tobin's Q (alternate proxy) (0.026). Conversely, Generalised trust is positively and significantly associated with Tobin's Q (-0.085; $p<0.01$) and Tobin's Q (alternate proxy) (0.117; $p<0.01$). These results infer that firms achieve higher performance when operating in countries with greater levels of trust, which is in keeping with past literature (e.g Algan and Cahuc, 2014; Knack and Keefer, 1997; Zac and Kneek, 2001, Beugelsdijk et al, 2004). Finally, Generalised trust is negatively associated with Corruption (-0.621; $p<0.01$), again, lending support for the theory that corruption erodes trust over time (Bjornskov, 2011; Rothstein, 2014).

3.5.3 Multivariate Analysis

As discussed in the research design section of the previous chapter, OLS is utilised in this study - standard errors are robust and are corrected for the clustering of observations by firm. While the correlation analysis in the descriptive statistics provides some insight into the relationship between board social capital and firm performance, it cannot be concluded that a relationship exists because it may be the result of missing variables. Moreover, hypothesis 2 and 3 were not explored in the univariate analysis because they involve the interaction between three variables. Presentation of the results are presented separately for the two dependent variables Tobin's Q and Tobin's Q (alternate proxy).

3.5.3.1 Main Results

This section provides analysis and discussion of three hypotheses concerning the influence of board social capital on firm performance. Although much research has been carried out on the relationship

between board social capital and firm performance (Kim, 2007; Kor and Sundaramurthy, 2009; Lee, Choi and Kim, 2012; Zona et al, 2018), the findings of such research remain inconclusive (Sullivan and Tang, 2013; Barroso-Castro et al, 2016). This study adds to the existing literature by examining the relationship between board social capital and firm performance in a multinational sample of firms from 57 countries. Moreover, the research seeks to establish how firm's external environment influences the impact of board social capital by addressing the potential interaction effect of country-level corruption (measured by perceptions of corruption) and country-level generalised trust on this relationship.

Hypothesis 1 states that there will be a positive relationship between board social capital and firm performance. Hypothesis 2 states that the degree of country-level perceived corruption positively moderates the relationship between board social capital and firm performance. Hypothesis 3 states that the degree of country-level generalised trust positively moderates the relationship between board social capital and firm performance.

The analysis is broken into two sections, based on the two variables used to measure firm performance: Tobin's Q and Tobin's Q (alternate proxy). In the analysis, I use two constructions of each – Tobin's Q and Tobin's (alternate proxy). Firm performance proxies are measured at t+2, which helps to alleviate concerns pertaining to endogeneity (Zona et al, 2018) and follows past corporate governance studies who have employed the same time-lag (e.g Geletkanycz and Boyd, 2011; Haynes and Hillman, 2010; He and Huang, 2011; Barroso-Castro et al, 2016; Shaw et al, 2016). In addition to measuring at t+2, I also construct Tobin's Q (t+1,2,3) and Tobin's Q (alternate proxy, t+1,2,3) measures which combine data at t+1, t+2 and t+3.

Firm Performance – Tobin's Q

Table 1 reports the OLS regression of firm performance, measured using Tobins Q, on board social capital, while controlling for a number of factors at the board and firm-level. The r^2 value ranges between 0.122 and 0.154.

Table 13: Regression analysis: TQ

VARIABLES	Tobin's Q (t+2)	Tobin's Q (t+1,2,3)
Board social capital	0.058***	0.211***
	(0.018)	(0.066)
Corruption	0.002	0.004
	(0.002)	(0.007)
Board social capital x corruption	-0.000	-0.001
	(0.000)	(0.001)
Generalised trust	0.451***	1.749***
	(0.143)	(0.527)
Board social capital x Generalised trust	-0.094***	-0.336***
	(0.033)	(0.122)
Board size	0.003	0.015
	(0.004)	(0.013)
Proportion of outside directors	0.003***	0.008***
	(0.000)	(0.001)
CEO duality	-0.043**	-0.141*
	(0.022)	(0.081)
Firm size	-0.112***	-0.433***
	(0.007)	(0.031)
Leverage	0.000	0.000
	(0.000)	(0.000)
Liquidity	-0.000	0.000
	(0.000)	(0.001)
International sales percentage	0.001**	0.002**
	(0.000)	(0.001)
Human Development Index	1.215***	3.094***
	(0.309)	(1.086)
Industry	yes	yes
Year	yes	yes
Constant	1.330***	5.595***
	(0.315)	(1.127)
Observations	37,109	37,109
R-squared	0.136	0.122

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Board social capital

Hypothesis 1 proposes that there is a positive relationship between board social capital and firm performance. A significant positive relationship is observed between board social capital and Tobin's Q (t+2) (0.582) at 1% significance level. Thus, firms that have greater levels of board social capital perform better, in line with H1. A significant positive relationship (0.211) at the 1% significance

level is observed between board social capital and Tobin's Q (t+1,2,3). This again suggests that firms who have greater levels of board social capital achieve greater firm performance. These results provide support for hypothesis 1 that there is a positive relationship between board social capital and firm performance.

Corruption

A non statistically significant positive relationship is found between corruption (measured using perceptions of corruption) and Tobin's Q (0.001). Similarly, a non statistically significant positive relationship is observed between corruption and Tobin's Q (t+1,2,3). (0.004).

Interaction: Corruption & Board social capital

Hypothesis 2 suggests that the degree of country level corruption (measured using perceptions of corruption) positively interacts with the relationship between board social capital and firm performance. A non statistically significant negative relationship is found in the interaction of corruption and board social capital on tq_l2 and Tobin's Q (t+1,2,3). These results do not provide support for hypothesis 2.

Generalised trust

A significant positive relationship is found between generalised trust and tq_l2 (0.451) at 1% significance level. Similarly, a significant and positive relationship is observed between tq2_mn and generalised trust (1.749) at the 1% significance level, indicating that higher levels of generalised trust are associated with greater firm performance.

Interaction: Generalised trust & Board social capital

Hypothesis 3 proposes that the degree of country level generalised trust negatively moderates the relationship between board social capital and firm performance. A significant negative relationship is found on the interaction of generalised trust and board social capital on Tobin's Q (-0.094) at the 1% sig level. Similarly, a significant negative relationship is found on the interaction of generalised trust and board social capital on Tobin's Q (t+1,2,3). (-0.336) at the 1% sig level. These results support hypothesis 3 which suggests that in environments with higher generalised trust board social capital will have less of a positive effect on firm performance.

Control variables

Board-level

Examining the effect of board size on Tobin's Q, an non statistically significant positive relationship is observed While an non statistically significant negative relationship is observed between board size and Tobin's Q (t+1,2,3). These results suggest that board size does not impact upon firm performance.

A significant, positive relationship is observed between proportion of outside directors and tq_2 (0.002) at the 1% level. Similarly, a significant positive relationship is observed between proportion of outside directors and Tobin's Q (t+1,2,3) (0.008), at the 1% level. These results suggest firms with a greater proportion of outside directors have greater performance.

A significant negative relationship is observed between the CEO duality and Tobin's Q (-0.044) at the 1% sig level. Similarly, a significant negative relationship is observed between the CEO duality and Tobin's Q (t+1,2,3) (-0.141) at the 10% sig level.

Firm-level

A significant, negative relationship is observed between firm size and Tobin's Q (-0.112) at the 5% level. Similarly, a significant negative relationship is observed between firm size and Tobin's Q (t+1,2,3). (-0.433), at the 10% level. These results suggest larger firms have poorer performance.

No significant relationships are found between leverage, liquidity or international sales percentage and the firm performance proxies tq_2 and tq_mn.

Country-level

A significant, positive relationship is observed between HDI and tq_2 (1.215) at the 1% level. Similarly, a significant, positive relationship is observed between HDI and tq_2 (3.255) at the 1% level. These results suggest that firms from countries with greater levels of human development achieve greater performance.

***

In summary, using tq_2 as the dependent variable, a statistically significant positive relationship is found with board social capital and generalised trust. A statistically significant negative relationship is found between tq_2 and CEO duality and firm size. The interaction of social capital and

generalised trust is also observed to a have a statistically significant negative effect. The other independent variables do not have a statistically significant relationship with tq_2.

Firm Performance – TQ2_2

Table 2 reports the OLS regression of firm performance, measured using a second computation of Tobin's Q, (Tobin's Q (alternate proxy)), on board social capital, while controlling for a number of factors at the board and firm-level. The r^2 value ranges between 0.174 and 0.139.

Table 14: Regression analysis: TQ2

VARIABLES	Tobin's Q (alternate proxy) (t+2)	Tobin's Q (alternate proxy) (t+1,2,3)
Board social capital	0.053***	0.174***
	(0.019)	(0.057)
Corruption	0.001	0.004
	(0.002)	(0.006)
Board social capital x Corruption	-0.000	-0.001
	(0.000)	(0.001)
Generalised trust	0.509***	1.588***
	(0.145)	(0.443)
Board social capital x Generalised trust	-0.090***	-0.289***
	(0.034)	(0.104)
Board size	0.005	0.016
	(0.004)	(0.011)
Proportion of outside directors	0.003***	0.009***
	(0.000)	(0.001)
CEO duality	-0.047**	-0.150**
	(0.022)	(0.067)
Firm size	-0.141***	-0.447***
	(0.007)	(0.022)
Leverage	-0.000	-0.000
	(0.000)	(0.000)
Liquidity	0.000	0.000
	(0.000)	(0.001)
International sales percentage	0.001***	0.003***
	(0.000)	(0.001)
Human Development Index	1.066***	3.023***
	(0.314)	(0.958)
Industry	Yes	Yes
Year	Yes	Yes
Constant	1.659***	5.273***
	(0.320)	(0.977)
Observations	37,109	37,109
R-squared	0.174	0.189

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Board social capital

Hypothesis 1 states that board social capital is positively associated with firm performance. A significant positive relationship is observed between board social capital and Tobin's Q (alternate proxy), (-0.0527) at 1% significance level. Thus, firms that have greater levels of board social capital perform better, in line with H1. A significant positive relationship (0.0267) at the 1% significance level is observed between board social capital and Tobin's Q (alternate proxy, t+1,2,3). This again supports hypothesis 1 suggesting that firms who have greater levels of board social capital achieve greater firm performance.

Corruption

A non statistically significant positive relationship is found between corruption (measured using perceptions of corruption) and Tobin's Q (alternate proxy), (0.001). Similarly, a non statistically significant positive relationship is observed between corruption and Tobin's Q (alternate proxy, t+1,2,3) (0.005).

Interaction: Corruption & Board social capital

A non statistically significant negative relationship is found in the interaction of corruption and board social capital on Tobin's Q (alternate proxy), and t obin's Q (alternate proxy, t+1,2,3). This does not support hypothesis 2 which suggests degree of country-level corruption positively moderates the relationship between board social capital and firm performance.

Generalised trust

A significant positive relationship is found between generalised trust and Tobin's Q (alternate proxy), (0.509) at 1% significance level. Similarly, a significant and positive relationship is observed between Tobin's Q (alternate proxy, t+1,2,3) and generalised trust (1.987) at the 1% significance level, indicating that higher levels of generalised trust are associated with greater firm performance.

Interaction: Generalised trust & Board social capital

Hypothesis 3 proposes that the degree of country level generalised trust negatively moderates the relationship between board social capital and firm performance. A significant negative relationship is found on the interaction of generalised trust and board social capital on Tobin's Q (alternate proxy), (-0.090) at the 1% sig level. Similarly, a significant negative relationship is found on the interaction of generalised trust and board social capital on Tobin's Q (alternate proxy, t+1,2,3) (-0.042) at the

1% sig level. These results support hypothesis 3 which suggests that in environments with higher generalised trust board social capital will have less of a positive effect on firm performance.

Control variables

Board-level

Examining the effect of board size on Tobin's Q (alternate proxy),, a non statistically significant positive relationship is observed, while an non statistically significant negative relationship is observed between board size and Tobin's Q (alternate proxy, t+1,2,3).

A significant, positive relationship is observed between proportion of outside directors and Tobin's Q (alternate proxy), (0.003) at the 1% level. Similarly, a significant positive relationship is observed between proportion of outside directors and Tobin's Q (alternate proxy, t+1,2,3) (0.008), at the 1% level. These results suggest firms with a greater proportion of outside directors have greater performance.

A significant negative relationship is observed between the CEO duality and Tobin's Q (alternate proxy), (-0.047) at the 1% sig level. Similarly, a significant negative relationship is observed between the CEO duality and Tobin's Q (alternate proxy, t+1,2,3) (-0.162) at the 1% sig level.

Firm-level

A significant, negative relationship is observed between firm size and Tobin's Q (alternate proxy), (-0.141) at the 5% level. Similarly, a significant negative relationship is observed between firm size and CEO duality (-0.162), at the 5% level. These results suggest larger firms have poorer performance.

No significant relationships are found between leverage, liquidity or international sales percentage and the firm performance proxies Tobin's Q (alternate proxy), and Tobins .

***

In summary, using tq2_2 as the dependent variable, a statistically significant positive relationship is found with board social capital and generalised trust. A statistically significant negative relationship is found between tq2_2 and CEO duality and firm size. The interaction of social capital and generalised trust is also observed to a have a statistically significant negative effect. The other independent variables do not have a statistically significant relationship with tq2_2.

1.1.1.1. Sensitivity analyses

The main results establish a link between board social capital and firm performance. They also explore the interaction effect of country-level corruption and country-level generalised trust on this relationship. To examine the robustness of the multivariate analysis, I perform a number sensitivity tests. Unless otherwise specified, all robustness tests are modelled with Tobin's Q and Tobin's Q (alternate proxy) as the dependent variables. For parsimony, unless adding additional control variables, I only tabulate the coefficients of the key variables.

Country effects

My results so far carry the caveat that there are other country-specific factors which have not been controlled for which may influence my results. In the main analysis, I control for the level of development, but it is feasible that my results may be biased by the lack of other country-level controls. As such, I add several additional proxies at the country level – all computed from data drawn from the World Bank.

First, I add a proxy for Voice and Accountability (voice), which: "captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media." Second, I include a measure of regulatory quality (regqual), which captures "perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development". Third, I add a proxy for rule of law (rulelaw), which captures "perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence". Finally, I add a proxy for government effectiveness (goveffect), which captures: "perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies".

Table 15: Regression with additional controls

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy) (t+2)
Board social capital	0.091***	0.086***
	(0.018)	(0.019)
Corruption	-0.010***	-0.009***
	(0.002)	(0.002)
Board social capital x Corruption	-0.001*	-0.001*
	(0.000)	(0.000)
Generalised trust	0.666***	0.726***
	(0.144)	(0.146)
Board social capital x Generalised trust	-0.144***	-0.140***
	(0.034)	(0.034)
Board size	0.005	0.007*
	(0.004)	(0.004)
Proportion of outside directors	0.003***	0.003***
	(0.000)	(0.000)
CEO duality	-0.029	-0.033
	(0.021)	(0.022)
Firm size	-0.113***	-0.141***
	(0.007)	(0.007)
Leverage	-0.000	-0.000**
	(0.000)	(0.000)
Liquidity	-0.000	0.000
	(0.000)	(0.000)
International sales percentage	0.001***	0.001***
	(0.000)	(0.000)
Human Development Index	2.420***	2.174***
	(0.457)	(0.464)
Rule of law	-0.121	-0.145
	(0.096)	(0.098)
Regulatory quality	0.006	0.015
	(0.047)	(0.047)
Voice	0.129***	0.139***
	(0.029)	(0.030)
Government effectiveness	-0.529***	-0.467***
Industry	Yes	Yes
Year	Yes	Yes
Constant	1.248***	1.544***
	(0.362)	(0.368)
Observations	37,109	37,109
R-squared	0.147	0.183

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The main results remain largely robust despite the introduction of a number of additional control variables. The coefficient of board social capital remains positive and highly significant at the 1% level. Hence, even controlling for additional variables board social capital remains significantly associated with firm performance. Moreover, the interaction of generalised trust and board social capital remains significant at the 1% level. Interestingly, with the addition of the new control variables corruption becomes negatively and significantly associated with firm performance. The coefficient of the interaction of corruption and board social capital becomes negative and significantly related to firm performance. This is contrary to hypothesis 2. With respect to the

additional control variables, I find that voice and effectiveness, as well government effectiveness are both significantly associated with firm performance.

Sample size

United States and United Kingdom have the most firm-year observations of any of the countries within my sample, comprising 37% and 14% of the total sample respectively. To check that my results are not driven by these two countries which comprise 51% of my sample, I re-run my model with observations from these countries removed. This reduces my sample to 18,229 firm-year observations.

Table 16: Regression with US and UK removed from sample

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy (t+2)
Board social capital	0.056***	0.053**
	(0.021)	(0.022)
Corruption	-0.013***	-0.013***
	(0.003)	(0.003)
Board social capital x Corruption	-0.000	-0.000
	(0.000)	(0.000)
Generalised trust	0.185	0.244
	(0.190)	(0.193)
Board social capital x Generalised trust	-0.114***	-0.109**
	(0.042)	(0.042)
Controls included	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	1.414***	1.679***
	(0.428)	(0.433)
Observations	18,229	18,229
R-squared	0.169	0.202

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

For the sake of brevity, I present only the coefficients for the key variables. Again, the results remain robust. The hypothesised relationships between board social capital and firm performance still holds as the coefficient of Board social capital remains positive and significant at the 1% level. The hypothesis regarding interaction of board social capital and generalised trust also still holds, as the coefficient remains negative and significant at the 1% level. Like in the main results, I do not find a significant relationship for the coefficient of the interaction of bsc and corruption. These results help

to mitigate concerns that my results are driven by a limited number of countries which comprise a large proportion of the overall sample.

Next, I remove firm-year observations which come from countries with less than 10 observations. Removing observations from firms in countries with less than 10 observations removes all the observations from firms in: Vietnam, Uruguay, Ukraine, Slovenia, Romania, Qatar, Pakistan, Malta, and Kuwait. This reduces my sample to 37,075.

Table 17: Regression with countries with fewer than 10 observations removed from sample

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy) (t+2)
Board social capital	0.091***	0.086***
	(0.018)	(0.019)
Corruption	-0.010***	-0.010***
	(0.002)	(0.002)
Board social capital x Corruption	-0.001*	-0.001*
	(0.000)	(0.000)
Generalised trust	0.665***	0.728***
	(0.144)	(0.146)
Board social capital x Generalised trust	-0.144***	-0.140***
	(0.034)	(0.034)
Constant	1.261***	1.553***
	(0.363)	(0.369)
Observations	37,075	37,075
R-squared	0.148	0.184

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

With firms from these countries excluded, my results remain largely robust and as in the main results hypothesis 1 and 3 still hold. This shows that less represented countries do not influence my inferences regarding these hypotheses. Contrary to main results and the prediction of hypothesis 2, I also find that the interaction of corruption and board social capital has a negative and statistically significant coefficient.

Mean centred variables

Given that there is debate within the literature on the need to address potential multicollinearity as a result of the interaction terms, in addition to my main results, following Aiken and West (1991) I re-run my regression with the variables mean-centred prior to creating the interaction effects. This is a

technique which has been employed within the corporate governance literature by scholars who interpret multicollinearity due to interaction effects to be problematic (e.g Barroso-castro et al, 2016).

Table 18: Regression with mean centred key variables

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy t+2)
Board social capital	0.016***	0.012**
	(0.005)	(0.005)
Corruption	0.002	0.001
	(0.001)	(0.001)
Board social capital x Corruption	-0.000	-0.000
	(0.000)	(0.000)
Generalised trust	0.127*	0.197***
	(0.073)	(0.073)
Board social capital x Generalised trust	-0.094***	-0.090***
	(0.033)	(0.034)
Board size	0.003	0.005
	(0.004)	(0.004)
Proportion of outside directors	0.003***	0.003***
	(0.000)	(0.000)
CEO duality	-0.043**	-0.047**
	(0.022)	(0.022)
Firm size	-0.112***	-0.141***
	(0.007)	(0.007)
Leverage	0.000	-0.000
	(0.000)	(0.000)
Liquidity	-0.000	0.000
	(0.000)	(0.000)
International sales percentage	0.001**	0.001***
	(0.000)	(0.000)
Human Development Index	1.215***	1.066***
	(0.309)	(0.314)
Industry	Yes	Yes
Year	Yes	Yes
Constant	1.625***	1.949***
	(0.279)	(0.283)
Observations	37,109	37,109
R-squared	0.136	0.174

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The results of the analysis with variables mean-centred prior to creating the interaction effects, are similar to those achieved before the mean centering process. Board social capital remains positively and significantly related to both measures of firm performance. Similarly, the interaction of effect of board social capital and generalised trust remains negative and statistically significant.

Alternative measures

I next carry out further analysis to ensure that my results are not driven by my selection of proxy for the key variables of interest. First, I run my regression models using an alternative proxy for board social capital. Following, Bendig et al (2020), I measure of board social capital as the total number of interlocks to other firms (interlocks). Unlike the original measure of board social capital, this counts the total number of interlocks a board possesses rather than the average number per board member.

Table 19: Regression with alternative measure of board social capital

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy) (t+2)
Board social capital (alternate proxy)	0.009***	0.009***
	(0.002)	(0.002)
Corruption	-0.002	-0.002
	(0.002)	(0.002)
Board social capital (alternate proxy) x corruption	-0.000	-0.000*
	(0.000)	(0.000)
Generalised trust	0.503***	0.573***
	(0.128)	(0.129)
Board social capital (alternate proxy) x Generalised trust	-0.014***	-0.014***
	(0.003)	(0.003)
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	0.922***	1.261***
	(0.344)	(0.349)
Observations	37,109	37,109
R-squared	0.138	0.175

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Again the results are similar to those in my main results. The alternative board social capital proxy is positively and significantly related to both measures of firm performance. Moreover, the interaction effect of Generalised trust on the relationship between the alternative board social capital proxy and the two firm performance proxies are negative and statistically significant at the 1% level.

I next run my model with an alternative corruption proxy. While my initial model uses Transparency Internationals corruption perception index, in the next models I create an alternative corruption proxy with data the from the World Bank control of corruption indicator. Much like the corruption perception index, the control of corruption index is drawn from a range of sources provides an estimate of the level of corruption in countries globally. There is an in-depth discussion of the

methodology of the control of corruption index and how it differs from the CPI is included in the research design.

Table 20: Regression with alternative measure of corruption

VARIABLES	Tobin's Q (t+2)	Tobin's Q, alternate proxy (t+2)
Board social capital	0.054***	0.049***
	(0.014)	(0.015)
Corruption (alternate proxy)	0.058	0.043
	(0.038)	(0.038)
Board social capital x Corruption (alternate proxy)	0.001	0.001
	(0.007)	(0.007)
Generalised trust	0.456***	0.510***
	(0.143)	(0.145)
Board social capital x Generalised trust	-0.088***	-0.084**
	(0.033)	(0.034)
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	1.242***	1.558***
	(0.268)	(0.272)
Observations	37,109	37,109
R-squared	0.136	0.174

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

My main results remain robust to an alternate specification of corruption. This shows that the not statistically significant coefficient of the interaction between board social capital and corruption is not a result of the proxy chosen to measure corruption.

Next, I run my model with an alternative specification of generalised trust. In my original model I linearly interpolate between the dates of the IVS survey – this reflects changes in generalised trust over time. Some trust scholars (e.g Bjornskov, 2006) have, however, emphasised the persistence of generalised trust. Consequently, I repeat my analysis with a time-invariant measure of generalised

trust. Following prior literature (e.g Hartlieb, 2020; Knechel et al, 2019), I instead measure generalised trust as the mean value for each country (gen_trust_tiv).

Table 21: Regression with alternative measure of generalised trust

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy t+2)
Board social capital	0.081***	0.074***
	(0.026)	(0.026)
Corruption	0.002	0.001
	(0.002)	(0.002)
Board social capital x Corruption	-0.000	-0.000
	(0.000)	(0.000)
Generalised trust (alternate proxy)	0.363*	0.425**
	(0.205)	(0.208)
Board social capital x Generalised trust (alternate proxy)	-0.130***	-0.124**
	(0.048)	(0.049)
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	1.383***	1.686***
	(0.328)	(0.333)
Observations	37,109	37,109
R-squared	0.136	0.173

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Using this alternative specification of generalised trust, my results still hold. Individually, the coefficient of generalised trust remains positive and significant. Likewise, the coefficient of the interaction effect of generalised trust and board social capital remains negative significant at the 1% level, supporting the hypothesis that generalised trust reduces the positive relationship between board social capital and firm performance.

3.5.4 Discussion of results

Board social capital and firm performance

My first hypothesis posits that board social capital is positively related to firm performance. In the main results, board social capital is measured as the sum of total interlocks of board members at the

focal firm to other for-profit firms, divided by the number of directors on the board. Two computations of Tobin's Q serve as the proxies for firm performance.

A significant positive relationship between board social capital and firm performance is found in the main results. This infers that firms with greater levels of board social capital achieve greater firm performance. This is consistent with the positive relationship between board social capital and board effectiveness proposed in a conceptual paper by Kim and Cannella (2008). The results are also consistent with the empirical findings of Kor and Sundaramurthy (2009), Bohren and Strom (2010) and Kim (2008), who find that board social capital leads to improved firm performance. The results of this study provide support for the resource-based view of board social capital – that directors external connections provide faster access to critical resources (Kor and Sundamurthy, 2009; Tian et al, 2011), provide a channel of communication back and forth to the firms external environment (Hillman et al, 2011), and increase the perceived legitimacy of decisions taken by the firm (Barossa and Castro, 2016; Kiel and Nicholson, 2006). The finding of the main results, regarding the positive influence of board social capital on firm performance (H1), are robust to a number of further tests: including the addition of extra control variables, changes in the sample based on both geography and number of observations, and an alternative specification of board social capital. Importantly, this study is the first research to empirically evidence the positive effect of board social capital on firm performance in a cross-national sample of firms.

My second hypothesis considers the interaction effect of corruption (measured by perceived corruption) on the relationship between board social capital and firm performance. Hypothesis 2 states that corruption has a positive interaction effect on the relationship between board social capital and firm performance. In my main results, the coefficient of the interaction of board social capital and firm performance is positive and not statistically significant – these results do not support hypothesis 2. I carry out a battery of different additional sensitivity tests to check that the main result is not a consequence of selection of corruption proxy or sample selection. Like the main results, the additional tests also do not provide support for hypothesis 2. The main results suggest that corruption does not influence the relationship between board social capital and firm performance. Past research has suggested that board social capital is a mechanism for dealing with environmental uncertainty (Boyd, 1990; Zona et al, 2018), and corruption is one source of environmental uncertainty for organisations (Rodriguez et al, 2005). Therefore, it is interesting that the data suggests that corruption does not enhance the positive effect of board social capital on firm performance. Interestingly, when adding additional controls (Table 15) and removing countries with fewer than 10 observations (Table 17), the interaction of corr and bsc becomes negative and statistically significant, albeit at the 10% level. Contrary to H2, this suggests that country-level corruption reduces the positive effect of board social capital. One potential explanation is that country-level corruption erodes moral agency

(Ashforth et al., 2008; Brief, Buttram, & Dukerich, 2001; Fleming & Zyglidopoulos, 2008), and as a consequence amplifies the agency problem sometimes associated with board social capital (Zona et al, 2018). The results of the analysis of the interaction of corruption on the relationship between board social capital and firm performance, come with the caveat that I use measures of perceived corruption rather than corruption itself. As discussed in section 3.2.4, there are a number of factors which may introduce noise into the perception of corruption, and there is a debate in the literature as to the extent to which perceptions of corruption reflect corruption itself. It is unclear the extent to which my reliance of corruption perception indices may have influenced the results of my second hypothesis.

The third hypothesis considers the relationship considers the interaction of board social capital and generalised trust. Generalised trust is measured using data from Integrated Values Survey, where respondents are asked: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". In my main results, the coefficient of the interaction between board social capital and generalised trust is negative and statistically significant at the 1% level. This result provides support for hypothesis 3, that the positive effect of board social capital is reduced for firms headquartered in countries with greater levels of generalised trust. The data supports the theory that when there are external factors which signal the character of the firm like being located in a high-trust society, investor reliance on firm-specific signals of legitimacy, such as board social capital, are reduced. Further testing provides generally provides additional support for hypothesis 3. The coefficient of the interaction of board social capital and firm performance remains robust to a battery of robustness tests, including a model with an alternate specification of the generalised trust variable. These results demonstrate that board social capital is *most* important for firms that are not situated in high-trust environments. As a result, firms in countries with lower levels of generalised should consider the heightened importance of recruiting directors who possess greater levels of social capital.

This is the first study to empirically investigate how factors in firm's external environment influence the relationship between board social capital and firm performance. Past research on board social capital and firm performance has focused exclusively on single country contexts (e.g Bøhren and Strøm, 2010; Barroso-Castro et al, 2016; Kim, 2005; Kor and Sundaramurthy, 2009; Lee et al, 2016; Jackling and Joh, 2009; Devos et al, 2009), and by design omitted the influence of national-level variables. The study adds theoretical specificity to the extant literature which links board social capital and firm performance by considering the external conditionals which influence the hypothesised relationship. The study demonstrates that country-level generalised trust interacts with the relationship between board social capital and firm performance. In doing so the research enriches

knowledge on the topic by illustrating that the firm's external environment effects the extent to which board social capital influences firm performance.

3.6 Conclusion

3.6.1 Summary

This section provides empirical analysis of the relationship between board social capital and firm performance in a cross-national sample of firms, considering the interaction effect of country-level generalised trust and country-level corruption. I follow an objectivist and positivist research philisophy. I deductively derive hypotheses from the existing literature before testing these hypotheses using quantitative data. First the chapter outlined the preparation of variables and provided descriptive statistics of the data used in this study. Following the descriptive statistics, I provide analysis of the correlations between variables. After discussing the bivariate correlations, I present and analyse regression analysis, and robustness tests.

The chapter provides robust evidence that board social capital is positively related with firm performance in a cross-national sample of firms. The chapter also finds support for the hypothesis that there exists a negative interaction effect of generalised trust on the relationship between board social capital and firm performance. However, there is little evidence of an interaction effect of corruption on the on the relationship between board social capital and firm performance.

3.6.2 Contribution

The study makes several contributions to the literature which considers board social capital and firm performance. First the extant research on the relationship between board social capital and firm performance consider only board and firm level variables (e.g Bøhren and Strøm, 2010; Barroso-Castro et al, 2016; Kim, 2007; Kor and Sundaramurthy, 2009; Lee et al, 2016; Jackling and Joh, 2009). Such research makes the implicit assumption that the relationship between these two variables is not affected by the firm's external environment. However, there is rationale that the informal institutions of where a firm is situated may affect both the behaviours and values of the directors, as well as investors' perceptions of the firm itself.

This study demonstrates that the value of board social capital is partially dependent on the country where the firm is headquartered. The results of my analysis support the theory that when a firm is located in a country with low-levels of generalised trust, board social capital becomes more important. Specifically, firms that are located in low-trust environments, do not benefit from the same endowed trust as those located in high-trust environments. The implication is that from a practitioners perspective, it is especially important to recruit directors with social capital to the board of directors if the firm is located in a country with lower levels of generalised trust.

Interestingly, contrary to my hypothesis I do not find a statistically significant interaction effect of corruption on the relationship between board social capital and firm performance. While I theorised that board social capital would help firms deal with the environmental uncertainty caused by corruption, my data analysis did not support this hypothesis. One reason for this is that the advantages created by board social capital may be more reputational than operational. In other words, the main benefits accrued from board social capital may revolve around reputation and legitimacy garnered, rather than a heightened ability to deal with environmental uncertainty (such as that caused by corruption or related to perceptions of corruption) through increased access to information or important stakeholders.

The study also contributes to the literature through its design. Previous studies on the relationship between board social capital and firm performance have often drawn from significantly smaller sample sizes, with firms from single countries, for example: : 72 United States high technology firms (Kor and Sundamurthy, 2009), 145 Italian manufacturing firms (Zona et al, 2018) or 103 Spanish companies (Barrosso-Castro et al, 2016). As I find that board social capital has a positive effect on firm performance in a cross-national sample of 13,600 firms from 57 countries, my study has a higher level of external generalisability than previous research, and adds to the body of literature which supports the resource dependence perspective of board social capital.

3.6.3 Limitations

The study comes with several limitations. My measure of board social capital is reliant solely on board interlocks – a formal measure of board social capital. While this is consistent with past research (e.g Kor and Sundamurthy, 2009; Zona et al, 2018; Barrosso-Castro et al, 2016), it neglects other sources through which directors may accumulate social capital, for example: through friendships, political connections or past working experience. Future research may choose to look at the effect informal sources of social capital that firm directors may accumulate, e.g. social capital that is generated outwith formal ties.

My research is also limited as my proxy for corruption measures perceived corruption rather than actual corruption. There has been much discussion in the literature (e.g Charron, 2016) about the extent to which perceptions of corruption mirror actual corruption, and the extent to which perceptions may be influenced by outside ‘noise’. I summarise the debate around the use of perception of corruption indices in corruption research in section 3.2.4. While it is difficult, or even impossible, to verify the exact extent to which perceptions accurately reflect actual corruption, using perceptions of corruption to measure corruption is used commonly (e.g Thakur et al, 2021; Chen et

al. 2015; Fan, Titman, and Twite 2012; Lee and David 2009; Mazzi, Slack, Tsalavoutas, 2018), and was unavoidable given the lack of reliable direct cross-national measures of corruption.

My study shares the limitation with all the past research on this subject regarding the causality of the relationship between board social capital and performance. Following the literature, I attempt to alleviate this in two main ways: first, I use longitudinal data and second, I lag the independent variables. However, this comes with the caveat that any corporate governance study is likely to be completely free of endogeneity concerns.

My study is underpinned by an objectivist, positivist research philosophy. As such I deductively derived hypothesis from the literature and tested those hypotheses. The use of qualitative methods could support further theorisation and help to uncover exactly how board social capital enables firms to perform better.

4 Chapter 4 – Study 2: Board social capital and firm performance – the role of county-level religiosity

4.1 Introduction

This chapter investigates the influence of board social capital on firm performance in a sample of United States firms, while exploring the interaction effect of county-level religiosity on the relationship.

The first section of this chapter addresses the concept of religiosity. The section starts by discussing various definitions of religiosity before then discussing the consequences of religiosity, and in particular the role of religiosity in shaping social norms. The section then reviews past empirical literature which attempts to demonstrate a causal link between religiosity at the individual level and decision-making in a business context. Following this discussion, I review literature which connects county-level religiosity and firm-level outcomes. After analysing the extant literature, I identify important gaps. I then present my hypothesis for how religiosity influences the relationship between board social capital and firm performance in the United States.

In second section of this chapter, I outline my research design. I begin by outlining my approach to sampling and data collection before subsequently discussing variable measurement. The section ends with discussion of my empirical model, and statistic and econometric issues.

In the final section I present my data analysis. The section starts by providing descriptive statistics and correlation coefficients. I then present and analyse the results of my multivariate analysis, including the presentation of additional robustness and sensitivity tests before concluding the chapter.

4.2 Religiosity

4.2.1 Defining Religiosity

Variation in religious belief and practise has made it challenging for scholars to find a generally accepted definition of religiosity. Religiosity is a contested term and it is often posed that there are nearly as many definitions as there are writers (Guthrie, 1980; Wilkes et al, 1986; Kumar, 2009). Within the literature, religiosity has been conceptualised as multidimensional with intellectual and behavioural components (Alshehriet al, 2020; Parboteeah et al. 2008; Woodberry and Smith 1998). The variety in uses of the term includes the following definitions:

> "A belief in God accompanied by a commitment to follow principles believed to be set forth by God". (McDaniel & Burnett, 1990, p. 110)

> "A socially shared set of beliefs, ideas and actions that relate to a reality that cannot be verified empirically yet is believed to affect the course of natural and human events". (Terpstra & David, 1991, p. 73)

> "An organised system of beliefs, practices, rituals and symbols designed (a) to facilitate closeness to the sacred or transcendent (God, higher power or ultimate truth/reality), and (b) to foster an understanding of one's relation and responsibility to others in living together in a community".
> (Koenig, McCullough & Larson, 2000, p. 18)

> "A social arrangement designed to provide a shared, collective way of dealing with the unknown and un-knowable aspects of human life, with the mysteries of life, death and the different dilemmas that arise in the process of making moral decisions".
> (Johnson, 2000, p. 259)

> "The extent to which an individual's committed to the religion he or she professes and its teachings, such as the individual's attitudes and behaviors reflect this commitment" (Johnson et al., 2001, p.25)

> "A combination of thoughts, beliefs and practices regulated by a formalized system of beliefs and traditions" (Alshehri et al., 2020, p2)

The range of definitions show that religiosity has many modern interpretations. Johnson (2000) definition is unique in that it does not mention a god and instead characterises religiosity by its functional property as a social arrangement which allows its followers to deal with life's uncertainty. This definition is the exception to the rule and there is a large degree of commonality amongst the others.

One common aspect is that the various definitions share is that central to religiosity is the belief in a higher power, deity, or god. Second, is that the belief in a higher power or god in some way determines principles by which we should act. The implication of this is that there is some agreement amongst scholars that religiosity should influence ethical judgement through belief in a higher power. Sparks and Pan (2010 p.409) define ethical judgement as "as an individual's personal evaluation of the degree to which some behaviour or course of action is ethical or unethical.". The notion that religiosity is a concept which may shape adherent's beliefs and subsequently behaviour is central to this study.

Another common aspect in many of the cases is the idea that beliefs are socially shared or intended to provide a collective understanding of moral decision making. The implication is that religiosity influences individual attitudes and behaviours within a society, and this is reflected in the views of society as a whole. As the religious belief is held by multiple people simultaneously, it allows for a collective lens through which to view ethical decisions.

In this research I define religion as according to Koenig, McCullough & Larson (2000, p. 18):

> "An organised system of beliefs, practices, rituals and symbols designed (a) to facilitate closeness to the sacred or transcendent (God, higher power or ultimate truth/reality), and (b) to foster an understanding of one's relation and responsibility to others in living together in a community".

This definition emphasises that religiosity refers to looking towards god or higher power for guidance as to how to act. In other words, for the purposes of this research we ascertain that religiosity involves 1) belief in a higher power and 2) the belief in a higher power in some way shapes our moral judgement 3) the idea that religiosity promotes a collective understanding of ethicality and responsibility which is reflected within a community. These characteristics are encompassing of the wide range of religious beliefs and the definition recognises that one does not necessarily need to engage in formal religious practises, i.e church going, to be considered religious. The definition also reflects that religious beliefs shape the behaviours or attitudes of groups of people, referring to "fostering an understanding" which reflects that religious beliefs shape behavioural patterns and socialisation.

4.2.2 Consequences of religiosity

4.2.2.1 Social norms and religion

A social norm is defined as: "A widely shared expectation about the appropriateness of a given behaviour in a given situation" (Gergen and Gergen, 1981, p.497). Social norms determine what is deemed as acceptable or not acceptable in a given situation. They determine which action is desirable and which action is not. While some social norms are written in legislation and enforced by the appropriate legal bodies, most commonly they are maintained by other means (Leftwich & Sen, 2010). Social norms tend to be enforced by social disapproval which arise from deviating from the expected behaviour (Sunstein, 1996). Social disapproval as a consequence from deviating from social norms may result in a range of negative emotions such as shame or embarrassment (Contreras, 2019). As well as the emotional consequences, the person who disobeys social norms may also be subject to consequences at the group-level such as rejection or stigmatisation by others. Consequently, social norms promote conformity that allows people to become socialised in the environment in which the live (Perkins and Berkowitz, 1986; Scott and Marshall, 2005).

It is well established that social norms vary across different cultures (Henrich et al, 2001). Religion is a central source of culture and shared values (Fukuyama, 2001). Religion determines social norms by the promotion of a specific set of values and beliefs. Although there are a wide variety of religions around the world and in the US specifically, all major religions teach a variation of the "golden rule" - that is to "treat others as one would like to be treated" (Ramasamy et al. 2010; Singhapakdi et al. 2000; Smith 2008; Weaver and Agle 2002). Religions determine social norms by promoting a belief in a god who cares about morality and potentially punishes those who transgress from what is deemed appropriate behaviour (Roes and Raymond, 2003).

There is a large multidisciplinary body of literature which considers how religion influence social norms (e.g Stavrova et al, 2013; Lindbeck & Persson, 2018; McGuire, 2008; Sherkat & Ellison, 1999). Moreover, there is a specific literature which considers the mechanisms through which religiosity reduces socially undesirable behaviours (e.g Lehrer and Chiswick, 1993; Donahue, & Benson, 1995; Norenzayan and Shariff, 2008; Sarogou et al, 2005). Multiple theories exist regarding the channels through which religion promotes certain social norms and reduces what is often perceived as unethical behaviour. McCullough and Willoughby (2009) theorise that religion can promote a greater degree of self-control and facilitate self-monitoring amongst its followers. Tittle and Welch (1983) argue religion promotes the internalisation of moral commitments and deviation from those commitments produces guilt which then reduces potential deviance. There is also the 'hellfire' view proposed by Hirschi and Stark (1969) who conjecture that religious individuals' behaviour is influenced by prospect of reward or punishment for their actions on earth in an afterlife.

As well as one's internal relationship with religion, it has also been theorised that religion impacts on behaviour through the social context (Contreras et al, 2019). It has been argued that religion promotes social bonding (Hirschi, 1969) and those with properly developed social ties and sense of participation have a lower propensity towards engaging in crime or delinquency (Hirschi 1969; Kornhauser 1978). Sutherland's (1937) differential association theory specifies that societies where there is consensus over appropriate values or beliefs there tends be lower levels of criminality. Religion promotes harmony through an accepted set of positive values thus reducing exposure to behaviour or content which is favourable of deviance. Similarly, it has been theorised that an individual's moral development is shaped by their community – individuals act in such a way and follow behaviours deemed as socially desirable in order to gain the approval of others (Kohlberg, 1984). This has consequences for the behaviour of individuals as they likely follow social norms in order to avoid the social costs that come with deviation from the set behavioural norms.

Within the realm of business and accounting research, scholars have tried to understand how religiosity shapes the behaviour of those within organisations, particularly in the United States

(Boone et al, 2013; Cui et al, 2015; Hilary and Hui, 2009; Adhikari and Agrawal, 2016). Researchers (e.g Hilary and Hui, 2009; Ci and Shi, 2019; Contreras et al, 2019; Chourou and Zhong; 2020) use a proxy for religiosity constructed from data from ARDA and the US Census Bureau. Data on religious adherence from ARDA is combined with data on county populations from the US census to assign each county level of religiosity. By definition, social integration within counties leads to shared norms. Firms in the aforementioned research, are each assigned a value for religiosity, dependent on the level of religiosity in the county in which their headquarters is situated.

Firms headquarters are where most corporate decisions are made. Headquarters are also where most managers and directors work and exchange information with the key stakeholders of the company (Rubin, 2008; Terzani and Turzo, 2020). Given that "ethical behaviour must begin at the top" (Stead et al, 1990, p. 238), it follows that it is prudent to study a firm's headquarters as it is assumed it has the greatest a bearing on ethicality throughout the firm. The social norm literature makes clear the ways in which employees of a company may be influenced by the religious social norms of where the firm is situated. There are two main reasons why the employees of organisations in areas with high religiosity reflect those norms. First, companies tend to recruit local people (Hilary and Hui, 2009), and in locations with high religiosity these individuals reflect the religiosity of their external environment (Chantziaras et al., 2020). Second past research has shown those in the upper echoleons of firms still work to establish relationships with local communities. Although the director themselves may not be religious, interactions with others from areas with high religiosity leads to internalisation of the religious social norms in that area (Fang, 2015; Dyreng et al., 2012). The outcome of both these factors is that the social norms of a region become embedded in managements own beliefs.

4.2.3 Empirical evidence of the effect religiosity on individual and corporate behaviour

Before I discuss the empirical literature pertaining to how religiosity, as a social norm, influences firm behaviour – I will first review research which assesses the influence of religion on managers or business students directly. Rather than measuring religion at the level of the county and the firm as the unit of analysis, these studies examine attitudes and behaviours of individuals. Although not related to social norm theory, which underpins this thesis, these studies help to elucidate the link between religion itself and decision-making in a business context. From the literature, we know that firms situated in locales with high levels of religiosity are more likely to employ religious managers members than firms situated in areas with low religiosity (Hilary and Hui, 2009). It follows that it is prudent to discuss how religion directly influences perception of ethical dilemmas in the work place before discussing the consequences of religiosity as a social norm.

In a study of business students from a religiously affiliated university in the Pacific Northwest, Kurpis et al (2008) found that religiosity is positively related to a commitment to moral-self improvement. The scholars theorise this is because major organized religions (e.g., Christianity, Islam, Judaism, Hinduism, and Buddhism) promote moral growth as a commendable goal in itself. Similarly, in a sample of US business undergraduates, Bloodgood et al (2007) find that highly religious were less likely to cheat in an experimental game than non-religious students. They posit that religious individuals tend to be moral idealists, who accept universal rules, and reject most forms of academic, business, and consumer dishonesty. In another study on the link between religiosity and perceptions of business ethics amongst students, Rashid and Ibrahim (2008) found that religiosity did have an impact on perceptions of business ethics amongst Malays, Chinese and Indian students. However, the strength of the religious association was dependent on culture, and high religiosity was not always associated with high ethicality. Indeed, the positive effect of religiosity on the moral reasoning of students has not always been replicated. For example, in a sample of Accounting students, Mubako et al (2020) find that religiosity does not have a significant effect on ethical behaviour. There are, however, clear limitations pertaining to studies which sample exclusively students. First, the generalisability of these studies to the wider populations is unclear. Moreover, students tend to be younger than the general population and this likely has a bearing on the findings of the studies.

The link between religion and ethicality has also been explored in a cross-national context. In a study of 63,087 participants from 44 countries, Parboteeah et al (2008) find that religiosity was significantly related to a reduction in acceptance of ethically suspect behaviours, such as taking bribes or tax avoidance. However, it should be noted, while the relationship was significant it the effect was slight.

In a US sample of 220 working adults, Walker et al (2012) measures different forms of religiosity pertaining to specific religious attitudes. They do not find that religiosity has wholly positive effect on ethical judgements but rather they claim the effect to be dependent on the specific religious attitudes. For example, they find that extrinsic religious motivated individuals (those who treats religion in terms of its usefulness), were more likely to make ethically questionable decisions than intrinsically motivated individuals (those who view their practice of religion as a goal in itself). Like Walker (2012), Alshehri et al (2020) distinguishes between different types and the motivations for religious beliefs. The study examines how Muslims' view of god influences their ethical judgement in organisations. They find that a view of god based on hope rather than fear is associated with unethical judgements. It is important to note that this study was conducted in Saudi Arabia so its generalisability to the US context is unclear.

Longenecker et al (2004) survey 1234 business managers regarding the ethicality of 16 different business decisions. Respondents who indicated that religious interests were of at least moderate importance to them demonstrated a higher level are significantly less likely to approve unethical scenarios. The scholars conclude that their research shows that religious commitment has an influence on business ethics. Similiarly, Emerson and McKinney (2010) studied that ethical attitudes of 3,111 business leaders in the United States. The scholars also find evidence to suggest that business professionals who self-report higher levels of religious importance are significantly less accepting of ethically questionable behaviour. Moreover, in a systematic review of religious identity in the workplace, Heliot et al (2020) conclude that religious identity has a sustained effect on positive individual contributions such as citizenship behaviour and ethical conduct.

Collectively, these empirical studies on individual attitudes serve to demonstrate religion represents an important source of morality and influence ethical decision-making processes relative to business scenarios. The research on individual attitudes help to make clear how religious individuals respond to business related ethical decision-making. Although they do not measure behaviour directly, these studies give some insight into the potential effect of religion on decision making inside organisation. The studies also demonstrate that religion tends to be associated with prosocial behaviour and a lesser acceptance of morally ambiguous ethical conduct.

Religiosity has also been linked to firm-level outcomes. In a seminal paper, Hilary and Hui (2009) demonstrated that US firms based in more religious counties display lower degrees of risk exposure. They attribute this link to a causal relationship between religiosity as a county-level social norm and risk-aversion at the level of the firm. The research of Hilary and Hui (2009) spawned a number of similar papers which also consider the role of religiosity on firm-level outcomes in in US firms. This stream or research focuses on the consequence's religiosity has on firm accounting decisions and management behaviour, and measures religiosity at the county-level. These studies conjecture that the firm's management may internalise the religious social norms of the area where the firm is headquartered. Importantly, consistent with the theories of Sutherland (1937) and Kohlberg (1984), these studies ascertain that individuals from highly religious areas internalise religious norms and align business behaviour with religious norms regardless of whether or not the manager is themselves religious (Callen & Fang, 2015; Dyreng et al., 2012; McGuire et al., 2012). As such, accounting and management scholars have widely supported the social norm perspective of religion (Callen & Fang, 2015).

The most prominent stream of research on region-level religiosity on firm outcomes in the United States pertains to accounting practises. Dyreng et al (2012) examine the relationship between religiosity and corporate financial reporting in a sample of US firms. Measuring religiosity based the

location of firm's headquarters, they find that religious adherence is associated with a lower likelihood of financial restatement and less risk that financial statements are misrepresented. They attribute these results to a combination of honest and risk aversion, two social norms which they view as connected with religiosity. McGuire et al (2012) also investigate the relationship between religiosity and accounting practises in the US and reinforce the findings of Dyreng et al (2012), finding evidence which supports the hypothesis being situated in an area with greater religiosity lowers incidences of financial reporting irregularities. The findings are attributed to a higher degree of honesty amongst religious populations. Similarly, in a sample of US firms, Chourou et al (2020) find that firms located in areas with higher religiosity disclose higher-quality management earnings forecasts than other firms. From their findings, they infer that the role of religiosity is concentrated in firms with weak monitoring mechanisms. The positive association between of greater financial reporting quality and religiosity has also been found in Portugal (Montenegro et al, 2017), and in a cross-national study of banks from 29 countries (Kanagaretnamet al, 2015).

In a sample of US firms, Leventis et al (2018) find that religiosity reduces audit pricing and the need for shareholders to bear the cost of monitoring agents as managers act more ethically. They conceptualise the religiosity of the county where a firm is headquartered as institutionalised monitoring mechanism, which promotes risk-averse, anti-manipulative and conservative attitudes towards business practises. Omer et al (2016) also investigate how audit practises in US firms vary by regional level religiosity. They find that audit offices in more religious areas are more likely to issue ongoing concern opinions. They attribute this to a higher degree of scepticism and aversion to risk as a result of religious social norms. Similarly, Cai and Shi (2019) document that firms in more religious areas of the United States use less debt financing and receive better credit ratings. The authors perceive these findings as evidence for both debt and risk-aversion as social norms for firms headquartered in more religious locations.

Taken in totality, these studies promote the idea that religiosity has an influence on accounting decision making in the United States. Specifically, these studies focus on religiosity as a social norm (based on the firm headquarters location) and use this information to explain accounting choices. Indeed, the majority of research which considers the impact of religiosity on firm-level outcomes in the United States is focused on accounting rather than management practises. In a review of religion and organisation, Tracey (2012) states that "for the most part, management researchers have stubbornly refused to engage meaningfully with religion…". Since then, there have been some development within the literature, particularly examining religiosity relative to organisational strategy and management misbehaviour.

Grullon et al (2019) examine the influence of religiosity on inappropriate corporate behaviour in a sample of US firms. They find that firms headquartered in highly religious counties are less likely to grant excessive compensations packages to managers and to be the target of class action lawsuit. The lesser incidence of class action law-suits in firms situated in areas with higher levels of religiosity is perceived by the authors to signal a reduction in inappropriate managerial behaviour.

Religiosity also often been linked to firms adoption of CSR policies. In a sample of US firms, Wu et al (2016) find that firms located in counties with higher levels of religiosity show higher CSR. They posit that stakeholder preferences are shaped by local religious norms and firms' corporate decisions are influenced by these local demographics. Similarly, Chantziaras et al (2020) find that in a sample of US banks, the probability of a bank issuing a CSR report is positively associated with level of religious adherence in the area where the bank is headquartered. They posit that this occurs because in highly-religious contexts, banks ethical decisions are examined by the local community more than they would be in less-religious areas. Harjoto and Rossi (2019) also examine religiosity as a determinant of the adoption of CSR policies. In a sample of Italian firms, they mirror the findings of Wu et al (2016) find that social pressure from local religiosity has a strong positive impact on firm CSR performance. They argue that Catholicism places an emphasis on the common good, and this subsequently results in firms in more religious regions of Italy adopting CSR policies.

Terzani and Turzo (2020) explore the relationship between religiosity and CSR in an international sample of firms from 33 countries, and their findings somewhat conflict that of the US based studies. The find that a 'U' shaped relationship between religiosity and CSR rather than a linear one – concluding that ESG disclosure is higher when religious norms are weak or strong, and lower when they are moderate. They theorise that when religiosity as high, ESG is higher because the firm tries to confirm to societal religious expectations. When firms are headquartered in countries with low religiosity, this may also increase ESG disclosure as firms as managers compensate for the lack of trust found in these countries by improving ESG disclosure. The relationship between CSR adoption and religiosity has also been explored outside of majority Christian nations. In sample of 189 Pakistani managers, Hunjra et al (2020) finds empirical support for the hypothesis that religiosity is positively associated with CSR. This is significant as it suggests that Islam too influences organisations systems of values and ethics, as previously theoretically postulated (e.g Khurshidet al, 2014; William and Zinkins, 2010).

Contrary to other studies on religiosity and CSR in the United States (e.g Wu et al, 2016; Chantziaras et al, 2020), McGuire et al (2012) find that US firms headquartered in areas with a strong religious presence receive lower ratings for CSR. They suggest that religious individuals are able to separate their personal responsibility for society with that of the firm (Brammer et al. 2007). Moreover, they

postulate that progressive CSR policies may conflict with the conflict with the traditional or conservative views sometimes associated with religion. Attig and Brockman (2017) also find support for the argument that firms in the US, headquartered in areas with higher levels of religious adherence receive lower ratings for CSR. Similarly, in a large sample of US firms, Cui et al (2015) also find that religiosity is negatively associated with environmentally friendly decisions made by management. They use White's (1967) "dominion hypothesis" to explain their findings, stating that Christian beliefs may in fact discourage environmental concerns.

Scholars have also recently been explored religiosity as a determinant of firm value. In a longitudinal sample of publicly listed US firms Zolotoy et al (2019) find that high levels of religiosity where a firm is situated attenuates the positive effects of CSR on firm value. The reason for this is that is investors make assumptions about firm character based on the strength of local religiosity in the location of their headquarters. They posit that strong local religious social norms reduce investor reliance on CSR, the level religiosity of where the firm is located is perceived as another signal of the good character of a firm.

Callen and Fang (2015) also examine the relation between religiosity and firm value, and in particular the risk of future stock price crash risk. The study is predicated on the idea that some managers withhold bad news as long as possible from investors because of career and compensation concerns. They find that managers of firms headquartered in more religious areas are less likely to withhold bad news and the firms are subsequently less likely to suffer from stock price crashes – a consequence of bad news hoarding. These findings suggest a reduction in improper management and self-serving management behaviour in more religious locales.

The findings of research on the impact of religiosity on management decisions in the US, broadly support the idea that religiosity leads to more ethical decision making, although there are notable exceptions (e.g McGuire et al, 2012; Cui et al, 2015). At present, research within the management literature which links religiosity at a regional level to firm-level outcomes generally pertain to only a few topics, for example: CSR (e.g Wu et al, 2016; Chantziaras et al 2020; Cui et al, 2015; Hunjra et al, 2020), management misbehaviour (Grullon et al, 2019) and firm value (Callen and Fang, 2015; Zolotoy et al, 2019). In the next section, I will outline the gap in the literature which this thesis addresses.

4.2.4 Research Gap

The foundations of a literature which consider the impact of religious social norms on corporate behaviour have begun to emerge (e.g Hilary and Hui, 2009; McGuire et al, 2012; Cai et al, 2019; Chourou, 2020; Leventis et al, 2018; Wu et al, 2016; Chantziaras et al 2020; Hunjra et al, 2020).

Similarly, scholars have built a rich body of research which considers firm-level governance mechanisms and their relevance to outcomes for the firm (Kumar and Zattoni, 2019). However, these two literatures have not yet been merged. Studies which do consider religiosity relative to management practises (e.g Chantziaras et al, 2020; Cui et al, 2015; Wu et al, 2016; Terzani and Turzo, 2020) do not take account of any board-level variables as within their research design. The few studies which do control for board-level factors, only control for one or two board-level variables each. For example, Chourou et al (2020) control for board independence, Jian et al (2018) control for board independence and board size, and Hilary and Hui (2009) for board size. As these studies neither focus nor control fully for board-level variables, there is a gap in the literature for studies on religiosity studies which consider the internal monitoring mechanisms of the firm. The lack of research in the field of management which reconciles the importance of both corporate governance variables and external factors, like religiosity, in shaping firm performance is notable, and is an important gap in our knowledge of how the behaviour of firms is shaped (Aguillera and Jackson, 2003; Kumar and Zattoni, 2019).

There has been wide debate about the role board social capital in shaping firm performance – this debate is documented fully in study 1 of this thesis. Many corporate governance studies consider the implication of the separation of ownership and control, addressing this issue through the lens of the agency problem. According to many corporate governance scholars (e.g Dalton et al, 2007; Fich, 2005; Perry & Peyer, 2005; Handschumacher et al, 2019), board social capital may lead to an agency problem and this agency problem has negative consequences for firm performance. The negative effect of board social capital or interlocks on firm performance has been found empirically in multiple different national contexts e.g United States (Fligstein and Bradley, 1992; Perry and Peyer, 2005; Fich and Shivdasani, 2012), India (Jackling and Johl, 2009), Malaysia (Haniffa and Hudaib, 2006). This research aims to expand the literature on board social capital and firm performance by taking into account the social norms derived from the level religiosity where a firm is headquartered. Religiosity, despite its central importance to American society, and nearly all societies globally, religion has largely been neglected in the study of organisations and management (Tracy, 2014; Gümüsay; 2017). While scholars have studied extensively the relationship between formal institutions and firm outcomes, there has been a dearth of research on whether social norms like religiosity might influence the relationship between corporate governance and firm performance (Zattoni et al, 2020). This neglection of studying social norms is important as it is theorised strong informal institutions, like religiosity, may promote social norms which influence the relationship between board social capital and firm performance (Schiehll, Ahmadijan, and Filatochev, 2014).

4.2.5 Religiosity and Board Social Capital: hypothesis development

My research considers the interaction effect of religiosity on the relationship between board social capital and firm performance. There are two main theories of how board social capital influences firm level-outcomes and, in particular, firm performance. Scholars tend to fall into one of two camps, those who take the resource-based view and agency theorists. Resource dependence scholars characterise the firm as an open system, which depends upon reciprocal exchanges with other firms to procure critical resources (Pfeffer & Salancik, 1978; Davis & Cobb, 2010; Hillman et al., 2009; Wry, Cobb, & Aldrich, 2013). Resource dependence scholars take the perspective that a critical function of the board is to provide resources for the firm (Boyd, 1990; Daily and Dalton, 1994; Gales and Kesner, 1994; Hillman and Dalziel, 2003; Madhani, 2017). From this perspective, scholars have theorised that directors' social capital serves to connect the firm with their external environment and essentially forming new streams of information and resources into the organisation (Carpenter and Westphal, 2001; Barosso-Castro, 2016), improving outcomes for the firm.

The other main view of board social capital is couched in agency theory. In brief, agency conflicts arise from the separation of ownership and control. Board social capital has been shown to have a negative effect on firm performance, as it exacerbates agency conflicts (Dalton, Hitt, Certo, and Dalton, 2007; Fich & White, 2003; Finkelstein, 1992). Agency theorists argue that as directors' social capital grows, they become more self-interested and concerned with their position within their elite social group. The implication of this is that they monitor less effectively (Mizruchi, 1996; Westphal & Khanna, 2003), which reduces firm performance. There is an extended discussion of both agency theory and the resource-based view of board social capital in study one of this thesis.

The empirical evidence surrounding the influence of board social capital (measured as director interlocks to other firms is mixed) on firm performance is mixed. Several scholars have found that board social capital is positively related to firm performance in the United States (Kor and Sundaramurthy, 2009; Abdollahian et al, 2017), UK (Horton et al, 2012), Norway (Bøhren and Strøm, 2010), and Spain (Perez-Calero et al, 2016, Sanchez-Famaso, 2020). Conversely a negative effect of board social capital or interlocks on firm performance has been found empirically in multiple different national contexts e.g United States (Fligstein and Bradley, 1992; Perry and Peyer, 2005; Fich and Shivdasani, 2012), India (Jackling and Johl, 2009), Malaysia (Haniffa and Hudaib, 2006). These findings make clear board social capital is a contested area of study where scholars have failed to reach a clear consensus on its influence on firm performance. One possible explanation for the disparity in findings is that scholars have failed identify how social and cultural norms, for example, religiosity, might interact with the effect of board-level characteristics on firm performance (Zatonni et al, 2020).

Religion is of great significance to American life. According the Pew Research Centre (2015), well over half of individuals in the United States are religiously affiliated. It is clear from the existing literature that religiosity influences the decision-making process of individuals within organisations. A growing body of literature indicates that religious social norms influence individual and organisational decision making. This research has shown that religiosity is associated with risk aversion (Cai and Shi, 2019; Chourou et al, 2020), honesty (Dyreng et al, 2012; McGuire et al, 2012), and ethicality (Leventis et al, 2018; Chourou et al, 2020). Importantly, these studies support the idea living or working in a religious county leads to the internalisation of religious norms and the alignment of business behaviour with religious norms regardless of whether or not the manager is themselves religious (Callen & Fang, 2015; Dyreng et al., 2012; McGuire et al., 2012). There is also evidence which suggests that firms located areas with a high proportion are religious adherents, are likely to employ larger proportions of religious people at all levels of the organisation and this has consequences for the managerial style, corporate culture and decisions that the firm takes (Hilary and Hui, 2009).

I expect that firms situated in counties with higher religiosity will exhibit higher levels of risk aversion. Religion has often been linked to risk aversion at the individual level (Osoba, 2003; Diaz, 200; Nielson et al, 2017). Moreover, many scholars have found that religiosity within US counties is linked to risk aversion in corporate decision making (Adhikari & Agrawal, 2016; Kanagaretnam et al, 2016; Omer et al, 2018; Leventis et al, 2018). There is good reason to expect that risk averse firms are more profitable. If a firm has a more risk-averse corporate culture, they will likely avoid projects with more uncertain payoffs (Hilary and Hui, 2009). Risk averse firms also likely require a higher internal rate of return before investing in a project (Hilary and Hui, 2009). In line with the findings of Hilary and Hui (2009), I expect that, on average, firms situated in US counties with greater religiosity should be more profitable, exhibiting higher ROA.

Board social capital has been cited as having multiple possible benefits to the firm such as: providing access to unique and diverse information (Beckman & Haunschild, 2002; Shropshire, 2010), enhanced ability to learn new corporate practises (Davis, 1991; Palmer, Jennings, & Zhou, 1993) and a method of dealing with uncertainty (Beckman, Haunschild, and Phillips, 2004; Boyd, 1990; Pfeffer, 1972; Podolny, 1994). Given these considerations, I conjecture that firms with higher levels of board social capital will experience greater firm performance.

While I have argued that board social capital, in the form of board interlocks, has a positive effect on firm operational performance, I expect religiosity to weaken this relationship. Scholars have shown that board social capital, in the form of director interlocks, is a strategy which is employed by firms to deal with the negative influence of uncertainty on performance (Beckman, Haunschild, and

Phillips, 2004; Boyd, 1990; Pfeffer, 1972; Podolny, 1994). Moreover, researchers report that interlocks are *most useful* to firms when they are faced with risk or uncertainty (Boyd, 1990; Martin et al, 2015). In organisational studies, uncertainty is equated to the inability to predict firm performance (Milliken, 1987). Firms in headquartered US counties with high religiosity, operate with lower levels of uncertainty - demonstrated by a lower variance in ROA (Hilary and Hui, 2009). The performance enhancement created by board social capital is most likely to be realised by firms which are not risk averse, and consequently operate under greater uncertainty. Given these considerations, I conjecture that greater county-level religiosity will reduce the positive impact of board social capital on firm performance.

H: County-level religiosity has a negative interaction effect on the relationship between board social capital and firm performance

4.3 Research Design
Introduction

The previous section provides a review of the literature on board social capital and firm performance and presents two hypotheses. This section addresses the research design, used to test those hypotheses. First, the chapter covers the approach to sample selection and data collection. After outlining my approach to sampling, the chapter discusses variable measurement: providing a detailed account of the measurement of the dependent variable, firm performance and the key explanatory variables, board social capital and religiosity. Subsequently, I outline the various controls used in the study. Next, the section outlines the empirical research models used to test the hypotheses, and the econometric and statistical issues which arise from the choice of methods employed.

Like all academic research, this study is underpinned by certain ontological and epistemological assumptions. Ontology is concerned with the nature of reality (Saunders, 2012). Objectivism and subjectivism stand at opposing ends of the ontological spectrum. My standpoint is one of objectivism. As an objectivist, I view reality as something that exists, whether we are conscious of it or not. From an epistemological standpoint, I follow the philosophy of positivism. Positivism assumes that an objective reality exists and can be empirically measured. The adoption of an objectivist positivist research philosophy shapes the research methods employed in this study as this philosophy assumes the constructs of interest within the thesis can be measured quantitively. There is a more detailed discussion of my research philosophy in study 1, section 3.4.1.

4.3.1 Sample selection process and data collection

The sample selection and data collection process of study 2 echo that of the first study with one exception – all firms headquartered outside of the United States are dropped from the sample.

As indicated in chapter 3, the starting point for the sample is all firms which are listed in the BoardEx organisational summary documents. The BoardEx data provides data from which the board-level variables are constructed. Stage two of the data collection process is matching the BoardEx data with Datastream. Matching firms between the two databases was a two-step process. First, both of the databases use ISIN as an identifier. I use the ISIN on both databases to automatically match firms. However, in some cases, an ISIN was not provided in one or both databases. To overcome this, I ran a name recognition programme implementing the Levenstein algorhythm, which matched the names of firms on Datastream to the name of firms on BoardEx. I subsequently manually checked all the matches, making any necessary adjustments to ensure the quality of the matching procedure.

Once firms from both databases were matched, I removed firm-year observations from outside the specified sample date range. The sample starts in 2005. The reason for this is that the availability of data on BoardEx for firms from the rest of the world is very sparse before that point. The sample stops in 2015 – this is because for the performance measures I need data 3 years ahead, in this sense, I have data up to 2018.

I remove firms from the sample which are not listed as having their headquarters in the US in Datastream. In line with prior literature (e.g Mazzi, Slack, & Tsalavoutas, 2018; Barroso-Castro et al, 2017), financial firms are also removed from the sample. Financial firms are excluded from the sample because they operate under unique regulations (Barn-hart et al., 1994) and have different balance sheet structures (Barroso-Castro et al, 2016). Moreover, financial firms are not suited to some of the measures used in this study, for example, Tobin's Q (Lins, 2003). I also exclude firm-year observations with missing Datastream accounting data.

I eliminate firm-year observations which report negative common equity (Datastream item: WC07220). Removing firms with negative common equity ensures that the return on equity ratio can be accurately interpreted. Finally, I remove firms from counties which have missing religiosity or county-level control data.

This process results in a longitudinal sample consisting of 13,600 firm-year observations corresponding to 1,628 firms.

Table 22: Sample selection process

236,549 firm year observations	**The sample starts with firms with data listed in BoardEx 'Board Summary' documents for the regions of North America, Europe and the rest of the world. This data covers the period 1999 – 2017.**
(-85,948) **150,601 firm year observations**	Firms listed on BoardEx which could not be matched to Datastream were dropped from the sample. I match the BoardEx data with Datastream. First, I use the ISIN as a common identifier to automatically match firms on the two databases. Second, I matched firms for which couldn't be matched by ISIN using a name recognition program implementing the Levenshtein algorithm. I subsequently reviewed these suggested matches by hand, accepting or rejecting the pairing.
(-53,833) **96,768 firm year observations**	Drop firm year observations from outside of the specified sample date range (2005 – 2015~~6~~).
(-15,017) **67,075 firm year observations**	Drop firm-year observations related to financial firms
(-25,330) **41,675 firm year observations**	Drop firm year observations with missing Datastream data
(-414) **41,229 firm year observations**	Drop firm year observations with missing data on corruption from Transparency International (i.e., CPI_Score is missing). The firms removed due to lack of country-level corruption data are mostly from under-developed economies.
(-953) **40,722 firm year observations**	Drop firm year observations with missing generalised trust values. The firms removed due to lack of country-level generalised trust data are mostly from under-developed economies.
(-1,132) observations **39,590 firm year observations**	Drop firm year observations with negative equity
(-25,764) observation **13,826 firm years observations**	Drop firm year observations not from the United States
(-226) observations **13,600 firm year observations**	Drop firm year observations with missing county-level demographic data or religiosity data

13,600 firm year observations	**Total firm year observations for the period 2005 – 2015 across the United States**

4.3.2 Variable Measurement

The aim of this research is to examine the influence of board social capital on firm performance. More specifically, the study investigates the interaction effect of county-level religiosity on the relationship between board social capital and firm performance.

The following regression model is used:

$$FP = \beta 0 + \beta 1(\textit{board social capital})it + \beta 2(\textit{board social capital} \text{ x } \textit{religiosity})it + \beta 3(controls)it + \varepsilon it$$

A similar research design is used in the previous study (chapter 3), which examines the interaction effect of country-level corruption and generalised trust on the relationship between board social capital and firm performance. The central point of differentiation between the design of these studies is that study 2 focuses on the interaction effect of religiosity, rather than generalised trust or corruption, and draws it sample exclusively from firms headquartered in the United States.

4.3.2.1 Measurement of the Dependent Variable – Firm Performance

Following in the same vein as study 1, in order to test the hypotheses derived from the literature, I compute two proxies of firm performance. Past empirical literature has often explored the relationship between board social capital and firm performance – using Tobin's Q (e.g Kim, 2007; Kor and Sundaramurthy, 2009; Jackling and Johl, 2009; Devos et al, 2009). To help facilitate comparability with past research I also measure firm market performance using two different computations of Tobin's Q. There has been considerable criticism of corporate governance studies which use accounting measures of performance as such measures fail to account to differences in systematic risk, tax laws, and accounting conventions (Wernerfelt and Montgomery, 1988; Singh et al, 2018), for this reason, I use market-based measures of performance.

Tobins Q was developed by James Tobin (1967) and is the ratio between a physical asset's market value and its replacement value (Singh, 2018). in theory, a Tobin's Q ratio of above 1 indicates that the market value is greater than the value of the companies recorded assets (Alghifari et al, 2013). Tobin's Q reflects the present value of future cash flows based on current and future information (Kaczmarek, Kimino, S & Pye, 2012; Singh, 2018). Following Jackling and Johl (2009), Drakos and Bekiris (2010), and Marinova et al (2016), the first Tobin's Q measure, is measured as the ratio

of market value of equity and debt divided by total assets. The second Tobin's Q measure, *Tobin's Q (alternate proxy)*, is measured as Market Value (MV) per total assets (Busco et al, 2019).

4.3.2.2 Measurement of Board Social Capital

Board Social Capital

As indicated in study 1, board social capital is defined as "the degree to which board members have outside connections with the environment and the potential resources arising from those connections, which may be sources of competitive advantage for the firm" (Barosso-castro, 2016, pp.7). Following Haynes and Hillman (2010), Kor and Sundaramurthy (2009) and Tian et al, (2011) my proxy for board social capital relies on measuring director interlocks to other firms. Measuring director interlocks is a simple process. For example, if one director at the focal firm holds external directorship at another two firms, this equals a score of two. The score of all the directors are added together giving a cumulative total before dividing by the total numbers of members on the board of the focal firm. This method acknowledges and addressed that larger boards are more likely to have more ties to other firms (Barroso-Castro et al, 2016). Greater levels of average director interlocks for the firm, is indicative of greater levels of board social capital

Board social capital (alternative proxy)

Following Ruigrok, Peck, & Keller (2006) and Johnson et al (2011) I also use total interlocks as an alternative measure of board social capital. Total interlocks is calculated as the number of external directorship ties board members hold with other organisations in each year.

4.3.2.3 Measurement of Religiosity

Religiosity

In order test the influence of religiosity on the relationship between board social capital and firm performance, I compute the variable rel. Following research in this area (e.g Chantziarasa et al, 2020; Callen & Fang, 2015; Dyreng et al., 2012; Jiang et al., 2018), I operationalise religiosity using data from the Association of Religion Data Archives (www.thearda.com). ARDA provides data pertaining to the number of religious adherents. ARDA (2018) defines religious adherents as:

> "all members, including full members, their children and the estimated number of other participants who are not considered members; for example, the "baptized,"

"those not confirmed," "those not eligible for Communion," "those regularly attending services," and the like”

The ARDA makes available decennial studies of religious adherents at the county level. I merge and cleaned the file for longitudinal analysis which covers the periods 2000, 2010. I choose these periods as my own sample covers the years 2005 – 2015. Following, previous research (e.g Chourou et al., 2020; Dyreng et al., 2012; El Ghoul et al., 2012; Hilary & Hui, 2009) I linearly interpolate and extrapolate county-level estimated of religiosity between between 2005 – 2010 and 2010 – 2015 respectively.

Following Hilary & Hui, (2009),Chantziarasa et al (2020) and Leventis et al (2018), Religiosity is measured as the number of adherents in the country over the total population. The level of religiosity attributed to a firm is determined by the level of religiosity of where their headquarters is located. The larger the proportion of religious adherents in the county, the larger the expected influence of religious norms on the organisation.

Religiosity (alternative proxy)

Following, Grullon et al (2010) and Dyreng et al (2012), I construct an alternative proxy for religiosity, measured as the number of congregations in the county where the firm is headquartered in year, divided by the population of the county, times 1000. The larger the proportion of congregations, the greater the expected influence of religious social norms in the area.

4.3.2.4 Measurement of Control Variables

Measurement of county-level variables

This section outlines the county-level control variables used in this study. The introduction of a number of control variables helps to mitigate potential concerns around internal validity. Internal validity refers to the extent to which a causal relationship between the variables within the study can be established (Winter, 2000). By introducing control variables at the board, firm, and county-level, which have been linked to firm performance in the extant literature, the design reduces concerns related to internal validity.

Iannaconne (1998) documents a number of different demographic characteristics which may influence an individual’s propensity towards religiosity. These include income, education, ethnicity, gender and age. Although it is unclear how these characteristics might influence the dependent

variable – firm performance – including them as controls makes sure that our key variable of interest captures the effect of religiosity rather than the demographic characteristics it is correlated with (Contreras et al, 2019). I include these variables as past research has demonstrated that they may be correlated with religiosity and I want to ensure that my religiosity proxy captures the effect of religiosity, as opposed to other demographic characteristics which it is correlated with (Hilary and Hui, 2009).

Income

Following Contreras et al (2019) and Jian et al (2017), income is measured as the natural logarithm of per capita personal income, using data from the U.S Census Bureau.

Education

Following Contreras et al (2019), Chantziaras et al (2020), Leventis et al (2018) and Jian et al (2017) education is measured as the percentage of population with a bachelor's degree or higher.

Age

Following McGuire et al (2012) and Chantziaras et al (2020), age is measured as the natural logarithm of the median age of the residents in a county using data from the U.S. Census Bureau.

Ethnicity

Following Contreras et al (2019), I calculate ethnic minority ratio as the percentage of non-white population.

Gender

Following Chantziaras et al (2020), gender is measured as the female-to-male ratio in the county.

Board level controls

Identical to study 1, this study also uses three controls at the board level, each of which has been associated with firm performance in past empirical literature: Board size, CEO Duality and Proportion of non-executive directors on board. The data for all of the board-level variables was gathered from BoardEx.

Board size

First, I control for Board size which is measured as the total number of directors on the board. Scholars have suggested that larger boards may have a negative influence on firm performance (Guest, 2009; Jensen, 1993), as a consequence of poorer communication and coordination (Lipton and Lorsch, 1992). This, however, has been contested - recent research on Asian firms has found that board size is positively correlated with firm performance (Johl, Kaur and Cooper, 2015; Danoshana & Ravivathani, 2019). The extant literature is inconclusive but nevertheless I control for board size.

CEO duality

CEO duality occurs when the same person is both CEO and chairman of the board. Again, the literature is mixed on the effect of CEO duality on firm performance. Proponents of agency theory argue that combing the roles of CEO and chairperson may reduce board independence and lead to less effective monitoring (Daily and Dalton, 1993; Jensen, 1993). Conversely, there may be benefits to CEO duality, for example, the combination of these roles may lead to more unified and strong leadership (Lam and Lee, 2008). Ultimately the past theoretical and empirical literature on CEO duality is mixed, it is not clear what effect CEO duality has on organisations. The influence of CEO duality may vary depending on organisational characteristics and business environment (Faleye, 2004).

Proportion of non-executive directors on board

Proportion of non-executive directors is calculated by the ratio of Independent NED on Board to the Non independent directors. The presence of non-executive directors on the board of directors is cited as good firm performance by agency theorists (Fuzi et al, 2016). Scholars have investigated the relationship between board independence countries around the world, for example: China (Liu et al, 2015), India (Black and Khanna, 2007), Korea (Black and Kim, 2012), and the U.K (Dahya and McConnell, 2007) and generally report a positive relationship between board independence and firm performance. Interestingly, however, Hermalin and Weisbach (2003) reviewed the literature on the relationship between board independence and firm performance in the context of the United States, and reported that it did not wield a significant influence on performance. Given the mixed existing evidence, and particularly the evidence specific to the United States, it appears that the proportion of non-executive directors on board should either have a positive and significant or non-significant relationship with firm performance.

4.3.2.5 Measurement of firm-level controls

Firm-level controls

This study uses five controls at the firm level, each of which has been associated with firm performance in past empirical literature: Firm size, Leverage, Liquidity, Industry classification and International sales percentage. The data for all of the firm-level controls was downloaded directly from Datastream.

Firm size

It is necessary to control for firm size as it may effect firm performance. Following Jackling and Johl (2009) and Bozec et al (2010), firm size is measured as the natural logarithm of total assets in hundreds of USD: log(tausd100). Many of the studies which investigate the link between firm size and performance find a positive association between these two variables (Dogan, 2013; Lee, 2009). There are two main reasons a firm's performance is often positively correlated with its size. First, firms who perform well are able to grow (Shah et al, 2016). Secondly, larger firms benefit from increased access to resources and are allowed to benefit from economies of scale in a way which smaller firms usually cannot.

Leverage

Following Aggarwal et al (2019) and Florio and Leoni (2017), leverage is measured as the ratio between total debt and book value of assets. The extant literature on the relationship between firm performance and leverage is mixed. Some studies have found a negative relationship between leverage and firm performance (Chen 2004; Tian and Zeitun, 2007; Salawu, 2007), while others have reported a positive relationship (Azeez, 2015). Within the literature there is relatively widespread agreement that the effect of leverage on firm performance is ambiguous (Ibhagui & Olokoyo, 2018).

Liquidity

Liquidity is another control variable used in this study. Liquidity is measured as the ratio between current assets and current liabilities. Liquidity measures the organisation's ability to meet payment obligations (Saleem and Rehman, 2011). There is limited empirical work on the relationship between firm performance. Saleem and Rehman (2011) provide an initial study into the relationship between liquidity and firm performance and find a significant and positive relationship between liquidity and ROA but no significant relation to ROE. Because of the lack of research on the relationship between liquidity and firm performance, it is not known what relationship is expected.

International sales percentage

International sales percentage is the final control variable used in this study. International sales percentage is measures as percentage of international sales of total sales (Vithessonthi & Racela, 2016) and is indicative of a firm's level of involvement in international markets proportionate to their size. There is little agreement amongst scholars as to the effect of international sales percentage on firm performance and the empirical literature has yielded mix results (Vithessonthi & Racela, 2016). In summary, the existing literature is not clear on the effect of internationalisation of firm performance and therefore, it is not known what relationship is expected.

4.3.3 Empirical research model

The aim of this research is to examine the interaction effect of county-level religiosity on the relationship between board social capital and firm performance. The coefficient of the interaction term shows the effect that religiosity has on the relationship between board social capital and firm performance. All of the regressions are measured twice for Tobin's Q and Tobin's Q (alternate proxy) – once at t+2 and once at t+1,2,3.

4.3.3.1 Statistical properties and econometric issues

Univariate analysis

Univariate analysis examines the correlation between the dependent and the individual independent variables. I run both parametric and non-parametric tests on the data. Parametric tests rely on the assumption that the data is normally distributed while, alternatively, the result of non-parametric tests do not rely on upon any particular data distribution to be considered valid.

Similar to study 1, I split my sample into sub-groups. This time I divide the firms by level of religiosity in the area which they are headquartered. I compare the observed means of the independent samples using t-test and also Mann-Whitney's test, which is a non-parametric equivalent of the t-test. While the t-test examines difference in mean, the Mann-Whitney test compares the difference in median values. This allows me to gain a better understanding of the characteristics of firms change depending on their environment and level of internationalisation. I also order the key variables by year and run the Cuzick test, which is a non-parametric test for trends across ordered

groups (Cuzick, 1985). This allows for an insight into the trend in each of the key variables over the course of the sample period.

As in study 1, I test the correlation between all pairs of variables using both Pearson's correlation test which is parametric and Spearman's correlation test which is a non-parametric equivalent. The correlation between variables is denoted by the coefficient, which operates on a scale of –1 to 1. Positive values signal a positive relationship between the variables, while negative values signal a negative relationship. The closer the value is to ± 1 the stronger the association is between the variables, with a value of ± 1 signalling a perfect correlation. This initial investigation into the relationship between variables provides a first assessment of the relationship between the individual independent and dependent variables.

Multivariate analysis

Like study 1, this study uses multivariate regression, which is used when the value of the dependent variable is hypothesised to depend on multiple independent variables. Multiple regression allows for understanding about the effect of each individual explanatory variable on the dependent variable by holding the effect of the other variable's constant (Mehmetoglu and Jakobson, 2016). There is an in-depth discussion of the assumptions which underpin multiple regression and how I test them in chapter 3.

Statistical techniques

Unbalanced Panel Data

The study uses panel data to investigate the relationship between firm performance and a range of explanatory variables. Panel data or longitudinal data as it is sometimes referred to is data that contains observations about different cross sections over time. In this case, the cross sections are firms. There are a number of advantages to using panel data, rather than cross-sectional data. Hsiao (2007) outlines many of the key benefits of panel data. First, panel data gives more degrees of freedom than cross-sectional data, the efficiency of econometric estimates are improved (Hsiao et al. 1995). Moreover, panel data is better suited to uncovering dynamic relationships, as it can pick up inter-firm differences to reduce collinearity. Panel data also reduced potential issues pertaining to reliability as it can be used to demonstrate stable relationships over time. As the study uses multiple observations made on the same firms over several years this helps to ensure reliability.

In this research, I run an OLS regression with clustered standard errors. In this method observations can be grouped into clusters based on firm id, with model errors uncorrelated across clusters but correlated within cluster (Cameron and Miller, 2015). As is common in accounting research, the continuous board-level and accounting variables are winsorised at the top and bottom 1%.

The relationship between board social capital and firm performance, as well as the interaction effects of corruption and generalised trust are tested through the following model:

$$\text{Firm Performance} = \beta 0 + \beta 1\text{bsc} + \beta 2\text{bsc x rel} + \beta 3\text{boardsize} + \beta 4\text{outside} + \beta 5\text{ceo\_dua} + \beta 6\text{size} + \beta 7\text{lev} + \beta 8\text{liq} + \beta 9\text{intsaleperc} + \beta 10\text{age} + \beta 11\text{income} + \beta 12\text{edu} + \beta 13\text{ethnicity} + \beta 49\text{sex} + \text{industry dummies} + \text{year dummies}$$

As discussed, multiple regression assumes that the independent variables are not highly correlated with one another. Similar to study 1, I use three methods to investigate multicollinearity within my independent variables. Bivariate correlations are checked using Pearson and Spearman's rank correlation coefficients. If the pairwise correlation between any two regressors is above 0.8 then multicollinearity is a problem (Kumari, 2008). I also use Variance Inflation Factor (VIF) to test multicollinearity. If the VIF value is more than 10 for any variable, this may be an indication that multicollinearity exists (Mehmetoglu, & Jakobsen, 2016). It may be necessary to drop one of the highly correlated variables, if it is theoretically justifiable.

Given that my research design involves interaction between a pairs of the independent variables: board social capital & religiosity, there is the potential for multicollinearity. There is debate in the literature as to the extent to which the perceived multicollinearity problem amongst interaction terms is actually an issue (Disatnik & Liron, 2016). For example, Disatnik & Liron (2016) argue that researchers should not be concerned with multicollinearity when deciding how to run and interpret regression moderated multiple regression (MMR). However, Irwin and McClelland (2001) suggest that multicollinearity may present as an issue and support the idea of mean centring variables prior to the computing of interaction effects. I re-run my regression with mean centred variables in the robustness testing section, as a response to this debate in the literature.

Conclusion

This study investigates the interaction effect of county-level religiosity on the relationship between board social capital and firm performance in the United States. This section covers the measurement

of the dependent, independent and control variables. For the dependent and each of the key explanatory variables, the chapter provides a definition, data source and details of the formula used where applicable.

The section also addresses the econometric assumptions at the foundations of regression analysis. There is also discussion the issue of endogeneity in corporate governance studies. The chapter covers the advantages of the OLS approach to data analysis, and why it is well suited to this data-set and research question.

Finally, the section discusses the approach to data collection and sample selection. I outline how data was collected and matched from different sources. I discuss why observations were removed from the sample, and provide a description of my sample split by industry classification and year.

4.4 Data analysis and discussion

4.4.1 Descriptive statistics

The univariate analysis examines descriptive statistics for each of the variables. The sample is an unbalanced panel consisting of 13,600 firm-year observations from 2,265 unique firms, with observations from 2005 – 2015. As typical of research which links corporate governance to firm performance (e.g Geletkayncz and Boyd, 2011; Haynes and Hillman, 2010; Barosso-Castro et al, 2016), the research recognises a time lag effect. In this research, I employ various time lags between the predictor and dependent variables stretching from 1 to 3 years. The independent variables for 2015, predict performance up to the year 2018.

Table 1 provides variable definitions while the descriptive statistics are presented in Table 2.

Table 23: Variable definition

Label	**Description**	**Source**
Tobins's Q	Tobin's Q, a market performance proxy, measured as the ratio of market value of equity and debt divided by total assets.	Market value of equity (MV) Debt (WC03255) Total assets (WC02999)
Tobin's Q (t+1)	The market performance proxy, measured as tq (t+1).	Market value of equity (MV)

		Debt (WC03255) Total assets (WC02999)
Tobin's Q (t+2)	The market performance proxy, measured as tq (t+2).	Market value of equity (MV) Debt (WC03255) Total assets (WC02999)
Tobin's Q (t+3)	The market performance proxy, measured as tq (t+3).	Market value of equity (MV) Debt (WC03255) Total assets (WC02999)
Tobin's Q (alternate proxy)	An alternative Tobin's Q (tq2) calculation, measured as Market Value (MV) per total assets (ta100).	Market value of equity (MV) Total assets (WC02999)
Tobin's Q (alternate proxy, t+1)	An alternative market performance proxy, measured at tq2 (t+1)	Market value of equity (MV) Total assets (WC02999)
Tobin's Q (alternate proxy, t+2)	An alternative market performance proxy, measured at tq2 (t+2)	Market value of equity (MV) Total assets (WC02999)
Tobin's Q (alternate proxy, t+3)	An alternative market performance proxy, measured at tq2 (t+3)	Market value of equity (MV) Total assets (WC02999)
Board social capital	Board social capital, measured at the firm level the formula: Total number of Director Interlocks / Total Number of Directors.	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.
Board social capital (alternate proxy)	Total Interlocks, calculated as the sum total of the number of interlocks directors in one firm have with other organisations	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.

Religiosity	Religiosity, is measured as the degree of religiosity in the county where a firm is located. The variable is measured using data from the American Religious Data Archive and the United States Census Bureau. I operationalise religiosity as percentage of people who are religious adherents at the county level. Adherents are defined as: "all members, including full members, their children and the estimated number of other participants who are not considered members; for example, the 'baptized,' 'those not confirmed,' 'those not eligible for communion,' 'those regularly attending services,' and the like." (ARDA, 2020). An aggregate value is calculated at the county level with higher values indicating higher levels of religiosity.	American Religious Data Archive. Longitudinal Religious Congregations and Membership File. United States Census Bureau
Religiosity (alternate proxy)	An alternative proxy for religiosity, measured as the number of congregations in the county where the firm is headquartered in year, divided by the population of the county, times 1000. An aggregate value is calculated at the county level with higher values	American Religious Data Archive. Longitudinal Religious Congregations and Membership File. United States Census Bureau

	indicating higher levels of religiosity.	
County population	Population, measured at the county level.	United States Census Bureau
Mean income per capita	Income, measured as mean per capita personal income in USD at the county level.	United States Census Bureau
Mean age	Mean age of those in the county, measured as the age of those in the county in the year 2010.	United States Census Bureau
Education	Education, measured as the % of the county who have a bachelor's degree or above	United States Census Bureau
CEO duality	Firm CEO duality. Dummy variable equal to 1 in firm year observations where the CEO also holds the position of the chairman of the board and 0 otherwise.	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.
Total non-executive directors	Non-executive director on board, calculated as the number of non-executive directors on the board of the firm.	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.
Board size	The total number of directors on the board of the firm	The data for the construction of variable was gathered from BoardEx 'Board Summary' file.
Percentage outside directors	Percentage of outside directors on the focal firm's board. Measured as the ratio between non-executive directors and the total number of directors.	BoardEx The data for the construction of variable was gathered from BoardEx 'Board Summary' file. The variable was computed in STATA.
Total assets (local currency)	Total Assets measured in local currency	Total Assets (WC02999)
Total assets (local currency/100)	Total Assets measured in local currency divided by 100	Total Assets (WC02999).
Total assets (USD)	Total Assets in U.S Dollars	Total Assets U.S Dollars (WC07230)

Total Assets in hundreds of U.S Dollars.	Total Assets in hundreds of U.S Dollars. Measured as the ratio: taus / 100.	Total Assets U.S Dollars (WC07230)
Firm size	Firm size, measured as the natural logarithm of total assets in hundreds of USD. log(tausd100)	Total Assets U.S Dollars (WC07230)
Liquidity	Liquidity, measured as the ratio between current assets and current liabilities	Current assets (WC02201) Current liabilities (WC03101)
Leverage	Leverage, measured as the ratio between total debt and book value of equity	Total debt (WC03255) Common Equity (WC07220)
International sales percentage	Percentage of international sales of total sales	intsales (WC08731)
Market value	The index market value, calculated as the sum of the share price multiplied by the number of ordinary shares in issue for each index constituent.	Market Value (MV)
Debt	Total debt measured in local currency	debt (WC03255)

Table 24: Summary statistics for dependent and independent vars (N, mean, median, min, max)

Variable	N	Mean	SD	Median	Min	Max
Tobin's Q	13600	1.27	1.14	0.93	0.04	10.36
Tobin's Q (t+1)	13600	1.26	1.14	0.92	0.04	10.36
Tobin's Q (t+2)	13600	1.23	1.12	0.91	0.04	10.36
Tobin's Q (t+3)	13600	1.24	1.17	0.91	0.03	11.29
Tobin's Q (t+1,2,3)	13600	3.72	3.18	2.81	0.11	32.01
Tobin's Q (alternate proxy)	13600	1.08	1.18	0.73	0	10.07
Tobin's Q (alternate proxy, t+1)	13600	1.05	1.17	0.71	0	10.07
Tobin's Q (alternate proxy, t+2)	13600	1.02	1.14	0.69	0	10.07
Tobin's Q (alternate proxy, t+3)	13600	1.01	1.19	0.67	0	11
Tobin's Q (alternate proxy, t+1,2,3)	13600	3.09	3.26	2.14	0	31.14
Board social capital	13600	2.98	1.51	2.71	1	11.25
Board social capital (alternate proxy)	13600	25.11	16.01	22	5	119
Religiosity	13600	0.56	0.13	0.56	0.32	0.94
Religiosity (alternate proxy)	13600	0.78	0.47	0.75	-0.06	2.69
Board size	13600	8.14	2.1	8	3	17
Proportion of outside directors	13600	75.45	13.51	78	0	100
CEO duality	13600	0.21	0.41	0	0	1
Firm size	13600	13.23	1.9	13.23	6.34	18.5
Leverage	13600	1.85	41.47	0.3	0	3569.37
Liquidity	13600	3.55	41.68	2.14	0.05	4759.4
Market value	13600	1.57E+06	3.52E+06	4.36E+05	0	7.87E+07
Debt	13600	7.77E+05	2.10E+06	58905.5	0	3.38E+07
International sales percentage	13600	22.83	27.75	10.25	0	100
County population	13600	1.59E+06	1.83E+06	9.55E+05	18562	9.94E+06
Income per capita	13469	53120.73	18114.21	48945	28685	1.31E+05
% county female	13600	0.51	0.01	0.51	0.49	0.53
Mean citizen age	13600	37.51	3.01	37.1	31.8	47.6
Education	13600	38.94	10.36	37.53	16.2	60.93

All continuous board-level and accounting variables have been winsorised at 1% and 99%

Firm performance

Firm performance is measured using two calculations of Tobin's Q: Tobin's Q and Tobin's Q (alternate proxy). The mean (median) value of Tobin's Q is 1.27 (0.93), as the mean is greater than the median this indicates that the data is positively skewed. Skewness has implications for the subsequent testing of the data. Where skewness exists, the assumption of normality is violated. Where the assumption of normality is violated, parametric tests may provide spurious results. As a response to the violation of normality in the dependent variable, non-parametric tests are used alongside their parametric equivalents throughout the analysis. The minimum value is 0.04 and the maximum value is 10.36. The mean (median) value of Tobin's Q (alternate proxy) is 1.08 (0.73), as the mean is greater than the median this again indicates that the data is positively skewed. The minimum value is 0 and the maximum value is 10.7.

Board social capital

The mean (median) value of board social capital is 2.98 (2.71) respectively, these values are comparable with other recent studies. For example, Tian et al (2011) report 2.53 as the mean level of board social capital in US firms. Similarly, Ferris et al (2020) report 3.84 (3.00) as mean (median) number of directorships held by board members. Board social capital has minimum value of 1 and maximum value of 11.25.

The mean (median) value of interlocks is 29.13 (24.00), these values are comparable with other recent studies of interlocks in the US, for example Martin et al (2015) report 18.67 the as mean level of interlocks in a sample of US manufacturing firms and Mandojana and Aragon-Correa (2015) report 35.82 the as mean level of interlocks in a sample of US electric firms. The maximum value of interlocks is 196, while the minimum value is 6.

Religiosity

In line with prior research (e.g Hilary and Hui, 2009; Cai and Shi, 2019; Chourou et al, 2020), religiosity is based on the county of the headquarters of each firm in the sample. The mean (median) value of religiosity is 0.56 (0.56) respectively. These values align closely with other recent studies (e.g Cai and Shi, 2019; Chourou et al, 2020 Leventis et al, 2018). The minimum value is 0.32 and the maximum value is 0.94.

Table 25: Total number of observations by industry and year

	Total	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Technology	1956	206	194	191	191	190	201	208	194	193	188	182
Telecommunication	548	59	61	62	54	53	54	60	50	45	50	51
Health Care	1684	169	174	171	148	141	187	179	170	165	180	203
Reall Estate	143	9	10	11	14	11	13	12	12	25	26	29
Consumer Discretionary	2464	236	240	234	225	219	272	263	261	251	263	267
Consumer Staples	647	58	60	64	59	64	71	66	71	70	64	64
Industrials	2633	226	238	249	231	243	287	299	298	286	276	279
Basic Materials	655	42	49	51	52	61	80	82	83	83	72	73
Energy	970	70	86	85	92	85	104	102	107	119	120	121
Utilities	567	44	47	49	48	52	66	70	66	62	63	64
Total	13600	1119	1159	1167	1114	1119	1335	1341	1312	1299	1302	1333

Table 3 provides a summary of the make-up of the sample by industry and year. The industry grouping for each firm was determined by the ICB classification. There are 11 different ICB classifications, 10 of which are represented in this sample as financials are excluded. Firms in the sample belong to the following industries: Technology (15% of the sample), Telecommunications (4% of the sample), Heath Care (13% of the sample), Real Estate (3% of the sample), Consumer Discretionary (20% of the sample), Consumer Staples (6% of the sample), Industrials (22% of the sample), Basic Materials (6% of the sample), Energy (7% of the sample) and Utilities (4% of the sample). Table 3 also shows the distribution of the sample across years. The year 2005 has the fewest number of observations (1119) while 2015 has the greatest number of observations (1333). The number of firm-year observations increases across the course of the sample which is expected given that the coverage BoardEx provides increases over time.

Table 26: Total number of observations and means of key variables by state

State name	N	Tobin's Q	Tobin's Q (alternate proxy	Board social capital	Religiosity
Alabama	70	1.41	1.28	2.36	0.81
Alaska	6	1.06	0.34	1.83	0.39
Arizona	266	1.29	1.09	2.95	0.41
Arkansas	65	1.04	0.76	2.11	0.69
California	2,186	1.47	1.32	3.29	0.46
Colorado	265	1.24	0.99	2.69	0.48
Connecticut	331	1.07	0.83	3.03	0.62
Delaware	53	0.64	0.39	2.77	0.47
District of Columbia	18	1.6	1.43	3.17	0.57
Florida	575	1.04	0.78	3.13	0.42
Georgia	395	1.08	0.83	2.94	0.66
Hawaii	38	0.77	0.5	3.45	0.42
Idaho	24	0.77	0.61	3.29	0.52
Illinois	580	1.21	0.98	3.04	0.63
Indiana	182	0.98	0.78	2.59	0.54
Iowa	57	0.91	0.71	2.02	0.77
Kansas	92	1.3	1.06	3.11	0.6
Kentucky	124	1.09	0.8	2.96	0.56
Louisiana	66	1.22	0.85	3.53	0.65
Maine	12	0.92	0.69	2.5	0.33
Maryland	188	1.36	1.19	3.13	0.47
Massachusetts	748	1.64	1.49	3.37	0.62
Michigan	288	1.08	0.85	3.01	0.5
Minnesota	457	1.45	1.29	2.44	0.68
Mississippi	24	0.84	0.71	1.54	0.73
Missouri	163	0.96	0.65	2.99	0.53
Montana	4	3.08	2.98	1	0.32
Nebraska	54	1.02	0.83	2.5	0.63
Nevada	160	1.61	1.23	2.97	0.36
New Hampshire	51	0.8	0.56	2.9	0.42
New Jersey	532	1.23	1.01	2.93	0.61
New Mexico	4	0.72	0.33	3	0.5
New York	979	1.26	1.09	3.02	0.57
North Carolina	287	1	0.78	2.9	0.59
North Dakota	14	0.82	0.39	2.29	0.85
Ohio	525	0.96	0.7	3.15	0.53
Oklahoma	141	0.86	0.57	3.47	0.74
Oregon	118	1.01	0.9	2.88	0.37
Pennsylvania	610	1.14	0.91	3.5	0.66
Rhode Island	49	0.87	0.67	2.76	0.57
South Carolina	30	0.93	0.81	2.47	0.65
South Dakota	32	2	1.88	2.38	0.62
Tennessee	157	0.99	0.72	2.83	0.65
Texas	1,588	1.08	0.82	3.35	0.61
Utah	143	1.47	1.28	2.29	0.78
Vermont	8	1.61	1.42	6	0.42
Virginia	260	1.08	0.86	3.2	0.64
Washington	293	1.65	1.5	2.95	0.39
West Virginia	17	1.06	0.69	3.18	0.48
Wisconsin	266	1.15	0.95	3.05	0.57
Wyoming	5	0.51	0.24	3.6	0.36

Table 4 shows descriptive statistics for the countries included in the sample, including the number of observations per state and also the means of the key variables. We can see from that table there is

a variation in the sample across states. The states with the greatest number of firm year observations are: California (2,186), Texas (1,588), and New York (979)The states in the sample with the fewest firm year observations include: District of Columbia (18), South Dakota (6), Alaska (6), Wyoming (5), New Mexico (4), and Montana (4). Variation in the level of observations from different states is to be expected. The variation exists largely because certain states have greater number of firms. This is shown by the 2018 Statistics of United States Business (SUSB) files from the US Census. The SUSB 2018 file details that Alaska, Wyoming, District of Columbia, South Dakota, New Mexico and Montana are among the States with the fewest firms, while California, Texas, and New York are among those which have the greatest number of firms ("2018 SUSB Annual Data Tables by Establishment Industry", 2021).

It is clear that there is large variation in levels of board social capital with the United State. Table 4 shows that mean board social capital is highest in Vermont (6.00), Wyoming (3.5), Louisiana (3.53), and Pennsylvania (3.50). While the states with the lowest levels of board social capital are Iowa (2.02), Alaska (1.83), Mississippi (1.54), and Montana (1.00).

Table 4 also demonstrates a broad range in levels of religiosity within the sample. Montana (0.32), Maine (0.33), Nevada (0.36), and Wyoming (0.36) have the lowest levels of religiosity. At the other end of the spectrum, North Dakota (0.85), Alabama (0.81) and Utah (0.78) have the highest levels of religiosity. This broad range in values of religiosity is important as it allows the research to test the hypothesis which concerns the interaction effect of religiosity on the relationship between board social capital and firm performance. Higher concentration of religiosity in states such as Alabama is expected given the findings of prior research (e.g Berggren and Bjørnskov, 2011).

Table 27: Total number of observations and means of key variables by year

Year	N	Tobin's Q	Tobin's Q2 (alternate proxy)	Board social capital	Religiosity
2005	1,119	1.41	1.23	3.08	0.58
2006	1,159	1.26	1.06	3.11	0.57
2007	1,167	0.98	0.78	3.12	0.57
2008	1,114	1.08	0.9	3.13	0.57
2009	1,119	1.21	1.03	3.13	0.57
2010	1,335	1.17	0.97	3.03	0.57
2011	1,341	1.15	0.95	3.01	0.56
2012	1,312	1.29	1.08	3.04	0.56
2013	1,299	1.35	1.1	3.11	0.55
2014	1,302	1.27	1.01	3.14	0.55
2015	1,333	1.39	1.14	3.12	0.54
Cuzick test		6.13***	0.6***	5.22***	-10.01***

Descriptive statistics provided in Table 5 demonstrate the mean value of each of the key variables in each year of the sample. The table also presents the results of Cuzick test, which is a non-parametric test for trends across ordered groups (Cuzick, 1985). There is a significant and positive trend in Tobin's Q and a not statistically significant positive trend in Tobin's Q (alternate proxy). Table 5 also shows positive and significant trend in board social capital, while there is a negative and significant trend in religiosity.

To improve understanding of the underlying data, I estimate the median level of religiosity in each year of the sample – this allows me to classify the firms into sub-groups, on whether or not the county they are headquartered in had above or below median level of religiosity in that year. In Tables 6, I present descriptive statistics for each group and compare mean and median difference using t-tests and the Mann-Whitney test. The Mann-Whitney test is similar to the t-test but it allows for comparison between groups when the data is not normally distributed.

Table 28: Summary statistics by median religiosity (mean, median, standard deviation, mix, max)

rel_m	Tobin's Q	Tobin's Q (alternate proxy)	Board social capital	Board social capital (alternate proxy)	Religiosity	Risk exposure	Board size	Proportion of outside directors	CEO duality	Firm size	Leverage	Liquidity	Market value	Debt	International sales %	Country population	Income per capita	% county female	Mean age citizen	Education
N 0	5727.00	5727.00	5727.00	5727.00	5727.00	5602.00	5727.00	5727.00	5727.00	5727.00	5727.00	5727.00	5727.00	5727.00	5727.00	5727.00	5723.00	5727.00	5727.00	5727.00
Mean	1.27	1.07	3.04	25.08	0.44	0.40	8.04	76.09	0.21	13.15	1.92	4.11	1404646.00	651529.40	25.78	1450899.00	54027.09	0.51	37.75	39.37
Median	0.93	0.72	2.75	22.00	0.45	0.26	8.00	78.00	0.00	13.18	0.26	2.27	427880.00	43974.00	13.77	1093401.00	47688.00	0.51	37.10	38.40
SD	1.15	1.18	1.50	14.99	0.06	0.43	2.09	12.73	0.40	1.85	39.39	62.95	2991590.00	1725811.00	29.58	1371092.00	21823.62	0.01	2.86	10.71
Min	0.04	0.00	1.00	6.00	0.32	0.00	3.00	0.00	0.00	6.34	0.00	0.13	0.00	0.00	0.00	18562.00	28685.00	0.49	31.80	16.20
Max	10.36	10.07	11.25	96.00	0.55	3.11	16.00	100.00	1.00	17.91	2183.59	4759.40	39700000.00	19500000.00	100.00	9935375.00	131246.00	0.53	47.60	60.93
N 1	7873.00	7873.00	7873.00	7873.00	7873.00	7701.00	7873.00	7873.00	7873.00	7873.00	7873.00	7873.00	7873.00	7873.00	7873.00	7873.00	7746.00	7873.00	7873.00	7873.00
Mean	1.21	0.99	2.94	24.85	0.65	0.34	8.22	74.98	0.22	13.28	1.80	3.14	1695593.00	867673.60	20.68	1683746.00	52451.07	0.51	37.34	38.63
Median	0.90	0.67	2.67	22.00	0.63	0.21	8.00	78.00	0.00	13.26	0.33	2.06	442650.00	72306.00	7.51	925632.00	49403.00	0.51	37.10	36.50
SD	1.09	1.11	1.52	15.17	0.08	0.36	2.10	14.04	0.41	1.93	42.92	10.90	3860884.00	2327388.00	26.12	2097498.00	14753.34	0.01	3.11	10.09
Min	0.05	0.00	1.00	6.00	0.51	0.00	3.00	0.00	0.00	7.86	0.00	0.05	0.00	0.00	0.00	18562.00	28685.00	0.49	31.80	16.20
Max	10.36	10.07	11.25	96.00	0.94	3.11	17.00	100.00	1.00	18.50	3569.37	901.00	78700000.00	33800000.00	100.00	9935375.00	119448.00	0.53	47.60	60.93
t-test	0.06 ***	0.08***	0.09***	0.23	-0.2***	0.06 ***	-0.18***	1.10***	-0.01***	-0.1***	0.13***	0.97***	-290947***	-216144.2***	5.10***	-232847***	1576.02***	-0.00***	0.41***	0.75***
t-stat	3.21	4.03	2.73	0.73	9.84	-160.00	-5.03	4.70	-1.74	-4.00	0.18	1.34	-4.76	-5.94	10.63	-7.34	-22.99	7.84	4.15	4.15
Mann-Whitney test	0.03***	0.06***	0.08***	0.00	-0.18***	0.04***	0***	0**	0*	-0.07***	-0.07***	0.20***	-14770***	-28332***	6.26***	167769***	-1715***	-0.00***	0***	1.9***
z stat	2.25	3.88	4.30	1.20	1.20	9.73	-99.33	-5.42	2.32	-1.74	-3.92	-5.19	7.84	-2.48	-6.63	5.04	-5.75	-25.57	5.33	4.68

(0 = group with with lower than / equal to median religiosity. 1 = group with with higher than median religiosity). *, ** & *** denote significance at 10%, 5% and 1%. All of the continuous variables are winsorized at the 1% level.

Firm performance

Table 6 displays summary statistics for each variable by median religiosity. All of the continuous variables are winsorized at the 1% level. First, I inspect the difference in the two firm performance proxies. Firms in more religious counties have poorer market performance, Tobin's Q mean (median) difference 0.06 (0.03) (p value of difference < 0.01) and Tobin's Q (alternate proxy) mean (median) difference 0.08 (0.06) (p value of difference < 0.01). These results suggest that firms achieve slightly greater market performance in states where religiosity is lower. To my knowledge, past research has not considered the direct effect of religiosity on market performance.

Risk exposure

I also inspect the difference in volatility in the firm's performance which is a proxy for risk exposure or uncertainty (Hilary and Hui, 2009). Congruent with past literature, I find that firms headquartered in religious counties are more risk averse (e.g Cebula and Rossi, 2021; Callen and Fang, 2015; Kanagaretem et al, 2015), mean (median) difference 0.06 (0.04) (p value of difference <0.01). Research has suggested the religious

Board social capital

Mean (median) Board social capital is slightly greater in counties with lower religiosity 0.09 (0.08) (p value of difference > 0.01). Mean (median) interlocks is also slightly greater in the non-religious group, mean (median) difference 0.23 (0.00) (p value of difference 0.01). As board social capital is often viewed as a method of dealing with risk and consequently uncertainty (Kim and Cannella, 2008; Martin et al, 2015), one theory is that firms headquartered in less religious counties might be more inclined to recruit well-connected directors as they have more risk exposure and operate with greater uncertainty.

Control variables

CEO duality

CEOs are very slightly more likely to hold the position of the chairman of the board in more religious counties, mean (median) difference -0.01 (0.00) (p value of difference <0.01). Religiosity is commonly associated with ethicality (e.g Callen and Fang, 2015; Leventis et al, 2018; Zolotoy et al, 2019). As directors of firms in religious areas behave more ethically, the potential for agency conflicts is reduced (Cebula et al, 2021). A reduction in the potential for agency problems may lead firms to be more inclined to combining the roles of CEO and chair of the board.

Outside

The mean (median) values of percentage of outside directors are 1.1 (0) (p value of difference <0.01), indicating almost no change in percentage of outside directors between the two groups.

Firm size

The mean (median) values of firm size is -0.01 (0.07) (p value of difference <0.01) indicating little difference in size of the firms in the two groups.

Leverage

The mean (median) difference in leverage is 0.13(-0.07) (p value of difference <0.01) at the 1% level. This difference in signs between mean and median shows that the data is not normally distributed. The data shows any influence that religiosity has on leverage is slight.

Liquidity

Firms situated in less religious counties have greater liquidity, mean (median) difference 0.97 (0.2) (p value of difference <0.01).

Demographic controls

Education

Education is also higher when the population has lower rates of religiosity, mean (median) difference 0.75 (1.9) (p value of difference <0.01). This is in line with the secularisation hypothesis, which suggests that religiosity generally negatively correlates with education.

Income

The income of the two sub-samples has a mean (median) difference of 1576 (-1715). The difference in these numbers tell us that the data is somewhat skewed.

Female

As might be expected, the ratio of males to females is the same in both sub-samples mean (median) 0.00 (0.00) difference.

Age

The age of the mean (median) citizen is very similar in both sample, mean (median) difference 0.41 (0.00)

4.4.2 Correlation coefficients

Table 29: Pearson correlation coefficients and Spearman's rank correlation coefficients

	Tobin's Q	Tobin's Q (alternative proxy)	Board social capital	Board social capital (alternate proxy)	Religiosity	Board Firm size	Proportion of outside directors	CEO duality	Firm size	Leverage	Liquidity	Market Value	Debt	International sales %	County population	Income per capita	% county female	medage	Education
Tobin's Q	1	0.904***	0.052***	-0.004	-0.022**	-0.102***	0.025***	-0.014	-0.174***	-0.169***	0.164***	0.126***	-0.215***	0.019**	0.031***	0.118***	-0.073***	0	0.130***
Tobin's Q (alternative proxy)	0.982***	1	-0.024***	-0.099***	-0.034***	-0.175***	0.007	-0.029***	-0.318***	-0.453***	0.300***	0.028***	-0.447***	0.077***	0.045***	0.126***	-0.072***	0.014*	0.174***
Board social capital	0.008	-0.013	1	0.859***	-0.064***	0.283***	0.219***	0	0.393***	0.198***	-0.156***	0.411***	0.318***	0.063***	0.086***	0.115***	-0.006	-0.033***	0.089***
Board social capital (alternate proxy)	-0.033***	-0.061***	0.916***	1	-0.040***	0.675***	0.314***	0.017**	0.593***	0.308***	-0.247***	0.581***	0.494***	0.091***	0.046***	0.071***	0.055***	-0.01	0.049***
Religiosity	-0.036***	-0.038***	-0.044***	-0.027***	1	0.025***	-0.031***	0.020**	0.003	0.035***	-0.060***	-0.007	0.040***	-0.096***	-0.087***	0.100***	0.199***	-0.059***	-0.003
Board Firm size	-0.120***	-0.157***	0.207***	0.508***	0.022**	1	0.296***	0.033***	0.614***	0.318***	-0.257***	0.556***	0.521***	0.089***	-0.042***	-0.046***	0.129***	0.031***	-0.056***
Proportion of outside directors	0	0	0.101***	0.147***	-0.046***	0.204***	1	-0.070***	0.300***	0.113***	-0.085***	0.319***	0.224***	0.146***	-0.027***	0.054***	0.008	-0.013	0.061***
CEO duality	-0.016*	-0.023***	0.016*	0.036***	0.018**	0.042***	-0.062***	1	0.080***	0.048***	-0.045***	0.074***	0.079***	-0.016*	0.019**	-0.022**	0.072***	0.01	-0.016*
Firm size	-0.242***	-0.301***	0.311***	0.465***	-0.003	0.622***	0.248***	0.080***	1	0.484***	-0.366***	0.884***	0.799***	0.175***	0.031***	-0.007	0.053***	-0.063***	-0.099***
Leverage	-0.003	-0.020**	0.008	0.012	0.002	0.015*	-0.005	-0.002	0.019**	1	-0.514***	0.277***	0.847***	-0.079***	-0.072***	-0.093***	0.057***	-0.014	-0.165***
Liquidity	0.011	0.017*	0	-0.014	-0.01	-0.033***	0.003	-0.009	-0.040***	-0.002	1	-0.243***	-0.491***	0.116***	0.012	0.085***	-0.054***	0.087***	0.131***
Market Value	0.052***	0.030***	0.230***	0.353***	0.017*	0.401***	0.143***	0.072***	0.556***	-0.004	-0.016*	1	0.612***	0.201***	0.056***	0.051***	0.016*	-0.069***	-0.025***
Debt	-0.116***	-0.169***	0.183***	0.305***	0.034***	0.391***	0.120***	0.045***	0.573***	0.032***	-0.018**	0.569***	1	0.033***	-0.030***	-0.080***	0.074***	-0.042***	-0.175***
International sales %	-0.026***	-0.004	0.076***	0.087***	-0.100***	0.059***	0.128***	-0.030***	0.139***	-0.008	-0.009	0.106***	-0.024***	1	0.092***	0.112***	-0.048***	0.056***	0.143***
County population	0.009	0.011	0.028***	0.016*	-0.051***	-0.028***	-0.042***	0.021**	0.044***	-0.004	-0.001	0.047***	0.033***	0.026***	1	0.169***	-0.118***	-0.332***	0.050***
Income per capita	0.085***	0.088***	0.094***	0.081***	-0.012	0.012	0.035***	0.018**	0.029***	-0.006	0.039***	0.036***	0.005	0.080***	-0.050***	1	0.046***	0.161***	0.775***
% county female	-0.067***	-0.069***	-0.014	0.042***	0.169***	0.146***	-0.013	0.081***	0.061***	0.006	0.020**	0.013	0.042***	-0.074***	-0.137***	0.215***	1	0.323***	0.099***
Mean age citizen	0.002	0.004	-0.030***	-0.014*	-0.062***	0.026***	-0.016*	0.007	-0.066***	0.006	-0.001	-0.059***	-0.054***	0.008	-0.303***	0.105***	0.257***	1	0.121***
Education	0.115***	0.134***	0.082***	0.049***	-0.014	-0.052***	0.076***	-0.012	-0.078***	-0.019**	0.028***	-0.029***	-0.076***	0.131***	-0.141***	0.731***	0.135***	0.015*	1

I present Pearson correlation coefficients between all variables in Table 28. The relationships between the independent variables as well as the dependent and independent variables were analysed using Pearson correlation coefficients and (Spearman's rank coefficients) for every potential pair of variables in the study. Of particular interest are the relationships between the key variables (i.e board social capital, Tobin's Q, and religiosity). These statistics cannot shed any light on the 2nd hypotheses, as that hypothesis considers the relationship between three variables.

First, I inspect the level of correlation between all the pairs of variables to check for multicollinearity issues. From inspection of the data, I can report that all pairs of independent variables are well below the critical range of 0.8, above which multicollinearity could cause spurious regression results (Franke, 2010). No correlation coefficients values are high enough in this model to suggest future multicollinearity issues in the regression which will influence the interpretation of the results.

Board social capital is not significantly related to either of the firm performance proxies: Tobin's Q (0.01; $p>0.1$) and Tobin's Q (alternative proxy)(0.03; $p>0.1$) As no significant correlations exist between the two firm performance proxies and board social capital no initial conclusion can be reached regarding hypothesis 1.

Board social capital is negatively and significantly related to religiosity (-0.04; $p>0.1$), in other words, in environments with high levels of religiosity trust firms are less likely to possess high amounts of board social capital. As board social capital is often cited as a measure to deal with uncertainty (Kim and Cannella. 2008; Martin et al, 2015), and uncertainty is lower for religious firms (Hilary and Hui, 2009; Cheong, 2018), it is expected that firms in less religious areas may be more likely to recruit directors with greater levels of board social capital.

Religiosity is negatively and significantly related to both measures of market performance Tobin's Q (-0.04; $p<0.01$) and Tobin's Q (alternative proxy) (-0.04 $p>0.1$). This indicates that in counties with higher levels of religiosity firms achieve poorer performance.

Table 11 also presents the results of Spearman's rank correlation coefficients. Spearman's rank correlation coefficient is a non-parametric measure of rank correlation. Given the skewness within the dependent variables it is important to also check the correlations using a non-parametric test.

Board social capital is positively and significantly related to Tobin's Q (t+2) (0.05; $p<0.01$) but negatively and significantly related to Tobin's Q (alternate proxy, t+2)(-0.02 $p>0.1$). As the signs of

the coefficient are positive for Tobin's Q but negative for Tobin's Q (alternative proxy), no initial conclusion be reached regarding the relationship between board social capital and firm performance.

Board social capital is negatively and significantly related to religiosity (-0.04; $p<0.01$), in other words, in environments with low levels of religiosity firms are more likely to possess high amounts of board social capital.

Religiosity is negatively related to the measures of firm performance Tobin's Q (-0.03; $p>0.01$) and Tobin's Q (alternative proxy) (-0.02; $p<0.01$). This indicates that firms headquartered in areas with higher levels of religiosity tend to have lower levels of firm performance.

4.4.3 Multivariate Analysis

While the previous section discussed the descriptive statistics, this section addresses the results of the multivariate analysis. As discussed OLS regression is utilised in this study. All of the standard errors are robust and are corrected for the clustering of observations by firm. Presentation of the results are presented separately for the two dependent variables Tobin's Q and Tobin's Q (alternative proxy).

4.4.3.1 Main Results

This section provides analysis and discussion of two hypotheses concerning the influence of board social capital on firm performance. The link between board social capital and firm performance has emerged as a topic of interest for many scholars (Kim, 2007; Kor and Sundaramurthy, 2009; Lee, Choi and Kim, 2012; Zona et al, 2018), however, there is not yet a consensus on the topic (Sullivan and Tang, 2013; Barroso-Castro et al, 2016). This study builds on the existing literature by examining the relationship between board social capital and firm performance in a sample of United States firms. The research expands the existing organisational social capital literature by investigating the potential interaction effect of county-level religiosity on the relationship between board social capital and firm performance.

Hypothesis 1 states that there will be a positive relationship between board social capital and firm performance. Hypothesis 2 states that greater county-level religiosity reduces the positive relationship between board social capital and firm performance.

The analysis is split into two sections, pertaining to the different measures of performance: TQ and TQ2. In the analysis, I use two constructions of each of the dependent variables. Each firm performance variable is measured at t+2, in order to reduce concerns about endogeneity (Zona et al, 2018) and follows past corporate governance studies who have employed the same time-lag (e.g

Geletkanycz and Boyd, 2011; Haynes and Hillman, 2010; He and Huang, 2011; Barroso-Castro et al, 2016; Shaw et al, 2016). In addition to measuring at t+2, I also construct measures of Tobins Q which combine measures at t+2 t+2 and t+3 (tq_mn & tq2_mn) .

Firm Performance – Tobin's Q

Table 1 reports the OLS regression of firm performance, measured using Tobin's Q, on board social capital, while controlling for a number of factors at the board and firm-level. The r^2 value ranges between 0.131 and 0.145.

Table 30: Regression analysis: TQ

VARIABLES	Tobin's Q (t+2)	Tobin's Q (t+1,2,3)
Board social capital	0.111**	0.308**
	(0.051)	(0.153)
Religiosity	0.248	0.479
	(0.341)	(1.029)
Board social capital x Religiosity	-0.096	-0.239
	(0.088)	(0.262)
Board size	0.027***	0.086***
	(0.010)	(0.030)
Proportion of outside directors	0.003**	0.007*
	(0.001)	(0.004)
CEO duality	0.039	0.135
	(0.040)	(0.121)
Firm size	-0.161***	-0.494***
	(0.017)	(0.051)
Leverage	0.000	0.000
	(0.000)	(0.000)
Liquidity	-0.000	-0.000
	(0.000)	(0.001)
International sales percentage	-0.000	-0.001
	(0.001)	(0.002)
County population	0.000	0.000
	(0.000)	(0.000)
% county female	-7.468**	-21.443**
	(2.903)	(8.669)
white	-0.099	-0.278
	(0.176)	(0.526)
Mean citizen age	0.002	0.004
	(0.009)	(0.027)
Education	0.006**	0.017**
	(0.002)	(0.007)
Industry	Yes	Yes
Year	Yes	Yes
Constant	6.326***	18.859***
	(1.405)	(4.202)
Observations	13,600	13,600
R-squared	0.131	0.145

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Board social capital

Hypothesis 1 proposes that board social capital is positively associated with firm performance.

A significant positive relationship is observed between board social capital and Tobin's Q (t+2) (0.111) at 5% significance level. Thus, firms that have greater levels of board social capital perform better, in line with H1. A significant positive relationship (0.308) at the 5% significance level is observed between board social capital and Tobin's Q (t+1,2,3). This again suggests that firms who have greater levels of board social capital achieve greater firm performance.

Religiosity

A non statistically significant positive relationship is found between religiosity and Tobin's Q (t+2) (0.360). Similarly, a non statistically significant positive relationship is observed between religiosity and Tobin's Q (t+1,2,3) (0.821).

Interaction: Religiosity & Board social capital

Hypothesis two proposes that county-level religiosity negatively moderates the relationship between board social capital and firm performance. A non statistically significant negative relationship is found in the interaction of religiosity and board social capital on Tobin's Q (t+2) and Tobin's Q (t+1,2,3). This does not support hypothesis 2 which suggests degree of county-level religiosity negatively moderates the relationship between board social capital and firm performance.

Control variables

Board-level

Examining the effect of board size on Tobin's Q (t+2), a significant positive relationship is observed (0.027) at the 1% level. Similarly a significant positive relationship is observed between board size and Tobin's Q (t+1,2,3) (0.086) at the 1% level. These results suggest that greater board size has a positive effect on firm performance in the United States.

A significant, positive relationship is observed between proportion of outside directors and Tobin's Q (t+2) (0.003) at the 1% level. Similarly, a significant positive relationship is observed between proportion of outside directors and Tobin's Q (t+1,2,3) (0.008), at the 1% level. These results suggest firms with a greater proportion of outside directors have greater performance.

A non statistically significant positive relationship is observed between the CEO duality and Tobin's Q (t+2) (-0.039). Similarly, a non statistically significant positive relationship is observed between the CEO duality and Tobin's Q (t+1,2,3) (-0.135).

Firm-level

A significant, negative relationship is observed between firm size and Tobin's Q (t+2) (-0.161) at the 1% level. Similarly, a significant negative relationship is observed between firm size and tq_mn duality (-0.494), at the 1% level. These results suggest larger firms have poorer performance.

No significant relationships are found between leverage, liquidity, CEO_duality or international sales percentage and the firm performance proxies Tobin's Q (t+2) and tq_mn.

County-level

A significant positive relationship is observed between edu at Tobin's Q (t+2) (0.006) at the % level. Similarly, a significant relationship is observed between edu at Tobin's Q (t+1,2,3) (0.018) at the 5% level.

A significant negative relationship is observed between female and Tobin's Q (t+2)(-7.468) at the 5% level. Similarly, a significant relationship is observed between female and Tobin's Q (t+1,2,3) (-21.44) at the 5% level. No significant relationships are found between the county-level controls pop, inc, white or medage and the firm performance proxies Tobin's Q (t+2) and Tobin's Q (t+1,2,3).

***

In summary, using tq_2 as the dependent variable, a statistically significant positive relationship is found with board social capital, boardsize, outside and edu. A statistically significant negative relationship is found with firm size and female. The interaction of board social capital and religiosity is observed to a have an not statistically significant negative effect. The other independent variables do not have a statistically significant relationship with Tobin's Q (t+2).

Firm Performance – TQ2

Table 2 reports the OLS regression of firm performance, measured using an alternate construction of Tobin's Q on board social capital, while controlling for a number of factors at the board and firm-level. The r^2 value ranges between 0.163 and 0.180.

Table 31: Regression analysis: TQ2

VARIABLES	Tobin's Q (alternate proxy) (t+2)	Tobin's Q (alternate proxy) (t+1,2,3)
Board social capital	0.128**	0.358**
	(0.051)	(0.153)
Religiosity	0.360	0.821
	(0.345)	(1.042)
Board social capital x Religiosity	-0.136	-0.362
	(0.087)	(0.261)
Board size	0.028***	0.089***
	(0.010)	(0.030)
Proportion of outside directors	0.004***	0.011**
	(0.001)	(0.004)
CEO duality	0.034	0.118
	(0.041)	(0.123)
Firm size	-0.196***	-0.598***
	(0.017)	(0.051)
Leverage	-0.000***	-0.001***
	(0.000)	(0.000)
Liquidity	-0.000	-0.000
	(0.000)	(0.001)
International sales percentage	0.000	0.001
	(0.001)	(0.002)
County population	0.000	0.000
	(0.000)	(0.000)
% county female	-7.118**	-20.435**
	(2.948)	(8.815)
white	-0.101	-0.279
	(0.182)	(0.544)
Mean citizen age	0.001	-0.001
	(0.009)	(0.027)
Education	0.007***	0.021***
	(0.002)	(0.007)
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	6.323***	18.846***
	(1.424)	(4.264)
Observations	13,600	13,600
R-squared	0.163	0.180

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Board social capital

A significant positive relationship is observed between board social capital and Tobin's Q (alternate proxy, t+2)(0.128) at 5% significance level. Thus, firms that have greater levels of board social capital perform better, in line with H1. A significant positive relationship (0.358) at the 5% significance level is observed between board social capital and Tobin's Q (alternate proxy, t+1,2,3). This again suggests that firms who have greater levels of board social capital achieve greater firm performance.

Religiosity

A non statistically significant positive relationship is found between religiosity and Tobin's Q (alternate proxy, t+2)(0.360). Similarly, a non statistically significant positive relationship is observed between religiosity and tq2_mn (0.821).

Interaction: Religiosity & Board social capital

A non statistically significant negative relationship is found in the interaction of religiosity and board social capital on Tobin's Q (alternate proxy, t+2)(-0.136) and Tobin's Q (alternate proxy, t+1,2,3) (0.362). This does not support hypothesis 2 which suggests degree of county-level religiosity negatively moderates the relationship between board social capital and firm performance.

Control variables
Board-level

Examining the effect of board size on Tobin's Q (alternative proxy, t+2), a significant positive relationship is observed (0.028) at the 1% level. Similarly, a significant positive relationship is observed between board size and Tobin's Q (alternate proxy, t+1,2,3) (0.088) at the 1% level. These results suggest that greater board size has a positive effect on firm performance in the United States.

A significant, positive relationship is observed between proportion of outside directors and Tobin's Q (alternate proxy, t+2)(0.004) at the 1% level. Similarly, a significant positive relationship is observed between proportion of outside directors and Tobin's Q (alternate proxy, t+1,2,3) (0.011), at the 1% level. These results suggest firms with a greater proportion of outside directors have greater performance.

A non statistically significant positive relationship is observed between the CEO duality and Tobin's Q (alternate proxy, t+2)(0.034). Similarly, a non statistically significant positive relationship is observed between the CEO duality and Tobin's Q (alternate proxy, t+1,2,3) (0.0107).

Firm-level

A significant, negative relationship is observed between firm size and Tobin's Q (alternate proxy, t+2)(-0.196) at the 1% level. Similarly, a significant negative relationship is observed between firm size and Tobin's Q (alternate proxy, t+1,2,3) duality (-0.598), at the 1% level. These results suggest larger firms have poorer performance.

A significant, negative relationship is observed between leverage and Tobin's Q (alternate proxy, t+2)(-0.000) at the 1% level. Similarly, a significant negative relationship is observed between leverage and Tobin's Q (alternate proxy, t+1,2,3) duality (-0.000), at the 1% level.

No significant relationships are found between liquidity or international sales percentage and the firm performance proxies tq2_2 and Tobin's Q (alternate proxy, t+1,2,3).

County-level

A significant positive relationship is observed between edu at Tobin's Q (alternate proxy, t+2) (0.007) at the % level. Similarly, a significant relationship is observed between edu at Tobin's Q (alternate proxy, t+1,2,3) (0.020) at the 5% level.

A significant negative relationship is observed between female and Tobin's Q (alternate proxy, t+2)(-7.118) at the 5% level. Similarly, a significant relationship is observed between female and Tobin's Q (alternate proxy, t+1,2,3). (-20.44) at the 5% level. No significant relationships are found between the county-level controls pop, inc, white or medage and the firm performance proxies Tobin's Q (alternate proxy, t+2)and Tobin's Q (alternate proxy, t+1,2,3).

***

In summary, using Tobin's Q (alternative proxy) as the dependent variable, a statistically significant positive relationship is found with board social capital, boardsize, outside and edu. A statistically significant negative relationship is found with firm size and female. The interaction of board social capital and religiosity is observed to a have a not statistically significant negative effect. The other independent variables do not have a statistically significant relationship with tq2_2.

***

4.4.3.2 Robustness checks for the main results

Having established a link between board social capital and firm performance, I then perform tests to evaluate the robustness of the results. Unless otherwise stated analysis is on the same sample as the main results and the same main dependent variables Tobin's Q and Tobin's Q (alternative proxy). For brevity, I only present the results for the key variables, unless adding additional control variables.

Sample size

To verify the validity of our main results, I rerun the analysis to ensure that they are not dependent on the interpolation of the religiosity variable (McGuire et al., 2012). I run the regressions using data on only the years which I have direct survey data on religiosity. This is to ensure that the results of my main results are not biased by the interpolation of the religiosity variable.

Table 32: Regression with sample limited to observations from 2010

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy) (t+2)
Board social capital	0.105	0.101
	(0.072)	(0.079)
Religiosity	0.327	0.397
	(0.432)	(0.470)
Board social capital x Religiosity	-0.101	-0.095
	(0.123)	(0.135)
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	7.479***	7.169***
	(1.824)	(2.049)
Observations	1,335	1,335
R-squared	0.145	0.182

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

As a consequence of reducing the sample to observations exclusively from 2010, the sample is reduced to 1,335 observations – approximately a 10 fold reduction in sample size. Inspection of the table shows that the coefficients the coefficient of board social capital remains positive and similar to that of the main results but is not statistically significant. It is, however, expected that a smaller sample may cause the significance level to drop. The coefficient of the interaction of board social capital and religiosity is similar to that of the main results, and remains not statistically significant.

Following Hilary and Hui (2009) I also re-estimate the models in more homogenous sample. In particular, I reduce the sample to firms from seven western states (Arizona, California, Idaho, Nevada, Oregon, Utah, and Washington). This subsample has high degrees of geographic homogeneity but high variation in religiosity (Utah and Arizona are among the most religious states while, Nevada, Oregon and Washingston are among the least).

Table 33: Regression with sample limited to Western States

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy) (t+2)
Board social capital	0.246**	0.271**
	(0.118)	(0.133)
Religiosity	1.786*	2.118*
	(0.987)	(1.138)
Board social capital x Religiosity	-0.382	-0.451
	(0.252)	(0.287)
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	7.555*	6.717
	(4.469)	(4.873)
Observations	3,190	3,190
R-squared	0.178	0.201

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In this more geographically homogenous sample, the coefficient of board social capital increases while the statistical significance remains at the 5% level. The coefficient of the interaction of board social capital on religiosity also increases but remains statistically not significant.

Omitted variables

Next, I investigate the possibility that the results are driven by an unspecified missing variable. First, I add state dummies to control for the differences in the legal and cultural environment in the different states.

Table 34: Regressions with state dummies

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy) (t+2)
Board social capital	0.115***	0.125***
	(0.044)	(0.048)
Religiosity	0.479	0.517
	(0.321)	(0.355)
Board social capital x Religiosity	-0.103	-0.129
Controls		
Industry		
Year		
Constant	4.183**	4.479**
	(1.791)	(1.983)
Observations	13,600	13,600
R-squared	0.170	0.197

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Inspection of the table shows that the coefficient and significance level of board social capital are similar to the main results. The coefficient and significance level of the interaction of board social capital and religiosity is again similar to that of the main results.

I next add a number of additional variables at the state level again to help ensure that my results are not driven by an unspecified missing variable. Following Hilary and Hui (2009), I control for the % of republican voters in presidential elections, the suicide rate, the alcohol consumption rate and the abortion rate.

The percentage of Republican voters (republican) is measured as the percentage of votes cast for the Republican candidate. I extrapolate to fill the missing data between elections. The data is available from: https://dataverse.harvard.edu/. Suicide rate (suicide) is measured as the number of deaths from suicide per 100,000. Data on the suicide rate is available from www.cdc.gov for the years 2005, 2014, and 2015. I linearly interpolate between these data points. The alcohol consumption rate (alcohol) is measured as yearly the per capita (persons aged 14+) consumption of ethanol (in gallons). This data is available from https://pubs.niaaa.nih.gov/publications/surveillance.htm. Abortion rate (abortion) is the number of reported legal abortions per 1,000 women ages 15 to 44. Data on abortion in each state is available from 2009 – 2015. I extrapolate to fill the missing years at the start of the sample. A number of states do not publish data on the incidence of abortions, namely: California, Delaware, Maryland, New Hampshire and Wyoming. This data is available from https://www.cdc.gov.

Table 35: Regression with additional control variables

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternative proxy) t+2)
Board social capital	0.125**	0.130**
	(0.053)	(0.055)
Religiosity	0.486	0.548
	(0.335)	(0.364)
Board social capital x Religiosity	-0.119	-0.137
	(0.088)	(0.091)
Board size	0.017*	0.020*
	(0.010)	(0.011)
Proportion of outside directors	0.002*	0.003**
	(0.001)	(0.002)
CEO duality	0.027	0.039
	(0.039)	(0.044)
Firm size	-0.136***	-0.176***
	(0.016)	(0.017)
Leverage	0.000*	-0.000***
	(0.000)	(0.000)
Liquidity	-0.000	-0.000
	(0.000)	(0.000)
County population	0.000	0.000
	(0.000)	(0.000)
% county female	-3.476	-1.722
	(3.424)	(3.803)
white	0.088	0.276
	(0.210)	(0.240)
Mean citizen age	-0.007	-0.014
	(0.008)	(0.009)
Education	0.003	0.003
	(0.002)	(0.003)
Percentage republican votes	-0.006	-0.008
	-0.004	-0.004
Suicide rate	-0.006	-0.008*
	(0.004)	(0.005)
Alchohol consumption rate	0.071	0.039
	(0.079)	(0.090)
Abortion rate	-0.003	-0.004
	(0.004)	(0.005)
Controls	Year	Year
Industry	Year	Year
Year	Year	Year
Constant	4.349**	3.940*
	(1.884)	(2.116)
Observations	10,831	10,831
R-squared	0.147	0.176

From inspection of table 7 we can ascertain that the results remain robust despite the inclusion of a number of additional controls. Both the coefficient and statistical significance of board social capital remains similar to my main results. Similarly, for the interaction of board social capital and religiosity, the shows that the coefficient is similar to the main results while it remains statistically non significant. With respect to the additional control variables, I find that they are not statistically

significant with the exception of percentage of republican voters which is negatively and significantly related to Tobin's Q (alternate proxy) at the 10% level.

Next, I check that my results are not driven by the choice proxy employed for the key variables. Instead of measuring religiosity as the proportion of religious adherents in a county, following, Grullon et al (2010), Dyreng et al (2012), and Leventis (2018), I construct an alternative proxy for religiosity, measured as the number of congregations in the county where the firm is headquartered in year, divided by the population of the county, times 1000. For the alternative specification of religiosity, the sample size remains the same.

Multicollinearity: Mean centred variables

As a response to potential concerns pertaining to the multicollinearity caused by the use of interaction terms, I follow the approach taken by Aiken and West (1991) and re-run my regression analysis, mean centering the variables prior to creating the interaction effects.

Table 36: Regression with mean centred variables

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternative proxy) (t+2)
Board social capital	0.058***	0.052***
	(0.010)	(0.011)
Religiosity	-0.038	-0.047
	(0.157)	(0.160)
Board social capital x Religiosity	-0.096	-0.136
	(0.088)	(0.087)
Board size	0.027***	0.028***
	(0.010)	(0.010)
Proportion of outside directors	0.003**	0.004***
	(0.001)	(0.001)
CEO duality	0.039	0.034
	(0.040)	(0.041)
Firm size	-0.161***	-0.196***
	(0.017)	(0.017)
Leverage	0.000	-0.000***
	(0.000)	(0.000)
Liquidity	-0.000	-0.000
	(0.000)	(0.000)
International sales percentage	-0.000	0.000
	(0.001)	(0.001)
County population	0.000	0.000
	(0.000)	(0.000)
% county female	-7.468**	-7.118**
	(2.903)	(2.948)
white	-0.099	-0.101
	(0.176)	(0.182)
Mean citizen age	0.002	0.001
	(0.009)	(0.009)
Education	0.006**	0.007***
	(0.002)	(0.002)
Industy	Yes	Yes
Year	Yes	Yes
Constant	6.638***	6.679***
	(1.406)	(1.426)
Observations	13,600	13,600
R-squared	0.131	0.163

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Observation of the results shows that mean centring the variables does not influence the main results. Board social capital remains positively and significantly related to firm performance, while the interaction of religiosity on the relationship between board social capital and firm performance remain statistically non significant.

Table 37: Regression alternative religiosity proxy

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy t+2)
Board social capital	0.087***	0.094***
	(0.020)	(0.023)
Religiosity (alternate proxy)	0.114	0.156*
	(0.077)	(0.085)
Board social capital x Religiosity (alternate proxy)	-0.037*	-0.048**
	(0.019)	(0.022)
Controls	Yes	Yes
Year	Yes	Yes
Industry	Yes	Yes
Constant	5.913***	6.023***
	(1.173)	(1.307)
Observations	13,600	13,600
R-squared	0.154	0.180

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Using an alternate computation of religiosity, the coefficient of board social capital remains similar to that of my original estimations, however, the statistical significance increases to the 1% level. The coefficient of the interaction between board social capital and religiosity is reduced, however, it becomes statistically significant at the 10% level for Tobin's Q and at the 5% level for Tobin's Q (alternative proxy), lending support for hypothesis 2.

I then re-run my results using an alternative proxy for board social capital. Following Bendig et al (2020), I measure of board social capital as the total number of interlocks to other firms (interlocks). Unlike the original measure of board social capital, this counts the total number of interlocks a board possesses rather than the average number per board member.

Table 38: Regression with alternative board social capital specification

VARIABLES	Tobin's Q (t+2)	Tobin's Q (alternate proxy) (t+2)
Board social capital, alternate proxy	0.011**	0.013***
	(0.005)	(0.005)
Religiosity	0.195	0.240
	(0.266)	(0.294)
Board social capital, alternate proxy x Religiosity	-0.008	-0.012
	(0.008)	(0.008)
Controls	Yes	Yes
Industry	Yes	Yes
Year	Yes	Yes
Constant	6.150***	6.203***
	(1.172)	(1.305)
Observations	13,600	13,600
R-squared	0.153	0.179

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

From inspection of the table, we see that the second measure of board social capital (interlocks) is positively and significantly related to Tobin's Q and Tobin's Q (alternate proxy) at 5% and 10%, respectively. Similar to the results of the main model, for the interaction of interlocks and religiosity, the coefficient is negative and not statistically significant.

4.4.4 Discussion of results

Board social capital and firm performance

In my main results, board social capital is measured by the variable bsc which is the sum of interlocks to other firms divided by the number of board members on the focal firm board. Firm performance is measured by two computations of Tobins Q. This study focuses exclusively on firms with headquarters in the United States.

My main results show a positive result between board social capital and firm performance. This lends support for my hypothesis that board social capital is positively associated with firm performance. These results are consistent with past empirical work on the effect of board social capital on firm performance (e.g Bohren & Strom, 2010; Kim, 2007; Kor and Sundamurthy, 2009). The results support the resource dependence view of board social capital, providing support for the theory that well-connected directors are able to add value to the firm through their links to the external environment. This theory states that boards with greater levels of social capital can gain preferential access to information and resources (Westphal, 2001; Tian et al, 2011), and increase the perceived legitimacy of the firm (Mizruchi, 1996). The study adds to the external generalisability of the effect of board social capital on firm performance as I use a longitudinal sample of 1,628 United States

firms from a variety of industries. This contrasts with past studies which have employed smaller samples and focused on single industries, for example: 72 United States high technology firms (Kor and Sundamurthy, 2009) or 145 Italian manufacturing firms (Zona et al, 2018).

The positive relationship between board social capital and firm performance in the main results is largely supported by the additional sensitivity testing. The results are robust to an alternative computation of board social capital. The results are also robust to the addition of extra controls, addition of state dummies, and running the regression in a more geographically homogenous sample.

Interaction effect of board social capital and religiosity

When following

An non statisticallysignificant negative relationship is seen between the interaction of board social capital and religiosity on firm performance, in the main results. This does not support hypothesis 2, that religiosity reduces the positive relationship between board social capital and firm performance. This result suggests that board social capital has the same positive effect on firm performance irrespective of the level of religiosity in the county where the firm is headquartered.

I employ a second proxy of religiosity (rel2). Following, Grullon et al (2010), Dyreng et al (2012), Leventis et al (2018), I measure rel2 as the number of congregations in the county where the firm is headquartered in year, divided by the population of the county, times 1000. Interestingly, I find that the interaction of religiosity and board social capital is negative and statistically significant related to tq_2 and tq2_2 at levels of 0.010 $p<0.05$ and 0.013 $p<0.01$ respectively. The use of a second religiosity proxy (rel2) results lends support for H2.

The difference in results between the two religiosity proxies is notable. While rel reflects the proportion of adherents in where the firm is headquartered; rel2 reflects the proportion of congregations. These show results that while proportion of adherents does not interact with the relationship between board social capital and firm performance, the number of congregations per capita does.

There is some research which also measures the effect of religiosity on firm-level outcomes using two different proxies: proportion of adherent's & proportion of congregations (e.g Grullon et al, 2010; Dyreng et al, 2012; Leventis et al, 2018). Like this study, Grullon et al (2010) finds that the selection of proxy influences their results. When using the level congregations per capita as a proxy for religiosity, they report that religiosity leads to a lower probability of class action lawsuits, however, when using the proportion of adherents, they report that there is little evidence of an effect on class action lawsuits. The exact reason for the discrepancy in the results is unclear and Grullon et

al (2010) does not provide a rationale for why their results change dependent on the choice of religiosity proxy. Some researchers have, however, argued that counting the proportion of congregations is less subjective than estimating the number of adherents (Dyreng et al, 2012) as adherents estimates might be bias upwards (Hout and Greely, 1998).

4.5 Conclusion

Using a sample of United States firms from 2005 – 2015, this study examines the influence of board social capital on firm performance. The study also explores the potential impact of social norms, namely religiosity, on the relationship between board social capital and firm performance.

Like study 1, the research philosophy of study 2 is objectivist and positivist. I deductively derive hypothesis from the existing literature before testing these hypotheses using quantitative data. Board social capital is studied by measuring the average number of interlocks each director has to other for-profit firms. Firm performance is examined by two computations of Tobin's Q, tq and tq2, both of which are measures of a firm's market performance. It is hypothesised that board social capital has a positive effect on firm performance (H1). This study finds support that board social capital does positively influence board social capital.

Religiosity is measured as the percentage of adults in a county who are religious adherents. It is hypothesised that religiosity reduces the positive effect of board social capital on firm performance (H2). From analysis of the main results, I do not find support for hypothesis 2. In my additional analysis, I use a second, different measure of religiosity - the number of congregations in the county where the firm is headquartered in year, divided by the population of the county, times 1000. In this additional analysis, I find that the interaction of religiosity (rel2) and board social capital is negatively and significantly related to firm performance. As such, this additional analysis with an alternative specification of the religiosity variable provides some limited support for hypothesis 2.

4.5.1 Contribution

This study adds to our knowledge of the relationship between board social capital and firm performance in a number of ways. The study lends empirical support for the hypothesis that board social capital is positively associated with firm performance. The study adds to the external generalisability of the effect of board social capital on firm performance as I use a longitudinal sample of 1,628 United States firms from a variety of industries. This contrasts with past studies which have employed smaller samples and focused on single industries, for example: 72 United States high technology firms (Kor and Sundamurthy, 2009), 145 Italian manufacturing firms (Zona et al, 2018) or 125 Korean firms (Lee, Choi and Kim, 2012).

Importantly this study investigates how religiosity as a social norm tempers the relationship between board social capital and firm performance. While scholars have started to consider how religious social norms influence corporate behaviour in the United States, the bulk of these studies focus on accounting practises (e.g Leventis et al, 2018; Chourou et al, 2020; Dyreng et al, 2020; McGuire et al, 2012), rather than management behaviour. Studies which do focus on religiosity relative to management practises tend to focus on the adoption of CSR policies (e.g Wu et al, 2016; Chantziaras et al 2020; Cui et al, 2015; Hunjra et al, 2020), or firm value (Callen and Fang, 2015; Zolotoy et al, 2019). This study is an early investigation into how religiosity interacts with corporate governance practises, and in particular, board social capital. This is important because social norms like religiosity, influence the values and behaviours of both individuals (Osoba, 2003; Diaz, 200; Nielson et al, 2017) and corporations (Hilary and Hui, 2009).

As expected, in this study I find that firms headquartered in areas with low religiosity have more risk exposure, while their counterparts located in areas with greater religiosity are more risk averse. This finding bolsters the existing literature, which has suggested that religious social norms may promote more attitudes towards risk (e.g Cebula and Rossi, 2021; Kanagaretem et al, 2015).

Interestingly, in my main results I do not find a statistically significant interaction effect of religiosity on the relationship between board social capital and firm performance. This is interesting because it is suggested in the literature, firms headquartered in US counties with high religiosity, operate with lower levels of uncertainty - demonstrated by a lower variance in ROA (Hilary and Hui, 2009). Given that board social capital is often cited as a mechanism for dealing with uncertainty (Kim and Cannella, 2008; Martin et al, 2015), it is expected that firms headquartered in areas with lower religiosity will experience the greatest benefit from board social capital, but the main results do not support this hypothesis. Consequently, one suggestion is that the main benefit of board social capital might not be a heightened ability to deal with uncertainty. Instead, the main benefit accrued from board social capital in the United States may be reputational.

4.5.2 Limitations

Given the similarity in research design, the limitations of study 2 correlate closely with those of study 1. Board social capital is operationalised by measuring director interlocks. This is the most commonly used and most valued source of board social capital within the corporate governance literature (Barroso-Castro et al, 2016). However, this is a formal measure of social capital and is only one of the multiple ways in which a director might accrue social capital. Future research may explore the association between other forms of board social capital and firm performance.

Again, this study is underpinned by an objectivist and positivist methodology. As such, I take a deductive approach, formulating hypotheses from analysis the extant literature, and testing them with quantitative data. Adopting an interpretivist, subjectivist approach and collecting qualitative data may allow for a better understanding of how board social capital effects firm-level outcomes. Such research could explore the nature of the causal relationship between board social capital and firm performance.

While my sample is larger and more diverse than that used in much of the extant literature, as it is composed of firms solely from the United States it limits the generalisability of the findings. It would be interesting to explore the effect of religiosity, on board social capital or other corporate governance variables in a country with a different dominant religion. Following other research on the effect of religiosity of corporate behaviour in the United States (e.g Hilary and Hui, 2009; Grullon et al, 2010; Dyreng et al, 2012; Leventis et al, 2018), I measure religiosity as a single variable rather than controlling for the different religions. It may warrant future investigatation whether the different religions have different effects on corporate governance.

5 Thesis Conclusion

5.1 Summary

Scholars have frequently sought to analyse the relationship between board social capital and firm performance (e.g Bøhren and Strøm, 2010; Barroso-Castro et al, 2016; Kim, 2005; Kor and Sundaramurthy, 2009; Lee et al, 2016; Jackling and Joh, 2009). However, the findings of the extant literature are inconclusive, and scholars have neglected how firm's external environment may influence this relationship. Researchers in this field have studied board characteristics but ignored the environmental context, making the implicit assumption that informal institutions or social norms do not influence the efficacy of corporate governance mechanisms (Zattoni et al, 2020). This gap is significant as is it is expected that board-level variables and firms external environment interact with one another to influence outcomes at the firm-level firm (Kumar and Zattoni, 2019; Stathopoulos and Talaulicar, 2020), but we do not yet know how.

This thesis investigates the influence of board social capital on firm performance while examining how informal institutions of generalised trust, corruption and religiosity temper this relationship. The thesis is comprised of two distinct but interrelated studies. All the previous research on board social capital and firm performance are single country studies, by default neglecting the influence of country-level variables on the relationship. Study 1 is the first empirical investigation of the relationship between board social capital and firm performance in a cross-national sample of firms. The use of a cross-national sample allows me to analyse how country-level informal institutions influence the relationship between board social capital and firm performance.

The first research question examines if board social capital influences firm performance. Motivated by the inconclusive findings of the extant literature (Sullivan and Tang, 2013; Barroso-Castro et al, 2016; Zona et al, 2018), both studies attempt to answer this question:

"What is the impact of board social capital on firm performance?"

The first study examines the effect of board social capital on firm performance in a cross-national panel of firms. The study investigates how country-level variables: generalised trust and corruption, influence the relationship between board social capital and firm performance. Thus, the second research question is:

"What is the influence of country-level corruption and country-level generalised trust on the relationship between board social capital and firm performance?"

Study 1 examines the relationship of board social capital on firm performance in a cross-national sample of firms. Past research which has attempted to establish a causal link between board social capital and firm-level outcomes (e.g Bøhren and Strøm, 2010; Barroso-Castro et al, 2016; Kim, 2005; Kor and Sundaramurthy, 2009; Lee et al, 2016; Jackling and Joh, 2009) have neglected the potential influence of the firm's environment and as such have built up an under-contextualised perspective of the relationship between these variables. As a response to this gap in the literature, the study examines the interaction effect of corruption and generalised trust on the relationship between board social capital and firm performance. The study makes inferences about the firms external environmental using information about the level of corruption and generalised trust where the firm is headquartered. It is expected that board social capital will have a positive influence on firm performance. It is also expected that corruption will have a positive interaction effect and generalised trust will have a negative interaction effect.

The second study examines the effect of board social capital on firm performance in a United States based panel of firms, while considering the effect county-level religiosity. Thus, the third research question is:

"What is the impact of county-level religiosity on the relationship between board social capital and firm performance?"

Study 2 also investigates the relationship between board social capital and firm performance but does so in a sample of firms exclusively from the United States. The second study also responds to calls for researchers to better contextualise the relationship between corporate governance variables and outcomes at the firm-level (Kumar and Zattoni, 2019; Zattoni et al, 2020). The research examines how religiosity, measured at the county-level, influences the relationship between board social capital and firm performance. It is expected that board social capital will have a positive effect on firm performance, while religiosity in the county in which the firm is headquartered will attenuate the positive effect of board social capital and firm performance.

5.2 Summary of the research methodology

My research follows a quantitative, deductive and positivistic methodology. In the first study, the following regression model is used to test the relationship between board social capital and firm performance, while taking account of the interaction effect of generalised trust and corruption.

$$FP = \beta 0 + \beta 1(\textit{board social capital})it + \beta 2(\textit{board social capital} \text{ x } \textit{corruption})it + \beta 3(\textit{board social capital} \text{ x } \textit{generalised trust})it + \beta 4(controls)it + \varepsilon it$$

In the second study, the following regression is used to estimate the relationship between board social capital and religiosity while also exploring the interaction effect of religiosity.

$$FP = \beta 0 + \beta 1(\textit{board social capital})it + \beta 2(\textit{board social capital} \text{ x } \textit{religiosity})it + \beta 3(controls)it + \varepsilon it$$

I used panel data estimation. Panel data, or longitudinal data as it is sometimes known, contains observations about different cross sections across time. In this thesis, panel data is used to measure the changing characteristics of firms board structure, financial performance and environment over the duration of the sample. Panel data has many advantages over cross-sectional data and allows for more accurate inference of model parameters (Hsiao, 2007). Moreover, panel data gives more degrees of freedom than cross-sectional data, the efficiency of econometric estimates are improved (Hsiao et al. 1995). OLS regression is utilised in both studies – all of the standard errors are robust and are corrected for the clustering of observations by firm.

Board social capital is measured by the average number of director interlocks of directors at the firm. Firm performance is measured by Tobins Q. Corruption is measured using data from the Corruption Perception Index. Generalised trust is measured using the 'social trust' question from the Integrated Value Survey. Religiosity is measured as the percentage of the county population which are defined as religious adherents by ARDA.

Study 1 tests the relationship between board social capital and firm performance in a sample of firms from 57 countries and investigates the interaction effect of country-level corruption and country-level generalised trust. Study 2 tests the relationship between board social capital and firm performance in a sample of firms from the United States and investigates the influence of religiosity on the relationship. For both studies, each regression is run four times in my main results: once with my first computation of Tobin's q measured at t+2, once with my first computation of Tobin's q measures at t+1,2,3, once with my second computation of Tobin's q measured at t+2, once with my second computation of Tobin's q measures at t+1,2,3.

5.3 Summary of results

The *first study* examines the effect of board social capital on firm performance, while taking into account the interaction effect of country-level corruption and country-level generalised trust (H1/2/3).

A significant positive relationship is found between board social capital and firm performance for both tq_2 & tq2_2. These results are in line with hypothesis 1, which suggests that board social capital has a positive influence on firm performance.

Hypothesis 2 concerns the interaction effect of corruption on the relationship between firm performance and board social capital. For both tq_2 and tq2_2, I find that the coefficient of the interaction of board social capital and corruption is negative and not statistically significant. This result does not support hypothesis 2.

Hypothesis 3 regards the interaction effect of generalised trust on the relationship between board social capital and firm performance. I hypothesise that generalised trust has negative interaction effect. For both the regressions on tq_2 and tq2_2, the coefficient of the interaction term of board social capital and firm performance was negative and significant. These results support hypothesis 3 – suggesting that board social capital is of the most benefit to firms who do not already benefit from being located in societies with high levels of generalised trust.

Study 2 examines the role of board social capital in determining firm performance in a sample of United States firms while taking into account the interaction effect of county-level religiosity.

Hypothesis 1 concerns the relationship between board social capital and firm performance. A significant positive relationship is found between board social capital and both tq_2 and tq2_2, consistent with hypothesis 1. The result suggests that in the United States, board social capital has a positive influence on firm performance.

Hypothesis 2 concerns the interaction effect of religiosity on the relationship between board social capital and firm performance. A non statistically significant positive relationship is found for the coefficient of the interaction terms of board social capital and religiosity, on the measures of firm performance – tq_2 and tq2_2. As the relationship is not statitsically significant this indicates that hypothesis 2 is not supported. Further testing is carried out with an alternative specification of religiosity – interestingly, using an alternative proxy of religiosity leads to positive and significant results.

5.4 Contribution

My research makes several contributions to knowledge. I will address first the general contribution of the thesis and its aims. I will then address the contributions of each of the studies individually, before finally addressing the lessons which can be learned from considering both sets of findings in totality.

Many scholars have addressed the relationship between board social capital and firm performance (e.g Bøhren and Strøm, 2010; Barroso-Castro et al, 2016; Kim, 2007; Kor and Sundaramurthy, 2009; Lee et al, 2016; Jackling and Joh, 2009) but the extant research does not consider how the firms external environment interacts with this relationship. While scholars have frequently studied the relationship between formal institutions and firm outcomes, there has been a dearth of research on whether social norms like corruption, generalised trust religiosity might influence the relationship between corporate governance and firm performance (Zattoni et al, 2020). Such research makes the implicit assumption that informal institutions or social norms do not influence the behaviour of directors or ultimately the effectiveness of the board (Zattoni et al, 2020). This assumption is problematic given that it has been shown that the social norms of where a firm is headquartered, in part, shape director's values and behaviours (Fang, 2015; Dyreng et al., 2012).

My research responds to this gap in the literature by addressing how firm's external environment, and in particular informal institutions, effect the relationship between board social capital and firm performance. By combining data at the board, firm and country/county level – answering calls within the corporate governance literature for research which merges micro and macro-level variables (Bamberger, 2008; Minichilli et al, 2018; Kumar and Zattoni, 2019; Stathopoulos and Talaulicar, 2020). Importantly, I recognise that informal institutions may shape the values and behaviours of directors. I also show that the informal institutions of where a firm is headquartered may shape the perceptions of the firm itself.

Study 1 examines the interaction effect of generalised trust and corruption on the relationship between board social capital and firm performance in sample of 37,109 firm year observations with firms from 57 countries. It is notable that my research takes firms from 57 countries as there is wider tradition within corporate governance research of single countries. This is mirrored in the stream of corporate governance research which considers the relationship between board social capital and firm performance, the majority of the work in this field is drawn from single country, single industry studies, for example: 72 United States high technology firms (Kor and Sundamurthy, 2009), 145 Italian manufacturing firms (Zona et al, 2018) or 103 Spanish companies (Barrosso-Castro et al, 2016). As I employ a significantly larger sample of firms from a range of industries and countries, this increases the external generalisability of the findings regarding the relationship between board social capital and firm performance. The large and diverse international sample marks an important step forward in a literature which consists primarily of single country, single industry studies. As the sample is larger and more diverse it provides additional support for the resource-based view of board social capital which has often been cited within the literature (Kim and Cannella, 2008; Barrosso-Castro et al, 2016).

Study 2 is among the first corporate governance studies set in the United States to consider the impact of religiosity on the efficacy of corporate governance mechanisms. While a literature which considers the impact of religious social norms on corporate behaviour have begun to emerge (e.g Hilary and Hui, 2009; McGuire et al, 2012; Cai et al, 2019; Chourou, 2020; Leventis et al, 2018; Wu et al, 2016; Chantziaras et al 2020; Hunjra et al, 2020), studies which do consider religiosity relative to management practises (e.g Chantziaras et al, 2020; Cui et al, 2015; Wu et al, 2016; Terzani and Turzo, 2020) do not take account of any board-level variables as within their research design. As such, the existing studies on this topic are situated outside of the corporate governance literature. As these studies do not focus or control fully for board-level variables, I contribute to literature by providing an initial understanding of how religiosity effects the influence of board social capital.

Combined, the results of study 1 and study 2, provide insight into how board social capital may contribute to greater firm market performance. In study 1, as hypothesized, I find that there is a negative and statistically significant interaction effect of generalised trust. Contrary to my hypothesis, however, I do not find a statistically significant effect of corruption in my main results. Similarly, in study 2, I do not find a statistically significant interaction effect of religiosity on the relationship between board social capital and firm performance.

It is interesting that neither the effect of perceived corruption or religiosity have a statistically significant interaction effect. There is some degree of commonality around both the hypotheses which consider corruption and religiosity. In short, the perceived corruption hypothesis poses that corruption causes environmental uncertainty and that in conditions of uncertainty board social capital becomes more useful. The religiosity hypothesis poses that firms from non-religious counties will have greater risk exposure, and consequently operate under greater making board social capital, again, more useful. The two hypotheses are linked by the theme that firms who operate in unstable will benefit most from board social capital – an idea first posed in a theoretical paper by Kim and Cannella (2008). However, I do not find support for that proposition in the data analysis of the two studies.

Conversely, in my hypothesis considering generalised trust I find a negative and statistically significant relationship. This suggests that the trust generated through board social capital is most important for firms who do not enjoy the endowed trust of being headquartered in a high-trust country. In this sense, board social capital is useful for firms' reputation – instilling market confidence in firms from countries with lower levels of generalised trust.

The literature generally suggests two mechanisms through which board social capital helps firms achieve better performance: 1) providing a channel of information between the firm and its environment; increasing access to resources and knowledge (Carpenter and Westphal, 2001), 2) by increasing the perceived legitimacy of the firm and decisions taking by directors (Kiel and Nicholson, 2006). Tentatively, from analysis of the results, I suggest that the main benefits accrued from board social capital may revolve around reputation and legitimacy garnered, rather than a heightened ability to deal with uncertainty through increased access to information or important stakeholders. This is conveyed through the significant interaction effect of generalised trust, which shows that board social capital has the greatest positive effect for firms that do not already enjoy the reputational benefits of being located in a high trust country. Conversely, there is no significant interaction effect of corruption or religiosity in my main results, this is interesting as the hypotheses of why they would matter revolve around increased access to information and ability to deal with uncertainty.

Another contribution of my research is that I show that informal institutions, and in particular, religiosity may shape attitudes towards risk. In my second study, I find that firms headquartered in religious counties are more likely to likely to have lower risk exposure – as demonstrated by lower volatility in firm performance. This finding adds the existing literature, which suggests that religious social norms encourage conservative attitudes towards risk (e.g Cebula and Rossi, 2021; Callen and Fang, 2015; Kanagaretem et al, 2015).

5.5 Limitations of the research

This research focuses on board interlocks as the proxy for board social capital. This is consistent with other recent research on board social capital (e.g Barroso-Castro et al, 2016; Tian et al., 2011; Wincent et al., 2009), which use count measures of interlocks as a proxy for board social capital. One weakness is that I was unable to account for the reputation of the directors who the focal board are connected to. Being connected to boards with more established and reputable directors likely results in greater social capital for the board at the focal firm. Unfortunately, such data was not available and would likely require hand-collecting biographical information about directors. This was not possible given the size and nature of the sample employed in this study.

Similarly, the thesis focuses on external board social capital but does not account for internal social capital. While external board social capital (connections to the firm's external environment) is often cited as the most valued source of social capital within the literature (Hillman and Dalziel, 2003; Kor and Sundaramurthy, 2009; Tian et al., 2011), internal social capital may also have an influence on board effectiveness and firm performance. The poorer availability of cross-national data on internal

social capital compared with that on external social capital influenced my decision to exclude it from the thesis.

My study is also limited by the availability of board-level and financial data available for firms. BoardEx coverage is not equal for all countries. BoardEx provides better coverage of firms from the United States and the United Kingdom than it does for countries in the rest of the world. The size of my sample was also reduced due to the availability of financial data for firms from DataStream. For study 1, my sample began with 96,768 firm-year observations from BoardEx from the years 2005 – 2015 that can be matched to Datastream. However, after dropping removing financial firms, and removing firms with missing financial or country-level data the sample was reduced to 37,109 firms.

My study is also limited by the use of perception indices as a proxy for actual corruption. While this is a technique commonly employed within the literature (e.g Thakur et al, 2021; Chen et al. 2015; Fan, Titman, and Twite 2012; Lee and David 2009; Mazzi, Slack, Tsalavoutas, 2018), the extent to which perceptions of corruption accurately reflect actual corruption is a contentious issue (e.g Donchev & Ujhelyi, 2014). Until researchers find reliable way of measuring global patterns corruption directly, it is likely a limitation that will continue to manifest in cross-national quantitative corruption research.

5.6 Avenues for future research

This research examines the relationship between board social capital and firm performance using a quantitative research methodology. Future research examining the relationship between board social capital and corporate behaviour could use qualitative methods. This might help to elucidate *how* board social capital leads to better firm performance. Conducting interviews with directors might lead to better understanding of the mechanisms through which social capital leads to greater firm performance.

This research focuses on board interlocks as the proxy for board social capital. This follows other recent research on board social capital and is made possible thanks to the available data on director interlocks for the countries in this study. An avenue for future research may be to combine the data on board interlocks with other markers of social capital: for example, connections to political parties. There is also burgeoning field of research which uses corporate social responsibility practises as a proxy for firm social capital. It may prove fruitful to investigate if there is an interaction between board social capital and firm social capital (measured by CSR) given that investors presumably rely on both as signals for the quality and legitimacy of a firm.

Given that it is hypothesised that board social capital is most useful to firms when confronted by uncertainty, another potential avenue for research is to explore the effect of economic crisis on the relationship between board social capital and firm performance.

This research marks an initial empirical investigation into how firm's external environment, in part, shapes the impact which board social capital has on firm performance. It is possible that the effect of other elements of board structure, for example, CEO duality or the presence of outside directors, may also be tempered by the firm's external environment. In future, it may prove fruitful for researchers to examine how informal institutions effect the relationship between corporate governance structures and other firm-level outcomes.

6 References

Abdallah, W., Goergen, M., & O'Sullivan, N. (2015). Endogeneity: How failure to correct for it can cause wrong inferences and some remedies. British Journal of Management, 26(4), 791-804.

Abdollahian, M., Yang, Z., & Thomas, J. (2017, July). Relationships Matter: Directors and Revenue Performance in the Fortune 500 Network. In International Conference on Applied Human Factors and Ergonomics (pp. 106-115). Springer, Cham.

Abdullah, H. and Valentine, B. (2009), "Fundamental and ethics theories of corporate governance", Middle Eastern Finance and Economics, Vol. 4, No. 4, pp. 88-96

Acquaah, M. (2007). Managerial social capital, strategic orientation, and organizational performance in an emerging economy. Strategic management journal, 28(12), 1235-1255.

Adegbite, E., Guney, Y., Kwabi, F., & Tahir, S. (2019). Financial and corporate social performance in the UK listed firms: the relevance of non-linearity and lag effects. Review of Quantitative Finance and Accounting, 52(1), 105-158.

Ades, A. and R. Di Tella (1996), "The Causes and Consequences of Corruption: A Review of Recent Empirical Contributions", Liberalization and the New Corruption, ed. by B.Harris-White and G. White, (Brighton: Institute of Development Studies Bulletin, XXVII), 6-12.

Ades, A., & Di Tella, R. (1999). Rents, competition, and corruption. American economic review, 89(4), 982-993.

Adger, W. N. (2003). Social capital, collective action, and adaptation to climate change. Economic geography, 79(4), 387-404.

Adhikari, B. K., & Agrawal, A. (2016). Does local religiosity matter for bank risk-taking?. Journal of Corporate Finance, 38, 272-293.

Adler, P. S. and Kwon, S. W. (2002) "Social Capital: Prospects for a New Concept," Academy of Management Review 27: 17–40.

Adler, P. S. and Kwon, S. W. (2009) "Social Capital: The Good, the Bad and the Ugly." Working paper MKT 03-09, Marshall Research Paper Series. Los Angeles, CA: USC Marshall School Business.

Aggarwal, R., Jindal, V., & Seth, R. (2019). Board diversity and firm performance: The role of business group affiliation. International Business Review, 28(6), 101600.

Aguilera, R. V., & Jackson, G. (2003). The cross-national diversity of corporate governance: Dimensions and determinants. Academy of management Review, 28(3), 447-465.

Ahern, K. R., Daminelli, D., & Fracassi, C. (2015). Lost in translation? The effect of cultural values on mergers around the world. Journal of Financial Economics, 117(1), 165–189.

Ahlstrom, D., & Bruton, G. D. (2001). Learning from successful local private firms in China: Establishing legitimacy. Academy of Management Perspectives, 15(4), 72-83.

Aiken, L. S., West, S. G., & Reno, R. R. (1991). Multiple regression: Testing and interpreting interactions. sage.

Al Nimer, M., Warrad, L., & Al Omari, R. (2015). The impact of liquidity on Jordanian banks profitability through return on assets. European Journal of Business and Management, 7(7), 229-232.

Al-Ghamdi, M., & Rhodes, M. (2015). Family ownership, corporate governance and performance: Evidence from Saudi Arabia. International Journal of Economics and Finance, 7(2), 78-89.

Aldridge, S., Halpern, D., & Fitzpatrick, S. (2002). Social capital: A discussion paper. London: Performance and Innovation Unit.

Algan, Y., & Cahuc, P. (2010). Inherited trust and growth. American Economic Review, 100(5), 2060–2092.

Algan, Y., & Cahuc, P. (2014). Trust, growth, and well-being: New evidence and policy implications. In Handbook of economic growth (Vol. 2, pp. 49-120). Elsevier.

Alghifari, E. S., Triharjono, S., & Juhaeni, Y. S. (2013). Effect of return on assets (roa) against Tobin's q: Studies in food and beverage company in Indonesia stock exchange years 2007-2011. International Journal Of Science and Research (IJSR), 2, 108-116.

Allen, M. R., George, B. A., & Davis, J. H. (2018). A model for the role of trust in firm level performance: The case of family businesses. Journal of Business Research, 84, 34-45.

Allison, D.W. and Potts, B.B. (1999), "Wave: the diffusion of the CEO title throughout the US

Alm, J., Martinez-Vazquez, J., & McClellan, C. (2016). Corruption and firm tax evasion. Journal of Economic Behavior & Organization, 124, 146-163.

Alshehri, F., Fotaki, M., & Kauser, S. (2020). The Effects of Spirituality and Religiosity on the Ethical Judgment in Organizations. Journal of Business Ethics. https://doi.org/10.1007/s10551-020-04614-1 American Journal of Economics and Sociology, Vol. 40 No. 1, pp. 37-50.

Amiraslani, H., Lins, K. V., Servaes, H., & Tamayo, A. (2017). A matter of trust? The bond market benefits of corporate social capital during the financial crisis.

Anand, V., Ashforth, B. and Joshi, M. (2004). Business as usual: The acceptance and perpetuation of corruption in organizations. Academy of Management Executive, 18(2), pp.39-53.

Andersson S,Heywood PM. (2009) The politics of perception: use and abuse of Transparency International's approach to measuring corruption. Polit. Stud. 57:746–67

Andrews, R. (2011). Exploring the impact of community and organizational social capital on government performance: Evidence from England. Political Research Quarterly, 64(4), 938–949. doi:10.1177/1065912910381649

Andvig, J., & Fjeldstad, O. (2001). Corruption A Review of Contemporary Research. Human Rights. Retrieved from http://bora.cmi.no/dspace/handle/10202/225

ARDA. Grammich, C., Hadaway, K., Houseal, R., Jones, D. E., Krindatch, A., Stanley, R., & Taylor, R. H. (2018). U.S. Religion Census Religious Congregations and Membership Study, 2010 (County File).

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. Journal of econometrics, 68(1), 29-51.

Argue, A., Johnson, D. R., & White, L. K. (1999). Age and religiosity: Evidence from a three-wave panel analysis. Journal for the Scientific Study of Religion, 423-435.Azzi, C., & Ehrenberg, R. (1975). Household allocation of time and church attendance. Journal of political Economy, 83(1), 27-56.

Arrow, K. J. (1974). The Limits of Organization. The Fels Lectures on Public Policy Analysis. Vol. 1.

Ashforth, B. E., Gioia, D., Sandra, A., Robinson, L., & Trevino L. K. (2008). Re-viewing organizational corruption. Academy of Management Review, 33: 670-684.

Ashforth, B.E, & Anand, V. (2003). The normalization of corruption in organizations. Research in Organizational Behavior, 25: 1-52.

Asiedu, E., & Freeman, J. (2009). The Effect of Corruption on Investment Growth : Evidence from Firms in Latin America , Sub-Saharan Africa , and Transition Countries *, 13(2), 200–214. https://doi.org/10.1111/j.1467-9361.2009.00507.x

Ataay, A. (2016). Roles of Interlocking Directorates in an Emerging Country: Control and Coordination in Family Business Groups. Eurasian Journal of Business and Management, 4(2), 106-116.

Athanasouli, D., Goujard, A., & Sklias, P. (2012). Corruption and firm performance: Evidence from Greek firms. International Journal of Economic Sciences and Applied Research, 5(2), 43-67.

Atuahene-gima, K. (2004). Strategic Decision Comprehensiveness and New Product Development Outcomes in New Technology. The Academy of Management Journal , Vol . 47 , No . 4 (Aug ., 2004), pp . 583-597

Azeez, A. A. (2015). Corporate governance and firm performance: Evidence from Sri Lanka. Journal of Finance and Bank Management, 3, 180–189.

Azeez, A. A. (2015). Corporate governance and firm performance: Evidence from Sri Lanka. Journal of Finance and Bank Management, 3, 180–189.

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. Administrative science quarterly, 421-458.

Baldi, S., Bottasso, A., Conti, M., & Piccardo, C. (2016). To bid or not to bid: That is the question: Public procurement, project complexity and corruption. European Journal of Political Economy, 43, 89-106.

Bamberger, P.(2008).Beyond contextualization: Using context theories to narrow the micro-macro gap in management research.Academy of Management Journal,51,839–846.

Bamiatzi, V., Bozos, K., Cavusgil, S. T., & Hult, G. T. M. (2016). Revisiting the firm, industry, and country effects on profitability under recessionary and expansion periods: A multilevel analysis. Strategic management journal, 37(7), 1448-1471.

Bankston III, C. L., & Zhou, M. (2002). Social capital as process: The meanings and problems of a theoretical metaphor. Sociological Inquiry, 72(2), 285-317.

Banerjee, A. (1997) A theory of misgovernance. Quarterly Jour nal of Economics, 112: 1289-1332

Barefoot, JC, Maynard, KE, Beckham, JC. (1998) Trust, health, and longevity. Journal of Behavioral Medicine 21(6): 517–526.

Barnett, T., Bass, K., & Brown, G. (1996). Religiosity, ethical ideology, and intentions to report a peer's wrongdoing. Journal of Business Ethics, 15(11), 1161–1174.

Barnhart, S. W., Marr, M. W., & Rosenstein, S. (1994). Firm performance and board composition: Some new evidence. Managerial and decision economics, 15(4), 329-340.

Baron, S., Field, J., & Schuller, T. (Eds.). (2000). Social capital: Critical perspectives. OUP Oxford.

Barro, R., & McCleary, R. M. (2003). International determinants of religiosity (No. w10147). National Bureau of Economic Research.

Barroso-Castro, C., Villegas-Periñan, M. D. M., & Casillas-Bueno, J. C. (2016). How boards' internal and external social capital interact to affect firm performance. Strategic Organization, 14(1), 6-31.

Baum, J. A., & Ingram, P. (1998). Survival-enhancing learning in the Manhattan hotel industry, 1898–1980. Management science, 44(7), 996-1016.

Bathala, C. T., & Rao, R. P. (1995). The determinants of board composition: An agency theory perspective. Managerial and decision economics, 16(1), 59-69.

Batra, G., Kaufmann, D., & Stone, A. H. (2003). Investment climate around the world: Voices of the firms from the World Business Environment Survey. The World Bank.

Becerra, M. (2009). Theory of the firm for strategic management: economic value analysis. Cambridge University Press.

Becht, M., Bolton, P., & Röell, A. (2003). Corporate governance and control. In Handbook of the Economics of Finance (Vol. 1, pp. 1-109). Elsevier.

Beckman CM, Haunschild PR, Phillips DJ. (2004). Friends or strangers? Uncertainty, market uncertainty, and network partner selection. Organization Science 15: 259–275.

Bekkers, R (2012) Trust and volunteering: Selection or causation? Evidence from a 4 year panel study. Political Behavior 34(2): 225–247

Bendig, D., Foege, J. N., Endriß, S., & Brettel, M. (2020). The Effect of Family Involvement on Innovation Outcomes: The Moderating Role of Board Social Capital. Journal of Product Innovation Management, 37(3), 249-272.

Bennouri, M., Chtioui, T., Nagati, H., & Nekhili, M. (2018). Female board directorship and firm performance: What really matters?. Journal of Banking & Finance, 88, 267-291.

Benson, P. L., Donahue, M. J., & Erickson, J. A. (1989). Adolescence and religion: A review of the literature from 1970 to 1986. Research in the social scientific study of religion, 1(1), 153-81.

Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. Games and economic behavior, 10(1), 122-142.

Berggren, N., & Bjørnskov, C. (2011). Is the importance of religion in daily life related to social trust? Cross-country and cross-state comparisons. Journal of Economic Behavior & Organization, 80(3), 459-480.

Berle, A., & Means, G. (1932). The Modern Corporation and Private Property Macmillan. New York, 2(3), 45-53.

Berry, A., & Perren, L. (2001). The role of non-executive directors in UK SMEs. Journal of Small Business and Enterprise Development.

Beugelsdijk, S., & Smulders, S. (2003). Bridging and bonding social capital: which type is good for economic growth?.

Beugelsdijk, S., De Groot, H. L., & Van Schaik, A. B. (2004). Trust and economic growth: a robustness analysis. Oxford economic papers, 56(1), 118-134.

Bhagat, S., & Bolton, B. (2019). Corporate governance and firm performance: The sequel. Journal of Corporate Finance, 58, 142-168.

Bhandari, H., & Yasunobu, K. (2009). What is social capital? A comprehensive review of the concept. Asian Journal of Social Science, 37(3), 480-510.

Bjørnskov, C. (2006). The multiple facets of social capital. European journal of political economy, 22(1), 22-40.

Bjørnskov, C. (2011). Combating corruption: On the interplay between institutional quality and social trust. The Journal of Law and Economics, 54(1), 135-159.

Black, B., Khanna, V., (2007) Can corporate governance reforms increase firm market values? Event study evidence from India. J. Empir. Leg. Stud. 4 (4), 749–796. Black, B.,

Blackburn, K., Bose, N., & Haque, M. E. (2006). The incidence and persistence of corruption in economic development. Journal of Economic Dynamics and control, 30(12), 2447-2467.

Bloodgood, J. M., Turnley, W. H., & Mudrack, P. (2008). The influence of ethics instruction, religiosity, and intelligence on cheating behavior. Journal of business ethics, 82(3), 557-571.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. Journal of econometrics, 87(1), 115-143.

Bøhren, Ø., & Strøm, R. Ø. (2010). Governance and politics: Regulating independence and diversity in the board room. Journal of Business Finance & Accounting, 37(9-10), 1281-1308.

Boivie, S., Bednar, M. K., & Barker, S. B. (2015). Social comparison and reciprocity in director compensation. Journal of Management, 41: 1578-1603.

Boix, C. (2001). Democracy, development, and the public sector. American Journal of Political Science, 1-17.

Boone, J. P., Khurana, I. K., & Raman, K. K. (2013). Religiosity and tax avoidance. The Journal of the American Taxation Association, 35(1), 53-84.

Bottazzi, L., Da Rin, M., Hellmann, T., 2011, "The Importance of Trust for Investment: Evidence from Venture Capital", NBER Working Paper No 16923.

Bourdieu, P. (1980). Le capital social: Notes provisoires. Actes de la Recherche en Sciences Sociales, 31, 2–3.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), Handbook of theory and research for the sociology of education (pp. 241–258). New York: Greenwood.

Boyd B. (1990). Corporate linkages and organizational environment: a test of the resource dependence model. Strategic Management Journal 11: 419–430.

Boyd, B. K. (1995). CEO duality and firm performance: A contingency model. Strategic Management Journal, 16, 301-312.

Bozec, R., Dia, M., & Bozec, Y. (2010). Governance–performance relationship: a re-examination using technical efficiency measures. British Journal of Management, 21(3), 684-700.

Brandstaetter, T. (2011). Informal institutions, personalism and organisational behaviour in the Arab world and China (Wasta and Guanxi). *Journal of Regional Development*, *3*(1), 70-82.

Brennan, N. M., & Solomon, J. (2008). Corporate governance, accountability and mechanisms of accountability: an overview. Accounting, Auditing & Accountability Journal, 21(7), 885–906.

Brewer, G. A. (2003). Building social capital: Civic attitudes and behavior of public servants. Journal of Public Administration Research and Theory, 13(1), 5-26.

Brief, A. P., Buttram, R. T & Dukerich, J. M. (2001). Collective corruption in the corporate world: Toward a process model. Groups at work: Theory and research, 471: 499.

Brink, Tove, (2011) What connections in networks of private entrepreneurs are related to growth? Journal of Depopulation and Rural Development Studies 11, 57–82. Britain", The British Journal of Sociology, Vol. 47 No. 2, pp. 205-231.

Brockman, P., Khurana, I. K., & Zhong, R. I. (2018). Societal trust and open innovation. Research Policy, 47(10), 2048-2065.

Brown, Lawrence D., and Marcus L. Caylor. "Corporate governance and firm performance." Available at SSRN 586423 (2004).

Brunetti, A. G. Kisunko and B. Weder (1997), "Credibility of Rules and Economic Growth - Evidence from a World Wide Private Sector Survey", Background paper for the World Development Report 1997 (Washington: The World Bank).

Brunetti, A., & Weder, B. (2003). A free press is bad news for corruption. Journal of Public economics, 87(7), 1801-1824.

Buch-hansen, H. (2014). Interlocking directorates and collusion: An empirical analysis. https://doi.org/10.1177/0268580914527021

Burns, N., Kapalczynski, A., & Wald, J. K. (2021). Independent director compensation, corruption, and monitoring. Financial Review, 56(1), 5-28.

Burt RS. (1980). Cooptive corporate actor networks: A reconsideration of interlocking directorates involving American manufacturing. Administrative Science Quarterly 25:557–581.

Burt RS. (1997). The contingent value of social capital. Administrative Science Quarterly 42: 339–365.

Burt, R. S. (2005). Brokerage and closure: An introduction to social capital. Oxford university press.

Busco, C., Malafronte, I., Pereira, J., & Starita, M. G. (2019). The determinants of companies' levels of integration: Does one size fit all?. The British Accounting Review, 51(3), 277-298

Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. Journal of Accounting and Economics, 32(1–3), 237–333.

Cai, J., & Shi, G. (2019). Do Religious Norms Influence Corporate Debt Financing ? Journal of Business Ethics, 157(1), 159–182. https://doi.org/10.1007/s10551-017-3701-5

Caiden, G. E., & Caiden, N. J. (1977). Administrative corruption. Public Administration Review, 37(3), 301-309.

Cameron, A. C., & Miller, D. L. (2015). A practitioner's guide to cluster-robust inference. Journal of human resources, 50(2), 317-372.

Campos, J.E., D. Lien and S. Pradhan (1999), "The Impact of Corruption on Investment: Predictability Matters." World Development, XXVII (6), 1059-67.

Carl, N., & Billari, F. C. (2014). Generalized trust and intelligence in the United States. PloS one, 9(3), e91786.

Carpenter, M. A., & Westphal, J. D. (2001). The strategic context of external network ties: Examining the impact of director appointments on board involvement in strategic decision making. Academy of Management journal, 44(4), 639-660.

Cassar, A., & Wydick, B. (2010). Does social capital matter? Evidence from a five-country group lending experiment. Oxford Economic Papers, 62(4), 715–739.

Cebula, R. J., & Rossi, F. (2021). Religiosity and corporate risk-taking: evidence from Italy. Journal of Economics and Finance, 1-13.

Chantziaras, A., Dedoulis, E., Grougiou, V., & Leventis, S. (2020). The impact of religiosity and corruption on CSR reporting : The case of U . S . banks. Journal of Business Research, 109(January 2019), 362–374. https://doi.org/10.1016/j.jbusres.2019.12.025

Charreaux, G. (1997), "Le gouvernement des entreprises - corporate governance theories etfaits"', Economica, Paris

Charan, R. (1998). Boards at work: How corporate boards create competitive advantage (Vol. 21). San Francisco: Jossey-Bass.

Charron, N. (2016). Do corruption measures have a perception problem? Assessing the relationship between experiences and perceptions of corruption among citizens and experts. European Political Science Review, 8(1), 147-171.

Chen, C., Dormitzer, C. M., Bejarano, J., & Anthony, J. C. (2004). Religiosity and the earliest stages of adolescent drug involvement in seven countries of Latin America. American Journal of Epidemiology, 159(12), 1180–1188.

Chen, Hambrick, D. C., & Pollock, T. G. (2008). Puttin' on the Ritz: Pre-IPO enlistment of prestigious affiliates as deadline-induced remediation. Academy of Management Journal, 51: 954-975.

Chen, J. J. (2004). Determinants of capital structure of chinese listed companies. Journal of Business Research, 57, 1341–1351.

Chen, M., Jeon, B. N., Wang, R., & Wu, J. (2015). Corruption and bank risk-taking: Evidence from emerging economies. Emerging Markets Review, 24, 122-148.

Chen, X., & Wan, P. (2020). Social trust and corporate social responsibility: Evidence from China. Corporate Social Responsibility and Environmental Management, 27(2), 485-500.

Cheong, C. W. (2018). Religiosity and Corporate Risk-taking. Asian J. Financ. Account, 10(2), 82-113.

Chourou, L., He, L., & Zhong, L. (2020). Does religiosity enhance the quality of management earnings forecasts?. Journal of Business Finance & Accounting, 47(7-8), 910-948.

Chowdhury, S. K. (2004). The effect of democracy and press freedom on corruption: an empirical test. Economics letters, 85(1), 93-101.

Chrisman, J. J. (2019). Stewardship theory: Realism, relevance, and family firm governance.

Claessens, S. (2006). Corporate governance and development. The World bank research observer, 21(1), 91-122.

Claridge, T. (2004). Social Capital and Natural Resource Management: An important role for social capital? Natural and Rural Systems Management, (July), 90. Retrieved from https://www.socialcapitalresearch.com/wp-content/uploads/2013/01/Social-Capital-and-NRM.pdf

Coffe´, H., & Geys, B. (2007). Toward an empirical characterization of bridging and bonding social capital. Nonprofit and Voluntary Sector Quarterly, 36(1), 121–139.

Coleman, J. S. (1988). Social capital in the creation of human capital. American journal of sociology, 94, S95–S120.

Coleman, J. S. (1994). Foundations of social theory. Harvard university press.

Conyon, M. J., & Peck, S. I. (1998). Board size and corporate performance: evidence from European countries. The European journal of finance, 4(3), 291-304.

Cooper, D., McCausland, W. D., & Theodossiou, I. (2013). Income inequality and wellbeing: The plight of the poor and the curse of permanent inequality. Journal of economic issues, 47(4), 939-958.

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. Journal of financial economics, 51(3), 371-406.

Cornwall, M. (2009). Reifying sex difference isn't the answer: Gendering processes, risk, and religiosity. Journal for the Scientific Study of Religion, 48(2), 252-255.

Costa, D. L., & Kahn, M. E. (2003). Civic engagement and community heterogeneity: An economist's perspective. Perspectives on politics, 1(1), 103-111.

Coulthard, M., Walker, A., & Morgan, A. (2002). People's perceptions of their neighbourhood and community involvement: Results from the social capital module of the General Household Survey 2000 (Vol. 1). London: Stationery Office.

Coxen, L., Van der Vaart, L., & Stander, M. W. (2016). Authentic leadership and organisational citizenship behaviour in the public health care sector: The role of workplace trust. SA Journal of Industrial Psychology, 42(1), 1-13.

Cuevas-Rodríguez, G., Cabello-Medina, C., & Carmona-Lavado, A. (2014). Internal and External Social Capital for Radical Product Innovation: Do They Always Work Well Together?. British Journal Of Management, 25(2), 266-284. doi: 10.1111/1467-8551.12002

Cui, J., Jo, H., & Velasquez, M. G. (2015). The influence of Christian religiosity on managerial decisions concerning the environment. Journal of Business Ethics, 132(1), 203-231.

Cui, V., Vertinsky, I., Robinson, S., & Branzei, O. (2015). Trust in the Workplace. Business & Society, 765031561172. https://doi.org/10.1177/0007650315611724

Cusack, T. R. (1999). Social capital, institutional structures, and democratic performance: A comparative study of German local governments. European Journal of Political Research, 35(1), 1-34.

Cuzick, J. (1985). A Wilcoxon-type test for trend. Statistics in medicine, 4(4), 543-547.

D'Aveni, R. A., & Kesner, I. F. (1993). Top managerial prestige, power and tender offer response: A study of elite social networks and target firm cooperation during takeovers. Organization Science, 4: 123-151

Dahlström, C., Lapuente, V., & Teorell, J. (2012). The Merit of Meritocratization. Political Research Quarterly, 65(3), 656–668. https://doi.org/10.1177/1065912911408109

Dahya, J., McConnell, (2007). Board composition, corporate performance, and the Cadbury committee recommendation. J. Financ. Quant. Anal. 42, 535–564

Daily, C. M., Dalton, D. R., & Rajagopalan, N. (2003). Governance through ownership: Centuries of practice, decades of research. Academy of Management Journal, 46(2), 151-158.

Daily, C.M. and Dalton, D.R. (1993), ''Board of directors leadership and structure: control and performance implications'', Entrepreneurship Theory and Practice, Vol. 17 No. 3, pp. 65-81.

Dalati, S., Raudeliūnienė, J., & Davidavičienė, V. (2017). Sustainable leadership, organizational trust on job satisfaction: empirical evidence from higher education institutions in Syria. Business, Management and Economics Engineering, 15(1), 14-27.

Dalton, D. R. and Dalton, C. M. (2011) "Integration of Micro and Macro Studies in Governance Research: CEO Duality, Board Composition, and Financial Performance," Journal of Management 37: 404–11. Davis,

Dalton, D. R., Daily, C. M., Johnson, J. L. and Ellstrand, A. E. (1999) "Number of Directors and Financial Performance: A Meta-analysis," Academy of Management Journal 42: 674–86.

Dalton, D. R., Hitt, M. A., Certo, S. T., & Dalton, C. M. (2007) Agency theory and its mitigation. The Academy of Management Annals, 1: 1-64

Danoshana, S., & Ravivathani, T. (2019). The impact of the corporate governance on firm performance: A study on financial institutions in Sri Lanka. SAARJ Journal on Banking & Insurance Research, 8(1), 62-67.

Davis, G. F. (1991) "Agents without Principles? The Spread of the Poison Pill through the Intercorporate Network," Administrative Science Quarterly 36: 583–613.

Davis, G. F. (1991). Agents without principles? The spread of the poison pill through the intercorporate network. Administrative science quarterly, 583-613.

Davis, G. F. (1996). The significance of board interlocks for corporate governance. Corporate Governance: An International Review, 4(3), 154-159.

Davis, G.F. and Powell, W.W. (1992), "Organization-environment relations", in Dunette, M.D.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. Academy of Management review, 22(1), 20-47.

Davis, J. H., Schoorman, F. D., Mayer, R. C., & Tan, H. H. (2000). The trusted general manager and business unit performance: Empirical evidence of a competitive advantage. Strategic management journal, 21(5), 563-576.

De Rosa, D., Gooroochurn, N., & Görg, H. (2010). Corruption and productivity firm-level evidence from the BEEPS survey (No. 5348). Policy Research Working Paper.

De Rosa, D., Gooroochurn, N., & Görg, H. (2016). Corruption and productivity: Firm-level evidence. In Corruption at the Grassroots-level–Between Temptation, Norms, and Culture (pp. 115-138). De Gruyter Oldenbourg.

De Waldemar, F. S. (2012). New products and corruption: evidence from I ndian firms. The Developing Economies, 50(3), 268-284.

DeBacker, J., Heim, B. T., & Tran, A. (2015). Importing corruption culture from overseas: Evidence from corporate tax evasion in the United States. Journal of Financial Economics, 117(1), 122-138.

Decktop, J. (1987). Top executive compensation and the pay-for-performance issue. In D. B. Balkin & L. R. Gomez-Mejia (Eds.), New perspectives in compensation. Englewood Cliffs, NJ: Prentice Hall.

Del Monte, A., & Papagni, E. (2001). Public expenditure, corruption, and economic growth: the case of Italy. European journal of political economy, 17(1), 1-16.

Delhey, J., & Newton, K. (2004). Social trust: global pattern or Nordic exceptionalism? (No. SP I 2004-202). WZB Discussion Paper.

Delhey, J., Newton, K., & Welzel, C. (2011). How general is trust in "most people"? Solving the radius of trust problem. American Sociological Review, 76(5), 786-807.

Den Butter, F. A., & Mosch, R. H. (2003). Trade, trust and transaction costs.

Devers, C. E., Cannella Jr, A. A., Reilly, G. P., & Yoder, M. E. (2007). Executive compensation: A multidisciplinary review of recent developments. Journal of management, 33(6), 1016-1072.

Devos, E., Prevost, A., & Puthenpurackal, J. (2009). Are interlocked directors effective monitors?. Financial Management, 38(4), 861-887.

Disatnik, D., & Sivan, L. (2016). The multicollinearity illusion in moderated regression analysis. Marketing Letters, 27(2), 403-408.

Diaz, J. D. (2000). Religion and gambling in sin-city: A statistical analysis of the relationship between religion and gambling patterns in Las Vegas residents. The Social Science Journal, 37(3), 453-458.

DiMaggio, P. J. and Powell, W. W. (1983) "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields," American Sociological Review 48: 147–60.

Dinesen PT (2013) Where you come from or where you live? Examining the cultural and institutional explanation of generalized trust using migration as a natural experiment. European Sociological Review 29(1): 114–128

Dinesen, P. T. (2011). A note on the measurement of generalized trust of immigrants and natives. Social Indicators Research, 103(1), 169-177.

Dirks, K. T., & Ferrin, D. L. (2001). The role of trust in organizational settings. Organization science, 12(4), 450-467.

Doğan, M. (2013). Does firm size affect the firm profitability? Evidence from Turkey. Research Journal of Finance and Accounting, 4(4), 53-59.

Dohmen, T., Falk, A., Huffman, D., & Sunde, U. (2012). The intergenerational transmission of risk and trust attitudes. The Review of Economic Studies, 79(2), 645–677.

Dohmen T, Falk A, Huffman D, et al. (2012) The intergenerational transmission of risk and trust attitudes. The Review of Economic Studies 79(2): 645–677.

Donadelli, M. & Persha, L. (2014). Understanding emerging market equity risk premia: Industries, governance and macroeconomic policy uncertainty. Research in International Business and Finance, 30(2), 284–309.

Donahue, M. J., & Benson, P. L. (1995). Religion and the well-being of adolescents. Journal of social issues, 51(2), 145-160.

Donaldson, L., & Davis, H. J. (1989). Ceo governance and shareholder returns: Agency theory or stewardship theory [paper presented at annual meeting of the Academy of Management, Washington, DC]. Donaldson Washington, DC.

Donchev. and Ujhelyi. (2009) What do Corruption IndicesMeasure?, working paper, http://ssrn. com/abstract=1124066; http://dx.doi.org/10.2139/ssrn.1124066

Doney, P. M., Cannon, J. P., & Mullen, M. R. (1998). Understanding the influence of national culture on the development of trust. Academy of management review, 23(3), 601-620.

Dong, W., Han, H., Ke, Y., & Chan, K. C. (2018). Social trust and corporate misconduct: Evidence from China. Journal of Business Ethics, 151(2), 539-562.

Dong, Y., Duan, T., Hou, W., & Liu, Y. L. (2019). Athletes in boardrooms: Evidence from the world. Journal of International Financial Markets, Institutions and Money, 59, 165-183.

Drakos, A. A., & Bekiris, F. V. (2010). Corporate performance, managerial ownership and endogeneity: A simultaneous equations analysis for the Athens stock exchange. Research in International Business and Finance, 24(1), 24-38.

Dreher, A., & Gassebner, M. (2013). Greasing the wheels? The impact of regulations and corruption on firm entry. Public Choice, 155(3-4), 413-432.

Driscoll, J. W. (1978). Trust and participation in organizational decision making as predictors of satisfaction. Academy of management journal, 21(1), 44-56.

Drost, E. A. (2011). Validity and reliability in social science research. Education Research and perspectives, 38(1), 105.

Duarte, J., S. Siegel, Young, L., 2012, “Trust and Credit: the Role of Appearance in Peer-toPeer Lending”, Review of Financial Studies 25, 2455-2484.

Durkheim, E. (1973). On morality and society; selected writings.

Dybvig, P. H., & Warachka, M. (2015). Tobin's q does not measure firm performance: Theory, empirics, and alternatives. Empirics, and Alternatives (March 5, 2015).

Dyreng, D. Mayew, W. Williams, C. (2012). Religious Social Norms and Corporate Financial Reporting, 39(December 2011), 845–875. https://doi.org/10.1111/j.1468-5957.2012.02295.x

Dzhumashev, R. (2014). Corruption and growth: The role of governance, public spending, and economic development. Economic Modelling, 37, 202-215.

Edwards, J. R., & Berry, J. W. (2010). The presence of something or the absence of nothing: Increasing theoretical precision in management research. Organizational Research Methods, 13(4), 668-689.

Eisenhardt, K. M. (1989). Building theories from case study research. Academy of management review, 14(4), 532-550.

El Ghoul, S., Guedham,O., Ni, Y., Pittman, J.,&Saadi, S. (2012).Does religion matter to equity pricing? Journal of Business Ethics, 111(4), 491–518.

Elsayed, K. (2007). Does CEO duality really affect corporate performance? Corporate Governance: An International Review, 15, 1203-1214.

Emerson, T. L., & Mckinney, J. A. (2010). Importance of religious beliefs to ethical attitudes in business. Journal of religion and business ethics, 1(2), 5.

Engbers, T. A., Rubin, B., & Aubuchon, C. P. (2013). Social capital and metropolitan economic development. Available at SSRN

Evans, P.B. and J.E. Rauch (1996), "Bureaucratic Structures and Economic Performance in Less Developed Countries", mimeograph UC San Diego

Faleye, O. (2004), ‘‘Does one hat fit all? The case of corporate leadership structure’’, working paper, College of Business Administration, Northeastern University, Boston, MA.

Fan, J. P., Titman, S., & Twite, G. (2012). An international comparison of capital structure and debt maturity choices. Journal of Financial and quantitative Analysis, 47(1), 23-56.

Fehr, E., Fischbacher,U., Kosfeld, M., 2005, “Neuroeconomic Foundations of Trust and Social Preferences: Initial Evidence”, The American Economic Review 95, 346-351.

Fehr, E., Gaechter, S., 2000, “Fairness and Retaliation: The Economics of Reciprocity”, Journal of Economic Perspectives 14, 159-181

Ferrell, A., Liang, H., & Renneboog, L. (2016). Socially responsible firms. Journal of Financial Economics, 122(3), 585-606

Ferris, S. P., Jagannathan, M., & Pritchard, A. C. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. The Journal of Finance, 58(3), 1087- 1111.

Ferris, S.P., Javakhadze, D. and Rajkovic, T. (2017), “The international effect of managerial social capital on the cost of equity”, Journal of Banking & Finance, Vol. 74, January, pp. 69-84.

Fich, E. M., & Shivdasani, A. (2006). Are busy boards effective monitors?. The Journal of finance, 61(2), 689-724.

Fich, E. M., & White, L. J. (2003). CEO compensation and turnover: The effects of mutually interlocked boards. Wake Forest Law Review, 38: 935-959.

Fich, E. M., & White, L. J. (2005). Why do CEOs reciprocally sit on each other’s boards? Journal of Corporate Finance, 11: 175-195.

Filatotchev, I., Liu, X., Buck, T., Wright, M., (2009). The export orientation and export performance of high-technology SME's in emerging markets: the effects of knowledge transfer by returnee entrepreneurs. Journal of International Business Studies 40, 1005–1021.

Filatotchev, I., Poulsen, A., & Bell, R. G. (2019). Corporate governance of a multinational enterprise: Firm, industry and institutional perspectives. Journal of Corporate Finance, 57, 1-8.

Fine, B. (2010). Theories of social capital: Researchers behaving badly. Pluto press.

Finke, R., & Scheitle, C. P. (2005). Accounting for the uncounted: Computing correctives for the 2000 RCMS data. Review of Religious Research, 5-22.

Finkelstein, S. and Mooney, A. C. (2003) "Not the Usual Suspects: How to Use Board Process to Make Boards Better," Academy of Management Executive 17: 101–13.

Finkelstein, S., & D'aveni, R. A. (1994). CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command. Academy of Management journal, 37(5), 1079-1108.

Fisman, R., & Svensson, J. (2007). Are corruption and taxation really harmful to growth? Firm level evidence. Journal of development economics, 83(1), 63-75.

Fleming, P., & Zyglidopoulos, C. S. (2008). The escalation of deception in organizations. Journal of Business Ethics, 81: 837-850.

Fligstein, N. and Brantley, P. (1992), "Bank control, owner control, or organizational dynamics: who controls the large modern corporation?", American Journal of Sociology, Vol. 98 No. 2, pp. 280-307.

Florio, C., & Leoni, G. (2017). Enterprise risk management and firm performance: The Italian case. The British Accounting Review, 49(1), 56-74.

Fooladi, M., & Nikzad Chaleshtori, G. (2011, June). Corporate governance and firm performance. In International Conference on Sociality and Economics Development (ICSED 2011), Kuala Lumpur, Malaysia, June (pp. 17-19).

Fracassi, C., & Tate, G. (2012). External networking and internal firm governance. the Journal of finance, 67(1), 153-194.

Franck, R., & Iannaccone, L. R. (2014). Religious decline in the 20th century West: Testing alternative explanations. Public Choice, 159(3-4), 385-414.

Franke, G. R. (2010). Multicollinearity. Wiley international encyclopedia of marketing.

Frankforter, S. A., Berman, S. L., & Jones, T. M. (2000) Boards of directors and shark repellents: Assessing the value of an agency theory perspective. Journal of Management Studies, 37: 321-348.

Frederiksen, M. (2019). On the inside of generalized trust: Trust dispositions as perceptions of self and others. Current Sociology, 67(1), 3-26.

Freille, S., Haque, M. E., & Kneller, R. (2007). A contribution to the empirics of press freedom and corruption. European Journal of Political Economy, 23(4), 838-862.

Freitag, M., & Traunmüller, R. (2009). Spheres of trust: An empirical analysis of the foundations of particularised and generalised trust. European journal of political research, 48(6), 782-803.

Frey, B.S. and A. Stutzer, (2001). "Happiness, Economy and Institutions," The Economic Journal

Friedlander, F. (1970). The primacy of trust as a facilitator of further group accomplishment. The Journal of Applied Behavioral Science, 6(4), 387-400.

Fukuyama, F. (1995). Social capital and the global economy. Foreign Affairs, 74(5), 89–103.

Fukuyama, F. (2001) Social capital, civil society and development, Third World Quarterly 22, 7-20.

Fulkerson, G. M., & Thompson, G. H. (2008). The evolution of a contested concept: A meta-analysis of social capital definitions and trends (1988–2006). Sociological Inquiry, 78(4), 536-557.

Fuzi, S. F. S., Halim, S. A. A., & Julizaerma, M. K. (2016). Board independence and firm performance. Procedia Economics and Finance, 37, 460-465.

Gabbay, S. M., & Leenders, R. T. (1999). CSC: The structure of advantage and disadvantage. In Corporate social capital and liability (pp. 1-14). Springer, Boston, MA.

Gallego-Alvarez, I., Rodríguez-Domínguez, L., & Martín Vallejo, J. (2020). An analysis of business ethics in the cultural contexts of different religions. Business Ethics: A European Review.

Geletkanycz, M. A. and Boyd, B. K. (2011) "CEO Outside Directorships and Firm Performance: A Reconciliation of Agency and Embeddedness Views," Academy of Management Journal 54: 335–52.

Geletkanycz, M. A., Boyd, B. K., & Finkelstein, S. (2001). The strategic value of CEO external directorate networks: Implications for CEO compensation. Strategic Management Journal, 22: 889-898.

Gergen, K. J., & Gergen, M. M. (1988). Narrative and the self as relationship. In Advances in experimental social psychology (Vol. 21, pp. 17-56). Academic Press.

Gil de Zuiga, H., Jung, N., & Valenzuela, S. (2012). Social media use for news and individuals' social capital, civic engagement and political participation. Journal of Computer-Mediated Communication, 17(3), 319–336.

Glaeser EL, Saks RE. (2006) Corruption in America. J. Public Econ. 90:1053–72

Goel, R. K., & Ram, R. (2013). Economic uncertainty and corruption: Evidence from a large cross-country data set. Applied Economics, 45(24), 3462-3468.

Goerzen, A., & Beamish, P. W. (2005). The effect of alliance network diversity on multinational enterprise performance. Strategic Management Journal, 26(4), 333-354.

Golden, B. R., & Zajac, E. J. (2001). When will boards influence strategy? Inclination× power= strategic change. Strategic management journal, 22(12), 1087-1111.

Golden, M. A., & Picci, L. (2005). Proposal for a new measure of corruption, illustrated with Italian data. Economics & Politics, 17(1), 37-75.

Goncalves, A. F., Rossoni, L., & Mendes-Da-Silva, W. (2019). Board social capital reduces implied cost of capital for private companies but not of state-owned companies. Management Decision.

González, C. (2019). Transnational Board Interlocks as a Source of Non-experiential Knowledge for the Firm in Foreign Markets. British Journal of Management, 30(2), 459-472.

Gales, L. M., & Kesner, I. F. (1994). An analysis of board of director size and composition in bankrupt organizations. Journal of business research, 30(3), 271-282.

Garud, R., Kumaraswamy, A., & Sambamurthy, V. (2006). Emergent by design: Performance and transformation at Infosys Technologies. Organization Science, 17(2), 277-286.

Green, C. P., & Homroy, S. (2018). Female directors, board committees and firm performance. European Economic Review, 102, 19-38.

Guan, Y., Lobo, G. J., Tsang, A., & Xin, X. (2020). Societal trust and management earnings forecasts. The Accounting Review, 95(5), 149-184.

Guest, P. M. (2009) The determinants of board size and composition: Evidence from the UK, Journal of Corporate Finance, 14, 51-72.

Guiso L, Sapienza P and Zingales L (2006) Does culture affect economic outcomes? Journal of Economic Perspectives 20(2): 23–48.

Guiso, L., Monte, F., Sapienza, P., & Zingales, L. (2008). Culture, gender, and math. SCIENCE-NEW YORK THEN WASHINGTON-, 320(5880), 1164.

Guiso, L., Sapienza, P., & Zingales, L. (2004). The role of social capital in financial development. American Economic Review, 94(3), 526–556.

Guiso, L., Sapienza, P., & Zingales, L. (2008). Trusting the stock market. the Journal of Finance, 63(6), 2557-2600.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales. "Civic capital as the missing link." Handbook of social economics 1 (2011): 417-480.

Guiso, L., Sapienza, P., & Zingales, L. (2009). Cultural biases in economic exchange?. The quarterly journal of economics, 124(3), 1095-1131.

Gulati R, Nohria N, Zaheer A. (2000). Strategic networks. Strategic Management Journal 21: 203–215.

Gümüsay, A. A. (2017). The potential for plurality and prevalence of the religious institutional logic. Business & Society. https://doi. org/10.1177/0007650317745634.

Gupta, M. S., & Abed, M. G. T. (2002). Governance, corruption, and economic performance. International Monetary Fund.

Guthrie, S (1980). A cognitive theory of religion. Current Anthropology, 21(2), 181-203.

Hallward-Driemeier, M., Wallsten, S., & Xu, L. C. (2006). Ownership, investment climate and firm performance: Evidence from Chinese firms 1. Economics of Transition, 14(4), 629-647.

Handschumacher, F., Behrmann, M., Ceschinski, W., & Sassen, R. (2019). Do board interlocks support monitoring effectiveness?. Management Research Review.

Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. Journal of Business Finance & Accounting, 33(7-8), 1034-1062.

Hartwell, C. A., & Malinowska, A. P. (2019). Informal institutions and firm valuation. Emerging Markets Review, 40, 100603.

Hansen L P (1982) Large sample properties of the generalized methods of moments Econometrica 50: 1029–1054.

Haque, F., & Jones, M. J. (2020). European firms' corporate biodiversity disclosures and board gender diversity from 2002 to 2016. The British Accounting Review, 100893.

Harris-White, B., & White, G. (1996). Editorial introduction: corruption, liberalization and democracy'. Institute of Development Studies Bulletin, 27(2), 1-5.

Harris, D. (2007). Bonding social capital and corruption: a cross-national empirical analysis (No. 27.2007). University of Cambridge, Department of Land Economics.

Harris, I. C. and Shimizu, K. (2004) "Too Busy to Serve? An Examination of the Influence of Overboarded Directors," Journal of Management Studies 41: 775–98.

Hart, S. L. (1995),"A natural resource based view of the firm", Academy of Management Review, Vol. 20, No. 4, pp. 986-1014

Hartlieb, S., Loy, T. R., & Eierle, B. (2019). The Effect of Generalized Trust on Cost Stickiness: Cross-Country Evidence. The International Journal of Accounting (TIJA), Forthcoming.

Hasan, I., He, Q., & Lu, H. (2020). The impact of social capital on economic attitudes and outcomes. Journal of International Money and Finance, 108, 102162.

Hasan, I., HOI, C. K., Wu, Q., & Zhang, H. (2017). Does social capital matter in corporate decisions? Evidence from corporate tax avoidance. Journal of Accounting Research, 55(3), 629-668.

Hastings, O. P., & Lindsay, D. M. (2013). Rethinking religious gender differences: The case of elite women. Sociology of Religion, 74(4), 471-495.

Haynes, K. T. and Hillman, A. (2010) "The Effect of the Board Capital and CEO Power on Strategic Change," Strategic Management Journal 31: 1145–63.

Healy, P. M., Hutton, A. P., & Palepu, K. G. (1999). Stock performance and intermediation changes surrounding sustained increases in disclosure. Contemporary Accounting Research, 16(3), 485–520.

Heath, A. F., Richards, L., & De Graaf, N. D. (2016). Explaining corruption in the developed world: The potential of sociological approaches. Annual Review of Sociology, 42, 51-79.

Heemskerk, E. M. (2013). 'The rise of the European corporate elite: evidence from the network of interlocking directorates in 2005 and 2010', Economy and Society, 42, pp. 74–101

Heemskerk, E. M., Fennema, M., & Carroll, W. K. (2016). The global corporate elite after the financial crisis: evidence from the transnational network of interlocking directorates. Global Networks, 16(1), 68-88.

Hendrikse, G., Hippmann, P., & Windsperger, J. (2015). Trust, transaction costs and contractual incompleteness in franchising. Small Business Economics, 44(4), 867-888.

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., & McElreath, R. (2001). In search of homo economicus: behavioral experiments in 15 small-scale societies. American Economic Review, 91(2), 73-78.

Hermalin, B.E., Weisbach, (2003). Boards of directors as an endogenously determined institution: a survey of the economic literature. Econ. Policy Rev. 9, 7–26.

Hernandez, M. (2012). Toward an understanding of the psychology of stewardship. Academy of Management Review, 37(2), 172-193.

Herzer, D., & Strulik, H. (2017). Religiosity and income: A panel cointegration and causality analysis. Applied Economics, 49(30), 2922-2938.

Hessami, Z. (2014). Political corruption, public procurement, and budget composition: Theory and evidence from OECD countries. European Journal of political economy, 34, 372-389.

Hessami, Z., & Uebelmesser, S. (2016). A political-economy perspective on social expenditures: corruption and in-kind versus cash transfers. Economics of Governance, 17(1), 71-100.

Heywood, P. M. (2015). Measuring Corruption: perspectives, critiques, and limits. Routledge handbook of political corruption, 137-153.

Hilary, G., & Hui, K. W. (2009). Does religion matter in corporate decision making in America?. Journal of financial economics, 93(3), 455-473.

Hilary, G., & Huang, S. (2015). Trust and contracting.

Hillman, A. J. (2005) "Politicians on the Board of Directors: Do Connections Affect the Bottom Line?" Journal of Management 31: 464–81

Hillman, A. J., Shropshire, C., Certo, S. T., Dalton, D. R., & Dalton, C. M. (2011). What I like about you: A multilevel study of shareholder discontent with director monitoring. Organization Science

Hillman, A. J. and Dalziel, T. (2003) "Boards of Directors and Firm Performance: Integrating Agency and Resource Dependence Perspectives," Academy of Management Review 28: 383–96.

Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource Dependence Theory : A Review. https://doi.org/10.1177/0149206309343469

Himmelberg C, Hubbard,G, and Palia D (1999) Understanding the determinants of managerial ownership and the link between ownership and performance. Journal of Financial Economics 53: 353–384.

Himmelberg C, Hubbard,G, and Palia D (1999) Understanding the determinants of managerial ownership and the link between ownership and performance. Journal of Financial Economics 53: 353–384.

Hirschi, T., & Stark, R. (1969). Hellfire and delinquency. Social Problems, 17(2), 202-213.

Hirschle, J. (2011). The affluent society and its religious consequences: An empirical investigation of 20 European countries. Socio-Economic Review, 9(2), 261-285.

Hoffmann WH. (2007) Strategies for managing a portfolio of alliances. Strategic Management Journal 28: 827–856.

Hofstede, G., & Bond, M. H. (1988). The Confucius connection: From cultural roots to economic growth. Organizational Dynamics, 16(4), 6–21.

Hooghe, M., Reeskens, T., Stolle, D., & Trappers, A. (2009). Ethnic diversity and generalized trust in Europe: A cross-national multilevel study. Comparative political studies, 42(2), 198-223.

Horton, J., Millo, Y., & Serafeim, G. (2012). Resources or power? Implications of social networks on compensation and firm performance. Journal of Business Finance & Accounting, 39(3-4), 399-426.

Hough, L.M. (Eds), Handbook of Industrial and Organizational Psychology, Consulting Psychologists Press, Palo Alto, CA, pp. 315-376.

Houqe, M. N., & Monem, R. M. (2016). IFRS adoption, extent of disclosure, and perceived corruption: A cross-country study. The International Journal of Accounting, 51: 363- 378.

Hout, M., & Greeley, A. (1998). What church officials' reports don't show: Another look at church attendance data. American Sociological Review, 63(1), 113-119.

Huntington, S. P. (1968). Modernization and corruption. Political order in changing societies, 59-71.

Hsiao, C., Mountain, D. C., & Illman, K. H. (1995). A Bayesian integration of end-use metering and conditional-demand analysis. Journal of Business & Economic Statistics, 13(3), 315-326.

Hsiao, C. (2007). Panel data analysis—advantages and challenges. Test, 16(1), 1-22.

Huang, C. J. (2016). Is corruption bad for economic growth? Evidence from Asia-Pacific countries. The North American Journal of Economics and Finance, 35, 247-256.

Hudoyo, A. (2009). The production of social capital and its impact on income: Using ZIP code areas as a unit of analysis in rural area Kentucky. Ph.D. dissertation, University of Kentucky: Lexington, KY

Hunjra, A. I., Boubaker, S., Arunachalam, M., & Mehmood, A. (2021). How does CSR mediate the relationship between culture, religiosity and firm performance?. Finance Research Letters, 39, 101587.

Iacobucci, D., Schneider, M. J., Popovich, D. L., & Bakamitsos, G. A. (2017). Mean centering, multicollinearity, and moderators in multiple regression: The reconciliation redux. Behavior research methods, 49(1), 403-404.

Ibhagui, O. W., & Olokoyo, F. O. (2018). Leverage and firm performance: New evidence on the role of firm size. The North American Journal of Economics and Finance, 45, 57-82.

Iddagoda, Y. & Opatha, H. (2017) Religiosity : Towards A Conceptualization and An Operationalization. (2017), 7(1), 59–69.

Inglehart, R. (1999). Trust, well-being and democracy. Democracy and trust, 88, 88-120.

Irwin, J. R., & McClelland, G. H. (2001). Misleading heuristics and moderated multiple regression models. Journal of Marketing Research, 38, 100–109.

Izogo, E. E., Jayawardhena, C., & Adegbola, E. A. (2020). Creating particularized trust in e-retailers through experiential value and generalized trust. Journal of Strategic Marketing, 28(1), 16-38.

Jackling, B., & Johl, S. (2009). Board structure and firm performance: Evidence from India's top companies. Corporate Governance: An International Review, 17(4), 492-509.

Jain, R. (2020). Bribery and firm performance in India: A political economy perspective. Journal of Asian Economics, 68, 101181.

Jansen, J. J. P. (2015). CEO Social Capital and Entrepreneurial Orientation of the Firm : Bonding and Bridging Effects, 41(7), 1957–1981. https://doi.org/10.1177/0149206312469666

Javers, E. (2011). Religion, Not Money, Often Motivates Corporate Whistleblowers. CNBC, Feb 12 available at http://www.cnbc. com/id/41494697. Accessed December 15, 2015.

Jensen, M. C. (1993) The modern industrial revolution, exit, and the failure of internal control systems, Journal of Finance, 48, 831-880.

Jensen, M. C., & Meckling, W. H. (1976) Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3: 305-360.

Jha, A. (2013). Earnings management around debt-covenant violations–An empirical investigation using a large sample of quarterly data. Journal of Accounting, Auditing & Finance, 28(4), 369-396.

Jha, A. (2019). Financial reports and social capital. *Journal of Business Ethics*, *155*(2), 567-596.

Jiang, F., John, K., Li, W. C., & Qian, Y. (2018). Earthly reward to the religious: Religiosity and the cost of public and private debt. Journal of Financial and Quantitative Analysis, 53(5), 2131–2160. https://doi.org/10.1017/S002210901800039X.

Johl, S. K., Kaur, S., & Cooper, B. J. (2015). Board characteristics and firm performance: Evidence from Malaysian public listed firms. Journal of Economics, Business and Management, 3(2), 239-243.

Johnson, A. G. (2000). The Blackwell dictionary of sociology (2nd ed.). Oxford: Blackwell Publishers Ltd. Kerlinger,

Johnson, B.R., Jang, S.J., Larson D.B., & Li, S.D. (2001). Does adolescent religious commitment matter? A reexamination of the effects of religiosity on delinquency. Journal of Research in Crime and Delinquency, 38(1), 22-43.

Johnson, S., Schnatterly, K., Bolton, J. F., & Tuggle, C. (2011). Antecedents of new director social capital. Journal of Management Studies, 48(8), 1782-1803.

Johnson, S., Schnatterly, K. and Hill, A. (2013) "Board Composition beyond Independence: Social Capital, Human Capital and Demographics," Journal of Management 39: 232–62.

Jones, C. D., Makri, M., & Gomez-Mejia, (2008). Affiliate directors and perceived risk bearing in publicly traded, family-controlled firms: The case of diversification. Entrepreneurship Theory and Practice, 32: 1007-1026.

Kaczmarek, S., Kimino, S., & Pye, A. (2012). Board task-related faultlines and firm performance: A decade of evidence. Corporate Governance: An International Review, 20(4), 337-351.

Kaczmarek, S., Kimino, S., & Pye, A. (2014). Interlocking directorships and firm performance in highly regulated sectors: the moderating impact of board diversity. Journal of Management & Governance, 18(2), 347-372.

Kakabadse, A., Ward, K., Korac-Kakabadse, N., & Bowman, C. (2001). Role and contribution of non-executive directors. Corporate Governance: The international journal of business in society.

Kanagaretnam, K., Lee, J., Lim, C. Y., & Lobo, G. J. (2014). Societal trust and corporate tax avoidance.

Kanagaretnam, K., Khokhar, A. R., & Mawani, A. (2018b). Linking societal trust and CEO compensation. Journal of Business Ethics, 151(2), 295-317.

Kanagaretnam, K., Lee, J., Lim, C. Y., & Lobo, G. (2018a). Societal trust and corporate tax avoidance. Review of Accounting Studies, 23(4), 1588-1628.

Kanagaretnam, K., Lobo, G. J., & Wang, C. (2015). Religiosity and earnings management: International evidence from the banking industry. Journal of Business Ethics, 132(2), 277-296.

Kang, J. K. & Shivdasani, A. 1995. Firm performance, corporate governance, and top executive turnover in Japan. Journal of Financial Economics, 38, 29-58.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The Worldwide Governance Indicators: Methodology and Analytical Issues. Hague Journal On The Rule Of Law, 3(02), 220-246. doi: 10.1017/s1876404511200046

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The Worldwide Governance Indicators: Methodology and Analytical Issues. Hague Journal On The Rule Of Law, 3(02), 220-246. doi: 10.1017/s1876404511200046

Kaufmann, D.,A. Kraay and P. Zoido-Lobatón (1999),"Aggregating Governance Indicators", World Bank Policy Research Working Paper 2195.

Kegan, D. L., & Rubenstein, A. H. (1973). Trust, effectiveness, and organizational development: A field study in R & D. The journal of applied behavioral science, 9(4), 498-513.

Kendler, K. S., Gardner, C. O., and Prescott, C. A. (1997). Religion, psychopathology, and substance use and abuse: a multimeasure, genetic-epidemiologic study. American Journal of Psychiatry, 154(3), 3224–329.

Khanna, T., & Rivkin, J. W. (2001). Estimating the performance effects of business groups in emerging markets. Strategic management journal, 22(1), 45-74.

Khanna, T., & Palepu, K. G. (2004). Globalization and convergence in corporate governance: Evidence from Infosys and the Indian software industry. Journal of International Business Studies, 35(6), 484-507.

Khurshid, M. A., Al-Aali, A., Soliman, A. A., & Amin, S. M. (2014). Developing an Islamic corporate social responsibility model (ICSR). Competitiveness Review.

Kiel, G. C., & Nicholson, G. J. (2006). Multiple directorships and corporate performance in Australian listed companies. Corporate Governance: An International Review, 14(6), 530-546.

Kim & Cannella (2008). Toward a Social Capital Theory of Director Selection, 16(4), 282–293. https://doi.org/10.1111/j.1467-8683.2008.00693.x

Kim, S. (2017). Public Service Motivation, Organizational Social Capital, and Knowledge Sharing in the Korean Public Sector. Public Performance & Management Review, 41(1), 1–22. https://doi.org/10.1080/15309576.2017.1358188

Kim, W., (2012). The effect of board structure on firm value: A multiple identification strategies approach using Korean data. J. Financ. Econ. 104, 203–226.

Kim, Y. (2007). The proportion and social capital of outside directors and their impacts on firm value: Evidence from Korea. Corporate Governance: An International Review, 15(6), 1168-1176.

Klitgaard, R. (1988). Controlling corruption. University of California press.

Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. The Quarterly Journal of Economics, 112(4), 1251–1288.

Knack, S., & Zak, P. J. (2003). Building trust: Public policy, interpersonal trust,and economic development. Supreme Court Economic Review, 10, 91–107.

Ko, M. C. (2019). An examination of the links between organizational social capital and employee well-being: Focusing on the mediating role of quality of work life. Review of Public Personnel Administration, 0734371X19865996.

Koenig, H. G., McCullough, M. & Larson, D. B. (2000). Handbook of religion and health. New York: Oxford University Press.

Koenig, T. and Gogel, R. (1981), "Interlocking corporate directorships as a social network",

Koenig, T., Gogel, R. and Sonquist, J. (1979) "Models of the Significance of Interlocking Corporate Directorates," American Journal of Economics and Sociology 38: 173–86.

Kohlberg, L. (1984). Essays on moral development/2 The psychology of moral development. Harper & Row.

Konovsky, M. A., & Pugh, S. D. (1994). Citizenship behavior and social exchange. Academy of management journal, 37(3), 656-669.

Kor, Y. Y., & Sundaramurthy, C. (2009). Experience-based human capital and social capital of outside directors. Journal of management, 35(4), 981-1006.

Kor, Y. Y. (2009). Experience-Based Human Capital and Social Capital of Outside Directors †, 35(4), 981–1006. https://doi.org/10.1177/0149206308321551

Kroll, A., & Tantardini, M. (2017). Motivating and Retaining Government Employees: The Role of Organizational Social Capital. International Public Management Journal, 0(0), 1–22. https://doi.org/10.1080/10967494.2017.1367341

Kumar, P. (2009). INFLUENCE OF RELIGIOSITY ON ETHICAL BEHAVIOUR : AN EXPLORATORY STUDY, XII(Xii), 1248–1272.

Kumar, P., & Zattoni, A. (2013). How Much Do Country-Level or Firm- Level Variables Matter in Corporate Governance Studies ?, 21(3), 199–200. https://doi.org/10.1111/corg.12025

Kumari, S. S. (2008). Multicollinearity: Estimation and elimination. Journal of Contemporary research in Management, 3(1), 87-95.

Kurpis, L. V., Beqiri, M. S., & Helgeson, J. G. (2008). The effects of commitment to moral self-improvement and religiosity on ethics of business students. Journal of Business Ethics, 80(3), 447-463.

Kurtz, M. J., & Schrank, A. (2007). Growth and governance: Models, measures, and mechanisms. The Journal of Politics, 69(2), 538-554.

Kwon, S. W., & Adler, P. S. (2014). Social capital: Maturation of a field of research. Academy of management review, 39(4), 412-422.

La Porta, R., Lopez-de-Silanes, F., Schleifer, A., & Vishny, R. W. (2000). Trust in large organizations. In P. Dasgupta& I. Serageldin (Eds.), Social capital: A multifaced perspective. Washington, DC: The World Bank.

Lam, T. Y., & Lee, S. K. (2008). CEO duality and firm performance: evidence from Hong Kong. Corporate Governance: The international journal of business in society.

Lappe, F. M., & Du Bois, P. M. (1997). Building social capital without looking backward. National Civic Review, 86(2), 119-128.

Leana, C. R., & Van Buren, H. J. (1999). Organizational social capital and employment prac- tices. Academy of Management Review, 24, 538-555.

Lechler, M., & Sunde, U. (2020). Aging, Proximity to Death, and Religiosity. Population and Development Review.

Lee, C. M. C., & David, N. G. (2009). Corruption and international valuation: Does virtue pay? The Journal of Investing 18 (4), 23–41.

Lee, J. (2009). Does size matter in firm performance? Evidence from US public firms. international Journal of the economics of Business, 16(2), 189-203

Lee, J. H., Choi, C., & Kim, J. M. (2012). Outside directors' social capital and firm performance: A complex network approach. Social Behavior and Personality: an international journal, 40(8), 1319-1331.

Lee, R. (2009). Social capital and business and management: Setting a research agenda. International Journal of Management Reviews, 11(3), 247-273.

Lee, J.-H., Jang, M., & Choi, C. (2016). Social capital of corporate boards: Effects on firm growth. Social Behavior and Personality: An international journal, 44(3), 453-462.

Leff, N. H. (1964). Economic development through bureaucratic corruption. American behavioral scientist, 8(3), 8-14.

Leftwich A. & Sen K. (2010). Beyond institutions: Institutions and organisations in the politics and economics of poverty reduction – a thematic synthesis of research evi- dence. University of Manchester. Available at: http://gsdrc.org/document-library/ beyond-institutions-institutions-and-organisations-in-the-politics-and-economics-of- poverty-reduction-a-thematic-synthesis-of-research-evidence/.

Lehmann, E., & Weigand, J. (2000). Does the governed corporation perform better? Governance structures and corporate performance in Germany. Review of Finance, 4(2), 157-195.

Lehrer, E. L., & Chiswick, C. U. (1993). Religion as a determinant of marital stability. Demography, 30(3), 385-404.

Leite, M. C., & Weidmann, J. (1999). Does mother nature corrupt? Natural resources, corruption, and economic growth. International Monetary Fund.

Leone, A. J., Minutti-Meza, M., & Wasley, C. E. (2019). Influential observations and inference in accounting research. The Accounting Review, 94(6), 337-364.

Lessig, L. (2011). Republic, lost: How money corrupts Congress--and a plan to stop it. Hachette UK.

Lessig, L. (2011). Republic, Lost. New York: Twelve.

Lessig, L. (2013). Foreword:"Institutional corruption" defined. The Journal of Law, Medicine & Ethics, 41(3), 553-555.

Leventis, S., Dedoulis, E., & Abdelsalam, O. (2018). The Impact of Religiosity on Audit Pricing. Journal of Business Ethics, 148(1), 53–78. https://doi.org/10.1007/s10551-015-3001-x

Levy, P. B. (1989) The Waterfront Commission of the Port of New York: A history and appraisal. Industrial and Labor Relations Review, 42: 508-523.

Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. Social Forces, 63(4), 967–985. doi:10.2307/2578601

Leys, C. (1965). What is the Problem about Corruption?. The Journal of Modern African Studies, 3(2), 215-230.

Li, F., Minnis, M., Nagar, V., & Rajan, M. (2014). Knowledge, compensation, and firm value: An empirical analysis of firm communication. Journal of Accounting and Economics, 58(1), 96-116

Li, X., Wang, S. S., & Wang, X. (2017). Trust and stock price crash risk: Evidence from China. Journal of Banking & Finance, 76, 74-91.

Lin, N. (1999). Social networks and status attainment. Annual Review of Sociology, 25, 467-487

Lin, N. (2002). Social capital: A theory of social structure and action (No. 19). Cambridge university press.

Linck, J. S., Netter, J. M., & Yang, T. (2008). The determinants of board structure. Journal of financial economics, 87(2), 308-328.

Lindbeck, A., & Persson, M. (2018). Social norms in social insurance. Journal of Political Economy, 126(S1), 116–139. https://doi.org/10.1086/698749.

Lins, K. V. (2003). Equity ownership and firm value in emerging markets. Journal of financial and quantitative analysis, 159-184.

Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *the Journal of Finance*, *72*(4), 1785-1824.

Lipton, M. and Lorsch, J. W. (1992) A modest proposal for improved corporate governance, Business Lawyer, 48, 59- 77.

Liu, X. (2016). Corruption culture and corporate misconduct. Journal of Financial Economics, 122(2), 307-327.

Liu, B., & McConnell, J. J. (2013). The role of the media in corporate governance: Do the media influence managers' capital allocation decisions?. Journal of Financial Economics, 110(1), 1-17.

Liu, Y., Miletkov, M. K., Wei, Z., & Yang, T. (2015). Board independence and firm performance in China. Journal of Corporate Finance, 30, 223-244.

Llanos-Contreras, O., Baier-Fuentes, H., & González-Serrano, M. H. (2021). Direct and indirect effects of SEWi, family human capital and social capital on organizational social capital in small family firms. International Entrepreneurship and Management Journal, 1-16.

Lochner, K., Kawachi, I. and Kennedy, B. (1999). Social capital: a guide to its measurement. Health and Place, 5, 259–270.

Longenecker, J. G., McKinney, J. A., & Moore, C. W. (2004). Religious intensity, evangelical Christianity, and business ethics: An empirical study. Journal of business ethics, 55(4), 371-384.

López, J. A. P., & Santos, J. M. S. (2014). Does corruption have social roots? The role of culture and social capital. Journal of Business Ethics, 122(4), 697-708.

Luhmann, N. (1979). Trust and Power. Chichester, UK: John Wiley & Sons

Lundmark, S., Gilljam, M., & Dahlberg, S. (2016). Measuring generalized trust: An examination of question wording and the number of scale points. Public Opinion Quarterly, 80(1), 26-43.

Luo, X., Griffith, D. A., Liu, S. S., & Shi, Y. Z. (2004). The effects of customer relationships and social capital on firm performance: A Chinese business illustration. Journal of International Marketing, 12(4), 25-45.

Madhani, P. M. (2007), "Corporate governance from compliance to competitive advantage", The Accounting World, Vol. 7, No. 8, pp.26-31.

Madhani, P. M. (2017). Diverse roles of corporate board: Review of various corporate governance theories. The IUP Journal of Corporate Governance, 16(2), 7-28.

Majumdar, K and Bhattacharjee, A. (2014) Firms, Markets, and the State: Insitutional Change and Manufacturing Sector Profitability Variances in India. Organization Science 25(2): 509–528.

Makino S, Isobe T and Chan CM. (2004). Does country matter? Strategic Management Journal 25(10):1027–1043.

Maman, D., 1999.Research note: Interlocking ties within business groups in Israel - A longitudinal analysis, 1974-1987. Organization Studies, 20(2), pp.323-339. http://dx.doi.org/10.1177/0170840699202006

Maman, D., 1999.Research note: Interlocking ties within business groups in Israel - A longitudinal analysis, 1974-1987. Organization Studies, 20(2), pp.323-339. http://dx.doi.org/10.1177/0170840699202006

Marinova, J., Plantenga, J., & Remery, C. (2016). Gender diversity and firm performance: Evidence from Dutch and Danish boardrooms. The International Journal of Human Resource Management, 27(15), 1777-1790.

Martin, G., Gözübüyük, R., & Becerra, M. (2015). Interlocks and firm performance: The role of uncertainty in the directorate interlock-performance relationship. Strategic Management Journal, 36(2), 235-253.

Martins, L., Cerdeira, J., & AC Teixeira, A. (2020). Does corruption boost or harm firms' performance in developing and emerging economies? A firm-level study. The World Economy, 43(8), 2119-2152.

Mazzi, F., Slack, R., & Tsalavoutas, I. (2018). The effect of corruption and culture on mandatory disclosure compliance levels: Goodwill reporting in Europe. Journal of International Accounting, Auditing and Taxation, 31, 52-73.

McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. Academy of management journal, 38(1), 24-59.

McCarthy, J. D., & Zald, M. N. (1977). Resource mobilization and social movements: A partial theory. *American journal of sociology*, *82*(6), 1212-1241.

McClenaghan, P. (2000). Social capital: exploring the theoretical foundations of community development education. British Educational Research Journal, 26(5), 565-582.

McCullough, M. E., & Willoughby, B. L. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications. Psychological bulletin, 135(1), 69.

McDaniel, S. W. & Burnett, J. J. (1990). Consumer religiosity and retail store evaluative criteria. Journal of the Academy of Marketing Science, 18, 101-112

McGuire, M. B. (2008). Religion: The social context. Waveland Press.

McGuire, S. T., Omer, T. C., & Sharp, N. Y. (2012). The impact of religion on financial reporting irregularities. The Accounting Review, 87(2), 645-673.

McGuire, S., T. Omer and N. Sharp (2012), 'The Impact of Religion on Financial Reporting Irregularities', The Accounting Review, Vol. 87, pp. 645–73.

Médard, J.-F (1998): 'Postface' in Le Clientélisme Politique dans les Sociétés Contemporaines. Briquet and Sawicki, eds, Paris: Presses Universitaires de France 307–316.

Médard, J. F. (2017). Corruption in the neo-patrimonial states of Sub-Saharan Africa. In Political Corruption (pp. 379-402). Routledge.

Meehan, F., and L. Tacconi. (2017). “A Framework to Assess the Impacts of Corruption on Forests and Prioritize Responses.” Land Use Policy 60: 113–122. doi:10.1016/j.landusepol.2016.10.021.

Mehmetoglu, M., & Jakobsen, T. G. (2016). Applied statistics using Stata: a guide for the social sciences. Sage.

Mendoza, R. U., Lim, R. A., & Lopez, A. O. (2015). Grease or sand in the wheels of commerce? Firm level evidence on corruption and SMEs. Journal of International Development, 27(4), 415-439.

Meng, Y., Wang, X., Zhang, G., & Zheng, S. (2020). Trust and corporate R&D investment: Cross-country evidence. Finance Research Letters, 101696.

Miller, A. S., & Hoffmann, J. P. (1995). Risk and religion: An explanation of gender differences in religiosity. Journal for the scientific study of religion, 63-75.

Miller, A. S., & Stark, R. (2002). Gender and religiousness: Can socialization explanations be saved?. American journal of sociology, 107(6), 1399-1423.

Miller, L., & Gur, M. M. S. (2002, February). Religiosity, depression and physical maturation in adolescent girls. Journal of the American Academy of Child and Adolescent Psychiatry, 41(2), 206–214.

Miller, L., Warner, V., Wickramaratne, P., & Weissman, M. (1997, October). Religiosity and depression: ten-year follow-up of depressed mothers and offspring. Journal of the American Academy of Child and Adolescent Psychiatry, 36(10), 1416–1425.

Minichilli, A., Zattoni, A., Nielsen, S., & Huse, M. (2012). Board task performance: An exploration of micro- and macro-level determinants of board effectiveness. Journal of organizational behavior, 33(2), 193-215.

Mizruchi, M. S. (1996). What do interlocks do? An analysis, critique, and assessment of research on interlocking directorates. Annual review of sociology, 22(1), 271-298.

Mizruchi, M. S. and Stearns, L. B. (1988) “A Longitudinal Study of the Formation of Interlocking Directorates,” Administrative Science Quarterly 33: 194–210.

Mkuua, K. M., & Yusoffb, M. E. B. (2020). Building Organisational Social Capital through Investment in Corporate Social Responsibility to Stimulate the Effectiveness of Zakat Activities in Zanzibar.

Mo, P. H. (2001). Corruption and economic growth. Journal of comparative economics, 29(1), 66-79.

Molina-Morales, F. X., & Martínez-Fernández, M. T. (2010). Social networks: effects of social capital on firm innovation. Journal of Small Business Management, 48(2), 258-279.

Montenegro, T. M. (2017). Religiosity and corporate financial reporting: evidence from a European country. Journal of Management, Spirituality & Religion, 14(1), 48-80.

Moore, S., & Kawachi, I. (2017). Twenty years of social capital and health research: a glossary. J Epidemiol

Mubako, G., Bagchi, K., Udo, G., & Marinovic, M. (2020). Personal Values and Ethical Behavior in Accounting Students. Journal of Business Ethics, 1-16.

Muchinsky, P. M. (1977). Organizational communication: Relationships to organizational climate and job satisfaction. Academy of Management journal, 20(4), 592-607.

Munnichs, J. M. A. (1966). Old Age and Finitude. Basel: Karger.

Mura, R. (2007). Firm performance: Do non-executive directors have minds of their own? Evidence from UK panel data. Financial Management, 36(3), 81-112.

Murphy, K. M., Shleifer, A., & Vishny, R. W. (1991). The allocation of talent: Implications for growth. The quarterly journal of economics, 106(2), 503-530.

Nahapiet, Janine and Sumantra Ghoshal. (1998) "Social Capital, Intellectual Capital, and the Organizational Advantage." Academy of Management Review 23(2):242.

Nanda, D., & Wysocki, P. (2013). Trust, external capital and financial transparency. In University of Miami Working Paper.

Nannestad, P. (2008). What have we learned about generalized trust, if anything? Annual Review of Political Science, 11, 413–436.

Nguyen, N. A., Doan, Q. H., Nguyen, N. M., & Tran-Nam, B. (2016). The impact of petty corruption on firm innovation in Vietnam. Crime, Law and Social Change, 65(4), 377-394.

Nicholson, G., Alexander, M., & Kiel, G. (2004). Defining the social capital of the board of directors: An exploratory study. Journal of Management and Organisation

Nielsen, J. S., Bech, M., Christensen, K., Kiil, A., & Hvidt, N. C. (2017). Risk aversion and religious behaviour: Analysis using a sample of Danish twins. Economics & Human Biology, 26, 21-29.

Norenzayan, A., & Shariff, A. F. (2008). The origin and evolution of religious prosociality. science, 322(5898), 58-62.

Noussair, C. N., Trautmann, S. T., Van de Kuilen, G., & Vellekoop, N. (2013). Risk aversion and religion. Journal of Risk and Uncertainty, 47(2), 165-183.

Nur-tegin, K., & Jakee, K. (2020). Does corruption grease or sand the wheels of development? New results based on disaggregated data, Quarterly Review of Economics and Finance, in press.

Offstein, E. H., Gnyawali, D. R. and Cobb, A. T. (2005) "A Strategic Human Resource Perspective of Firm Competitive Behavior," Human Resource Management Review 5: 305–18.

Okleshen, M. and Hoyt, R. (1996). A cross cultural comparison of ethical perspectives and decision approaches of business students: United States of America versus New Zealand. Journal of Business Ethics, 15(5), pp.537-549.

Olney, W. W. (2016). Impact of corruption on firm-level export decisions. Economic Inquiry, 54(2), 1105-1127.

Omer, T. C., Sharp, N. Y., & Wang, D. (2018). The impact of religion on the going concern reporting decisions of local audit offices. Journal of Business Ethics, 149(4), 811-831.

Onyx, Jenny, and Paul Bullen. (2000). "Sources of social capital." Pp. 105 - 135 in Social capital and public policy in Australia, edited by Ian Winter. Melbourne: National Library of Australia.

Onyx, Jenny, and Paul Bullen. (2001). "The different faces of social capital in NSW Australia." Pp. 45 - 58 in Social Capital and Participation in Everyday Life, edited by Eric M. Uslaner. London: Routledge.

OPM, 2007. 'Measuring Corruption', Oxford Policy Management Briefing Notes 2007-01: www.opml.co.uk

Osborne, J. W., Christensen, W. R., & Gunter, J. (April, 2001). Educational Psychology from a Statistician's Perspective: A Review of the Power and Goodness of Educational Psychology Research. Paper

presented at the national meeting of the American Education Research Association (AERA), Seattle, WA.

Osoba, B. (2003). Risk preferences and the practice of religion: Evidence from panel data. Unpublished Working Paper, West Virginia University.

Ostrom, E (2000) Collective action and the evolution of social norms. Journal of Economic Perspectives 14(3): 137–158.

Ostrom, E. (2000). Social capital: A fad or a fundamental concept? In P. Dasgupta & I. Serageldin (Eds.), Social capital: A multivaceted perspective (pp. 172–214). Washington, DC: The World Bank.

Ostrom, E. (2009). What is social capital. *Social capital: Reaching out, reaching in*, 17-38.

Ostrom, E. (2014). Collective action and the evolution of social norms. Journal of Natural Resources Policy Research, 6(4), 235–252.

Ostrom, E., & Ahn, T. K. (2003). A social science perspective on social capital: social capital and collective action. Revista Mexicana De Sociologia, 65(1), 155-233.

Oumlil, A. B., & Balloun, J. L. (2009). Ethical decision-making differences between American and Moroccan managers. Journal of Business Ethics, 84(4), 457-478.

Paldam, M., & Gundlach, E. (2013). The religious transition. A long-run perspective. Public Choice, 156(1-2), 105-123.

Palmer, D. A., Jennings, P. D., & Zhou, X. (1993). Late adoption of the multidivisional form by large US corporations: Institutional, political, and economic accounts. Administrative science quarterly, 100-131.

Parboteeah, K., Hoegl, M., & Cullen, J. (2008). Ethics and religion: An empirical test of a multidimensional model. Journal of Business Ethics, 80(2), 387–398.

Paunov, C. (2016). Corruption's asymmetric impacts on firm innovation. *Journal of Development Economics*, *118*, 216-231.

Paxton, P. (2007). Association memberships and generalized trust: A multilevel model across 31 countries. Social Forces, 86, 47–76

Pedhazur, E. J., (1997). Multiple Regression in Behavioral Research (3rd ed.). Orlando, FL:Harcourt Brace.

Pejovich, S. (1999), 'The Effects of the Interaction of Formal and Informal Institutions on Social Stability and Economic Development', Journal of Markets & Morality, 2(2), Fall, 164-181

Pejovich, S. (2006). 3. The effects of the interaction of formal and informal institutions on social stability and economic development. Institutions, Globalisation and Empowerment, 56.

Pellegrini, L. (2011). Causes of corruption: a survey of cross-country analyses and extended results. In Corruption, development and the environment (pp. 29-51). Springer Netherlands. Chicago

Peng, M. (2003) Institutional transitions and strategic choices. Academy of Management Review 28(2): 275–296

Penrose, E.T. (1959), The Theory of the Growth of the Firm, New York: Wiley.

Pérez-Calero, L., del Mar Villegas, M., & Barroso, C. (2016). A framework for board capital. Corporate Governance.

Perkins, H. W., & Berkowitz, A. D. (1986). Perceiving the community norms of alcohol use among students: Some research implications for campus alcohol education programming. International journal of the Addictions, 21(9-10), 961-976.

Perrow, C. (1986). Economic theories of organization. Theory and society, 15(1-2), 11-45.

Perry, T., & Peyer, U. (2005). Board seat accumulation by executives: A shareholder's perspective. The Journal of Finance, 60(4), 2083-2123.

Petersen MB and Aarøe L (2015) Birth weight and social trust in adulthood: Evidence for early calibration of social cognition. Psychological Science 26(11): 1681–1692.

Petrou, A.P. (2014). Bank foreign affiliate performance in the face of pervasive and arbitrary corruption. European Management Review, 11(3–4), 209–221.

Pevzner, M., F. Xie, Xin, X.,2014, "When firms talk, do investors listen? The role of trust in stock market reactions to corporate earnings announcements.", Journal of Financial Economics, Forthcoming.

Pevzner, M., Xie, F., & Xin, X. (2015). When firms talk, do investors listen? The role of trust in stock market reactions to corporate earnings announcements. Journal of Financial Economics, 117(1), 190-223.

Pew Research Center. (2015). America's changing religious landscape. Washington, DC: Pew Research Publications. Retrieved from http://www.pewforum.org/2015/05/12/americas-changing-religious-landscape/

Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organization and its environment. Administrative science quarterly, 218-228.

Pfeffer, J. and Salancik, G. (1978) The External Control of Organizations: A Resource Dependence Perspective. New York: Harper & Row.

Philp M. (2006) Corruption definition and measurement. In Measuring Corruption,ed. CJ Sampford,AH Shacklock, C Connors, F Galtung, pp. 45–56. Aldershot, UK: Ashgate

Philp, M. (2014). The definition of political corruption. In Routledge handbook of political corruption (pp. 31-43). Routledge.

Pichler, F., & Wallace, C. (2007). Patterns of formal and informal social capital in Europe. European Sociological Review, 23(4), 423–435. https://doi.org/10.1093/esr/jcm013

Pillai, R., & Al-Malkawi, H. A. N. (2018). On the relationship between corporate governance and firm performance: Evidence from GCC countries. Research in International Business and Finance, 44, 394-410.

Pirinsky, C., & Wang, Q. (2006). Does corporate headquarters location matter for stock returns? The Journal of Finance, 61(4), 1991–2015. https://doi.org/10.1111/j.1540- 6261.2006.00895.x.

Podolny JM. (1994) Market uncertainty & social character of economic exchange. Administrative Science Quar- terly 39: 458–483.

Podolny JM. (2001) Networks as the pipes and prisms of the market. American Journal of Sociology 107: 33–60.

Podolny, J. M. (1994). Market uncertainty and the social character of economic exchange. Administrative science quarterly, 458-483.

Poortinga, W. (2006). Social relations or social capital? Individual and community health effects of bonding social capital. Social science & medicine, 63(1), 255-270.

Portes, A. (1998) "Social capital: its origins and applications in modern sociology." Annual Review of Sociology 24: 1-25.

Portes, A., & Stepick, A. (1993). City on the Edge: The Transformation of Miami. Berkeley, California: University of California Press.

Portes, A and Vickstrom, E. (2011). Diversity, Social Capital, and Cohesion. Annual Review of Sociology 37:461–7

Pratt, J. W., & Zeckhauser, R. J. (1985). Principals and agents: An overview. Principals and agents: The structure of business, 1, 1-36.

Pretty, J. (2003). Social capital and the collective management of resources. Science, 302(5652), 1912-1914.

Putnam, R. (1993). The prosperous community: Social capital and public life. The american prospect, 13(Spring), Vol. 4. Available online: http://www. prospect. org/print/vol/13 (accessed 7 April 2003).

Putnam, R. (2001). Social capital: Measurement and consequences. Canadian Journal of Policy Research, 2(1), 41–51.

Putnam, R. D. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. PS: Political Science & Politics, 28(04), 664–683.

Putnam, R. D. (2000). Bowling alone: The collapse and revival of American community. New York City: Simon and Schuster.

Putnam, R. D., Leonardi, R., & Nanetti, R. Y. (1994). Making democracy work: Civic traditions in modern Italy. Princeton: Princeton University Press.

Rahayuningsih, I. (2019). The Positive Impact Of Organizational Trust: A Systematic Review. Journal of Educational, Health and Community Psychology, 8(1).

Ramasamy, B., Yeung, M. C., & Au, A. K. (2010). Consumer support for corporate social responsibility: The role of religion and val- ues. Journal of Business Ethics, 91(1), 61–72.

Rashid, M. Z., & Ibrahim, S. (2008). The effect of culture and religiosity on business ethics: A cross-cultural comparison. Journal of Business Ethics, 82(4), 907-917.

Reeskens, T., & Hooghe, M. (2008). Cross-cultural measurement equivalence of generalized trust. Evidence from the European Social Survey (2002 and 2004). Social Indicators Research, 85(3), 515-532.

Reeskens, T., & Hooghe, M. (2008). Cross-cultural measurement equivalence of generalized trust. Evidence from the European Social Survey (2002 and 2004). Social Indicators Research, 85(3), 515-532.

Rijckeghem, C. Van and Weder, B. (1997), "Corruption and the Rate of Temptation: Do Low Wages in the Civil Service Cause Corruption?", International Monetary Fund Working Paper

Robbins, B. G. (2019). Measuring generalized trust: Two new approaches. Sociological Methods & Research, 0049124119852371.

Roberts, M. R., & Whited, T. M. (2013). Endogeneity in empirical corporate finance1. In Handbook of the Economics of Finance (Vol. 2, pp. 493-572). Elsevier.

Robinson, S. L. (1996). Trust and breach of the psychological contract. Administrative science quarterly, 574-599.

Robison, L. J., & Siles, M. E. (1999). Social capital and household income distributions in the United States: 1980, 1990. The Journal of Socio-Economics, 28(1), 43-93.

Robison, L. J., Siles, M. E., Bokemeier, J. L., Beveridge, D., Fimmen, M., Grummon, P. T., & Fimmen, C. (2000). Social capital and household income distributions: evidence from Michigan and Illinois (No. 1091-2016-87447).

Rodriguez, P., Uhlenbruck, K., & Eden, L. (2005). Government corruption and the entry strategies of multinationals. Academy of management review, 30(2), 383-396.

Rodrik, (1999) "Democracies Pay Higher Wages," Quarterly Journal of Economics (114), 707–738

Roes, F. L., & Raymond, M. (2003). Belief in moralizing gods. Evolu- tion and Human Behavior, 24(2), 126–135.

Rose, J. (2018). The meaning of corruption: Testing the coherence and adequacy of corruption definitions. Public Integrity, 20(3), 220-233.

Rose, R., & Peiffer, C. (2012). Paying Bribes to Get Public Services: A Global Guide to Concepts and Survey Measures (No. SPP 494). Glasgow, UK: Centre for the Study of Public Policy.

Rosenberg, M. (1956). Misanthropy and political ideology. American sociological review, 21(6), 690-695.

Rosenstein, S., & Wyatt, J. G. (1990). Outside directors, board independence, and shareholder wealth. Journal of financial economics, 26(2), 175-191.

Rose-Ackerman, S. (1978). Corruption: A study in political economy. Academic Press.

Rose-Ackerman, S. (1999). Political corruption and democracy. Conn. J. Int'l L., 14, 363.

Rothstein, B. (2014). What is the opposite of corruption? Third World Quarterly, 35(5), 737–752. https://doi.org/10.1080/01436597.2014.921424

Rubin, A. (2008). Political views and corporate decision making: The case of corporate social responsibility. The Financial Review, 43(3), 337–360. https://doi.org/10.1111/ j.1540-6288.2008.00197.x.

Ruigrok, W., Peck, S. I., & Keller, H. 2006. Board characteristics and involvement in strategic decision making: Evidence from Swiss companies. Journal of Management Studies, 43: 1201-1226.

Rutledge, R. W., Karim, K. E., & Lu, S. (2016). The effects of board independence and CEO duality on firm performance: evidence from the NASDAQ-100 index with controls for endogeneity. Journal of Applied Business and Economics, 18(2).

Rupasingha, A., Goetz, S. J., & Freshwater, D. (2000). Social capital and economic growth: a county-level analysis. Journal of Agricultural and Applied Economics, 32(1379-2016-113202), 565-572.

Sabitini, F. (2007). The empirics of social capital and economic development: A critical perspective. In M. Osborne, K. Sankey, & B. Wilson (Eds.), Researching social capital, lifelong learning regions and the management of place: An international perspective (pp. 76–95). New York: Routledge.

Saguaro Seminar. (2001). The social capital community benchmark survey. Cambridge: John F. Kennedy School of Government, Harvard University.

Salah, W. (2018). The Impact of Country-Level and Firm-Level on Financial Performance: A Multilevel Approach. International Journal of Accounting, 6(2), 41-53.

Salawu, R. O. (2007). An empirical analysis of the capital structure of selected quoted companies in Nigeria. The International Journal of Applied Economics and Finance, 1(1), 16–28.

Saleem, Q., & Rehman, R. U. (2011). Impacts of liquidity ratios on profitability. Interdisciplinary journal of research in business, 1(7), 95-98.

Saleem, Q., & Rehman, R. U. (2011). Impacts of liquidity ratios on profitability. Interdisciplinary journal of research in business, 1(7), 95-98.

Sampath, V. S., & Rahman, N. (2018). Bribery in MNEs : The Dynamics of Corruption Culture Distance and Organizational Distance to Core Values. Journal of Business Ethics, (123456789). https://doi.org/10.1007/s10551-018-3827-0

Sanchez-Famoso, V., Mejia-Morelos, J. H., & Cisneros, L. (2020). New Insights into Non-Listed Family SMEs in Spain: Board Social Capital, Board Effectiveness,} and Sustainable Performance. Sustainability, 12(3), 814.

Sandholtz, Wayne, & Gray. (2003) International integration and national corruption. International Organization, 57: 761-800.

Sandholtz. and Koetzle (2000) “Accounting for Corruption: Economic Structure, Democracy, and Trade,” International Studies Quarterly 2000 (44), 31–50

Saroglou, V., Pichon, I., Trompette, L., Verschueren, M., & Dernelle, R. (2005). Prosocial behavior and religion: New evidence based on projective measures and peer ratings. Journal for the scientific study of religion, 44(3), 323-348.

Sauerwald, S., Lin, Z., & Peng, M. W. (2016). Board social capital and excess CEO returns. Strategic Management Journal, 37(3), 498-520.

Schiehll, E., Ahmadjian, C., & Filatotchev, I. (2014). National governance bundles perspective: Understanding the diversity of corporate governance practices at the firm and country levels. Corporate Governance: An International Review, 22(3), 179-184.

Schnabel, L. (2016). The gender pray gap: Wage labor and the religiosity of high-earning women and men. Gender & Society, 30(4), 643-669.

Schultz, E. L., Tan, D. T., & Walsh, K. D. (2010). Endogeneity and the corporate governance-performance relation. Australian journal of Management, 35(2), 145-163.

Scott, J., & Marshall, G. (Eds.). (2009). A dictionary of sociology. Oxford University Press, USA.

Sekerdej, M., Kossowska, M., & Czernatowicz-Kukuczka, A. (2018). Uncertainty and prejudice: The role of religiosity in shaping group attitudes. European journal of social psychology, 48(2), O91-O102.

Serra, R. (2001). Social capital: Meaningful and measurable at the state level? Economic and Political Weekly, 36(8), 693–704.

Servaes, Henri, and Ane Tamayo. "The role of social capital in corporations: a review." Oxford Review of Economic Policy 33.2 (2017): 201-220.

Sequeira, S. (2012). Advances in measuring corruption in the field. New advances in experimental research on corruption.

Shapiro, D., Tang, Y., Wang, M. and Zhang, W., (2015). The Effects of Corporate Governance and Ownership on the Innovation Performance of Chinese SMEs. Journal of Chinese Economic and Business Studies, 1 (4), 311-335.

Sharma, C., & Mitra, A. (2015). Corruption, governance and firm performance: Evidence from Indian enterprises. Journal of Policy Modeling, 37(5), 835-851.

Sherkat & Ellison, (1999). Recent developments and current controversies in the sociology of religion. Annual review of sociology, 25(1), 363-394.

Shipilov, A.V., Greve, H.R. and Rowley, T.J. (2010), "When do interlocks matter? Institutional logics and the diffusion of multiple corporate governance practices", Academy of Management Journal, Vol. 53 No. 4, pp. 846-864.

Shleifer, A., & Vishny, R. W. (1993). Corruption, the quarterly journal of economics.

Short, J. C., McKelvie, A., Ketchen Jr, D. J., & Chandler, G. N. (2009). Firm and industry effects on firm performance: A generalization and extension for new ventures. Strategic Entrepreneurship Journal, 3(1), 47-65.

Shrader, R. C. (2001) "Collaboration and Performance in Foreign Markets: The Case of Young High-technology Manufacturing Firms," Academy of Management Journal 44: 45–60.

Shropshire, C. (2010), "The role of the interlocking director and board receptivity in the diffusion of practices", Academy of Management Review, Vol. 35, No. 2, pp. 246-264.

Shukhova, A., & Nisnevich, Y. (2017). Measurement of Validity of Corruption Indices. Higher School of Economics Research Paper No. WP BRP, 42.

Siisiainen, M. (2003). Two concepts of social capital: Bourdieu vs. Putnam. International journal of contemporary sociology, 40(2), 183-204.

Silva, F., Majluf, N., & Paredes, R. D. (2006). Family ties, interlocking directors and performance of business groups in emerging countries: The case of Chile. Journal of Business Research, 59(3), 315-321.Silverstein, M., & Bengtson, V. L. (2018). Return to religion? Predictors of religious change among baby-boomers in their transition to later life. Journal of population ageing, 11(1), 7-21.

Simpson, J. A. (2007). Psychological foundations of trust. Current Directions in Psychological Science, 16(5), 264–268. doi:10.1111/j.1467-8721.2007.00517.x

Singh, S., Tabassum, N., Darwish, T. K., & Batsakis, G. (2018). Corporate governance and Tobin's Q as a measure of organizational performance. British Journal of Management, 29(1), 171-190.

Singhapakdi, A., Marta, J., Rallapalli, K., & Rao, C. P. (2000). Toward an understanding of religiousness and marketing ethics: An empirical study. Journal of Business Ethics, 27(4), 305–319

Smith-Crowe, K., Tenbrunsel, A. E., Chan-Serafin, S., Brief, A. P., Umphress, E. E., & Joseph, J. (2015). The Ethics "Fix": When Formal Systems Make a Difference. Journal of Business Ethics, 131(4), 791–801. https://doi.org/10.1007/s10551-013-2022-6

Smith, C. (2008). Future directions in the sociology of religion. Social Forces, 86(4), 1561–1589.

Son, J. (2015). Organizational Social Capital and Generalized Trust in Korea. American Behavioral Scientist, 59(8), 1007–1023. https://doi.org/10.1177/0002764215580611

Son, J. & Feng, Q. Soc Indic Res (2019) 144: 167. https://doiorg.ezproxy.lib.gla.ac.uk/10.1007/s11205-018-2026-9

Song, J. and Windram, B. (2004), "Benchmarking audit committee effectiveness in financial reporting", International Journal of Auditing, Vol. 8, pp. 195-205.

Sparks, J. R., & Pan, Y. (2010). Ethical judgments in business ethics research: Definition, and research agenda. Journal of Business Ethics, 91(3), 405–418.

Stark, R. (1996). Religion as context: Hellfire and delinquency one more time. Sociology of religion, 57(2), 163-173.

Stark, R. (1999). Secularization, rip. Sociology of religion, 60(3), 249-273.

Stark, R. (2002). Physiology and faith: Addressing the "universal" gender difference in religious commitment. Journal for the Scientific Study of Religion, 41(3), 495-507.

Stathopoulos, K., & Talaulicar, T. (2020). Taking stock of corporate governance research and future research opportunities.

Stavrova, O., Fetchenhauer, D., & Schlösser, T. (2013). Why are religious people happy? The effect of the social norm of religiosity across countries. Social science research, 42(1), 90-105.

Stead, W. E., Worrell, D. L., & Stead, J. G. (1990). An integrative model for understanding and managing ethical behavior in busi- ness organizations. Journal of Business Ethics, 9(3), 233–242.

Stephan, U., Uhlaner, L. M., & Stride, C. (2015). Institutions and social entrepreneurship: The role of institutional voids, institutional support, and institutional configurations. Journal of International Business Studies, 46(3), 308–331.

Stevenson, W. B. and Radin, R. F. (2009) "Social Capital and Social Influence on the Boards of Directors," The Journal of Management Studies 46: 16–44

Stiles, P. (2001),"The impact of the board on strategy: An empirical examination", Journal of Management Studies, Vol. 38, No. 5, pp. 627-650.

Stolle, D. (1998). Bowling together, bowling alone: The development of generalized trust in voluntary associations. Political Psychology, 19, 497–525.

Strulik, H. (2016). Secularization and Long-Run Economic Growth. Economic Inquiry, 54(1), 177-200.

Stuart, T. E., & Yim, S. (2010). Board interlocks and the propensity to be targeted in private equity transactions. Journal of Financial Economics, 97(1), 174-189.

Sullivan, B., & Tang, Y. (2013). Which signal to rely on? The impact of the quality of board interlocks and inventive capabilities on research and development alliance formation under uncertainty. Strategic Organization, 11(4), 364-388.

Sung, H. (2004). Democracy and political corruption : A cross-national comparison, 179–194.

Sunstein, C.R., 1996, Social Norms and Social Roles, Columbia Law Review 96, 903-968.

Suseno, Y., Standing, C., Kiani-Mavi, R., & Jackson, P. (2020). National innovation performance: the role of human capital and social capital. Innovation: The European Journal of Social Science Research, 33(3), 296-310.

Sutherland, E. H. (1937). The professional thief. Journal of Criminal Law and Criminology (1931-1951), 161-163.

Svendsen, G.L.H. and Svendsen, G.T. (2003). The Creation and Destruction of Social Capital: Entrepreneurship, Co-operative Movements and Institutions. Cheltenham, UK: Edward Elgar.

Syriopoulos, T., & Tsatsaronis, M. (2012). Corporate governance mechanisms and financial performance: CEO duality in shipping firms. Eurasian Business Review, 2(1), 1-30.

Szreter, S., & Woolcock, M. (2004). Health by association? Social capital, social theory, and the political economy of public health. International journal of epidemiology, 33(4), 650-667.

Tabachnick, B. G., Fidell, L. S. (1996). Using Multivariate Statistics (3rd ed.). New York: Harper Collins College Publishers Tabachnick, B. G., Fidell, L. S. (2001). Using Multivariate Statistics (4th ed.). Needham Heights, MA: Allyn and Bacon

Tantardini, M., & Garcia-Zamor, J. C. (2015). Organizational Social Capital and Anticorruption Policies: An Exploratory Analysis. Public Organization Review, 15(4), 599–609. https://doi.org/10.1007/s11115-014-0294-7

Tantardini, M., & Kroll, A. (2015). The Role of Organizational Social Capital in Performance Management. Public Performance & Management Review, 39(1), 83–99. https://doi.org/10.1080/15309576.2016.1071163

Tavits, M (2006) Making democracy work more? Exploring the linkage between social capital and government performance. Political Research Quarterly 59(2): 211–225.

Teal, F and J McArthur (2002). Corruption and Firm Performance in Africa. Economics Series Working Papers WPS/2002–10, Department of Economics, University of Oxford, Oxford.

Terpstra, V. & David, K. (1991). The cultural environment of international business (3rd ed.). Cincinnati, Ohio: South-Western Publishing Company.

Terzani, S., & Turzo, T. (2020). Religious social norms and corporate sustainability: The effect of religiosity on environmental, social, and governance disclosure. Corporate Social Responsibility and Environmental Management.

Thakur, B. P. S., Kannadhasan, M., Charan, P., & Gupta, C. P. (2021). Corruption and firm value: Evidence from emerging market economies. Emerging Markets Finance and Trade, 57(4), 1182-1197.

Thompson, C. G., Kim, R. S., Aloe, A. M., & Becker, B. J. (2017). Extracting the variance inflation factor and other multicollinearity diagnostics from typical regression results. Basic and Applied Social Psychology, 39(2), 81-90.

Thompson, C. G., Kim, R. S., Aloe, A. M., & Becker, B. J. (2017). Extracting the variance inflation factor and other multicollinearity diagnostics from typical regression results. Basic and Applied Social Psychology, 39(2), 81-90.

Thorgren, S., & Wincent, K. (2011). Interorganizational trust: Origins, dysfunctions and regulation of rigidities. British Journal of Management, 22(1), 21–41. doi:10.1111/j.1467-8551.2010.00717.x

Tian, G. G., & Zeitun, R. (2007). Capital structure and corporate performance: Evidence from Jordan. Australasian Accounting Business and Finance Journal, 1(4), 40–61.

Tian, J., Haleblian, J. and Rajagopalan, N. (2011) "The Effects of Board Human and Social Capital on Investor Reactions to New CEO Selection," Strategic Management Journal 32: 731–47

Tittle, C. R., & Welch, M. R. (1983). Religiosity and deviance: Toward a contingency theory of constraining effects. Social forces, 61(3), 653-682.

Tong T. W., Alessandri T. M., Reuer J. J., Chintakananda A. (2008) How much does country matter? An analysis of firms' growth options. Journal of International Business Studies 39(3): 387- 405.

Tracey, P. (2012). Religion and organization: A critical review of current trends and future directions. Academy of management annals, 6(1), 87-134.

Tracey, P., Phillips, N., & Lounsbury, M. (2014). Taking religion seriously in the study of organizations. In Religion and organization theory. Emerald Group Publishing Limited.

Treisman, D. (2007). The architecture of government: Rethinking political decentralization. Cambridge University Press.

Treisman, D., (2000) The causes of corruption: a cross-national study. Journal of Public Economics 76, 399–457.

Trzebiatowska, Marta, and Steve Bruce. Why are women more religious than men?. Oxford University Press, 2012.

Tuliao, K. V., & Chen, C. W. (2017). CEO duality and bribery: the roles of gender and national culture. Management Decision.

Twenge, J. M., Campbell, W. K., & Carter, N. T. (2014). Declines in trust in others and confidence in institutions among American adults and late adolescents, 1972–2012. Psychological Science. doi:10. 1177/0956797614545133.

Twenge, J. M., Campbell, W. K., & Carter, N. T. (2014). Declines in trust in others and confidence in institutions among American adults and late adolescents, 1972–2012. Psychological Science. doi:10. 1177/0956797614545133.

Tzanakis, M. (2013). Social capital in Bourdieu's, Coleman's and Putnam's theory: empirical evidence and emergent measurement issues. Educate~, 13(2), 2-23.

Ullah, S., Akhtar, P., & Zaefarian, G. (2018). Dealing with endogeneity bias: The generalized method of moments (GMM) for panel data. Industrial Marketing Management, 71, 69-78.

United Nations. (n.d.). Human Development Reports. Retrieved August, 2020, from http://hdr.undp.org/en/content/human-development-index-hdi

Useem, M. (1984). The inner circle. New York: Oxford University Press

Uslaner, E. (2002). The moral foundations of trust. New York: Cambridge University Press.

Uslaner, E. M., & Brown, M. (2005). Inequality, trust, and civic engagement. American politics research, 33(6), 868-894.

Uslaner EM (2008a) Trust as a moral value. In: Castiglione D, Van Deth JW and Wolleb G (eds) The Handbook of Social Capital. Oxford: Oxford University Press, 101–121.

Uslaner EM (2008b) Where you stand depends upon where your grandparents sat: The inheritability of generalized trust. Public Opinion Quarterly 72(4): 725–740.

Uslaner, E. M. (2015). Measuring generalized trust: In defense of the 'standard'question. In Handbook of research methods on trust. Edward Elgar Publishing.

Van Buren III, H. J., Syed, J., & Mir, R. (2020). Religion as a macro social force affecting business: Concepts, questions, and future research. Business & Society, 59(5), 799-822.

Van Rijckeghem, C. and B.Weder, (2001) "Bureaucratic Corruption and the Rate of Temptation: Do Wages in the Civil Service affect Corruption, and by how Much?" Journal of Development Economics 2001 (65), 307–331.

Van Veen, K., & Kratzer, J. (2011). National and international interlocking directorates within Europe: corporate networks within and among fifteen European countries. Economy and Society, 40(1), 1-25.

Van Vu, H., Tran, T. Q., Van Nguyen, T., & Lim, S. (2018). Corruption, types of corruption and firm financial performance: New evidence from a transitional economy. Journal of Business Ethics, 148(4), 847-858.

Vargas-Hernández, J. (2009). The Multiple Faces of Corruption: Typology, Forms and Levels. SSRN Electronic Journal.

Vithessonthi, C., & Racela, O. C. (2016). Short-and long-run effects of internationalization and R&D intensity on firm performance. Journal of Multinational Financial Management, 34, 28-45.

Vitolla, F., Raimo, N., & Rubino, M. (2020). Board characteristics and integrated reporting quality: an agency theory perspective. Corporate Social Responsibility and Environmental Management, 27(2), 1152-1163.

Vogel, D. (1992), "The globalization of business ethics: why America remains distinctive", California Management Review, Vol. 36, pp. 30-49.

Wade, J., O'Reilly, C. A., III, & Chandratat, I. (1990). Golden parachutes: CEOs and the exercise of social influence. Administrative Science Quarterly, 35: 587-603.

Walker, A. G., Smither, J. W., & DeBode, J. (2012). The effects of religiosity on ethical judgments. Journal of business ethics, 106(4), 437-452.

Wallis, J. J. (2006). The concept of systematic corruption in American history. In Corruption and Reform: Lessons from America's economic history (pp. 23-62). University of Chicago Press.

Walsh, D., McCartney, G., McCullough, S., van der Pol, M., Buchanan, D., & Jones, R. (2015). Comparing levels of social capital in three northern post-industrial UK cities. Public Health, 129(6), 629–638

Watts, P. (2000). Corporate social responsibility: making good business sense. World Business Council for Sustainable Development.

Weaver, G. R., & Agle, B. R. (2002). Religiosity and ethical behavior in organizations: A symbolic interactionist perspective. The Academy of Management Review, 27(1), 77–97.

Web Abramo. (2008) How much do perceptions of corruption really tell us? Econ. Open-Access Open-Assess. 2:1–56

Webb, J., Schirato, T., & Danaher, G. (2001). Understanding bourdieu. Sage.

Weber Abramo. (2008) How much do perceptions of corruption really tell us? Econ. Open-Access Open-Assess. 2:1–56

Wei, S. J. (1997). Why is corruption so much more taxing than tax? Arbitrariness kills (No. w6255). National bureau of economic research.

Wei, S. J. (1999). Corruption in economic development: Beneficial grease, minor annoyance, or major obstacle?. World Bank Policy Research Working Paper, (2048).

Wei, S. J. (2000). How taxing is corruption on international investors?. Review of economics and statistics, 82(1), 1-11.

Wernerfelt, B. (1984). A resource-based view of the firm. Strategic management journal, 5(2), 171-180.

Wernerfelt, B. and A. Montgomery (1988). 'Tobin's q and the importance of focus in firm performance', American Economic Review, 78, pp. 246–250.

Westphal, J. D., & Khanna, P. (2003) Keeping directors in line: Social distancing as a control mechanism in the corporate elite. Administrative Science Quarterly, 48: 361-398.

White, L. (1967). The historical roots of our ecological crisis. Science, 155, 1203–1207.

Wilkes, R. E., Burnett, J. J., & Howell, R. D. (1986). On the Meaning and Measurement of Religiosity in Consumer Research, 14(1), 47–56.

Williams, C. C., & Martinez-Perez, A. (2016). Evaluating the impacts of corruption on firm performance in developing economies: An institutional perspective. International Journal of Business and Globalisation, 16(4), 401-422.

Williams, G., & Zinkin, J. (2010). Islam and CSR: A study of the compatibility between the tenets of Islam and the UN Global Compact. Journal of Business Ethics, 91(4), 519-533.

Willim, A. P. (2015). Price book value & tobin's Q: Which one is better for measure corporate governance. Eur. J. Bus. Manage, 7(27), 74-79.

Wincent, J., Anokhin, S. and Boter, H. (2009) "Network Board Continuity and Effectiveness of Open Innovation in Swedish Strategic Small-firm Networks," R&D Management 39: 55–67.

Windolf, P., & Beyer, J. (1996). Co-operative capitalism: corporate networks in Germany and Britain. British Journal of Sociology, 205-231.

Winter, G. (2000). A comparative discussion of the notion of 'validity' in qualitative and quantitative research. The qualitative report, 4(3), 1-14.

Winters and Weitz-Shapiro R. (2012) Lacking information or condoning corruption:When will voters support corrupt politicians? J. Compar. Polit. 45:418–36

Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. Journal of financial economics, 105(3), 581-606.

Woodberry, R. D., & Smith, C. S. (1998). Fundamentalism et al.: Con- servative Protestants in America. Annual Review of Sociology, 24, 25–56.

Woolcock, M. (1998). Social capital and economic development: Toward a theoretical synthesis and policy framework. Theory and Society, 27(2), 151–208.

Woolcock, M. and Narayan. (2000) "Social capital: Implications for development theory, research, and policy." The World Bank Research Observer 15: 225-249.

Wooldridge, J. M. (2016). Introductory econometrics: A modern approach. Nelson Education.

World Bank. (2020). WGI-Documents. Retrieved 29 July 2020, from https://info.worldbank.org/governance/wgi/Home/Documents

Wu, D., Lin, C., & Liu, S. (2016). Does community environment matter to corporate social responsibility?. Finance Research Letters, 18, 127-135.

Wu, X. U. N. (2005). Corporate Governance and Corruption: A Cross-Country Analysis, 18(2), 151–170.

Wulff, D. M. (1997). Psychology of religion: Classic and contemporary (2nd ed.). New York: Wiley and Sons.

Wry, T., Cobb, J. A., & Aldrich, H. E. (2013). More than a metaphor: Assessing the historical legacy of resource dependence and its contemporary promise as a theory of environmental complexity. Academy of Management annals, 7(1), 441-488.

Yamagishi, T. (2001). Trust as a form of social intelligence. In K. S. Cook (Ed.), Trust in society (pp. 121–147). New York, NY: Russell Sage Foundation.

Yamagishi, T. (2011). Trust: The evolutionary game of mind and society. Berlin: Springer. (Original work published (1998)).

Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. Motivation and Emotion, 18, 129–166.

Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. Motivation and Emotion, 18, 129–166.

Yang, I., Horak, S., & Kakabadse, N. K. (2021). An integrative ethical approach to leader favoritism. Business Ethics: A European Review, 30(1), 90-101.

Yermack D (1996) Higher market valuation of companies with a small board of directors Journal of Financial Economics 40: 185–211.

Yixiang, Z. (2011). Empirical research on ownership structure and corporate performance based on the perspective of dynamic endogeneity. Energy Procedia, 5, 1878-1884.

Young, S., & Thyil, V. (2008). A holistic model of corporate governance: a new research framework. Corporate Governance: The international journal of business in society.

Youngdahl, J. (2017). Corruption in Finance–The Role of the Investment Consulting and the Financial Auditing Industries. In The Handbook of Business and Corruption: Cross-Sectoral Experiences (pp. 279-303). Emerald Publishing Limited.

Zaheer A, Bell G. (2005) Benefiting from network position: firm capabilities, structural holes, and performance. Strategic Management Journal 26: 809–825.

Zajac, E.J. (1988), "Interlocking directorates as an interorganizational strategy: a test of critical assumptions.", Academy of Management Journal, Vol. 31, No. 2, pp. 428-438.

Zajac, E.J. and Westphal, J.D. (1996), "Director reputation, CEO-board power, and the dynamics of board interlocks", Administrative Science Quarterly, Vol. 41, No. 3, pp. 507-529.

Zak, P. J., & Knack, S. (2001). Trust and growth. The economic journal, 111(470), 295-321.

Zarembka, P. (1990). Transformation of variables in econometrics. In Econometrics (pp. 261-264). Palgrave Macmillan, London.

Zattoni, A., Dedoulis, E., Leventis, S., & Van Ees, H. (2020). Corporate Governance and Institutions-A Review and Research Agenda. Corporate Governance: An International Review.

Zattoni, A., & Cuomo, F. (2008). Why adopt codes of good governance? A comparison of institutional and efficiency perspectives. Corporate governance: an international review, 16(1), 1-15.

Zhou, H., Owusu-Ansah, S., & Maggina, A. (2018). Board of directors, audit committee, and firm performance: Evidence from Greece. Journal of International Accounting, Auditing and Taxation, 31, 20-36.

Zhou, J. Q., & Peng, M. W. (2012). Does bribery help or hurt firm growth around the world? Asia Pacifc Journal of Management,29(4), 907–921

Zolotoy, L., O'Sullivan, D., & Chen, Y. (2019). Local religious norms, corporate social responsibility, and firm value. Journal of Banking & Finance, 100, 218-233.

Zona, F., Boyd, B. K., & Takacs Haynes, K. (2018). Coordination, control, or charade? The role of board interlocks among business group members. Management Decision.

Zona, F., Gomez-Mejia, L. R., & Withers, M. C. (2018). Board interlocks and firm performance: Toward a combined agency–resource dependence perspective. Journal of Management, 44(2), 589-618.

Zuckerman, B. M. (2006). Our cheating hearts. US News & World Report, 6: 88.

Zyglidopoulos, S. (2016). Toward a Theory of Second-Order Corruption. Journal of Management Inquiry, 25(1), 3–10. https://doi.org/10.1177/1056492615579914