CRANFIELD UNIVERSITY

Soudabeh Bolourian

Analysing The Impact of Corporate Governance on Corporate Sustainability at Board Level

School of Management
Management and Leadership

PhD
Academic Year: 2016 - 2021

Supervisors: Dr Andrew Angus
Dr Leila Alinaghian

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ABSTRACT

Stakeholders are increasingly holding companies accountable for their environmental and social conduct. Organisations are engaging in, and incorporating, social and environmental issues in their business models, organisational structures and processes. The board of directors are responsible for the overall achievement and oversight of the organisation's aims and objectives. However, there is little detail on the board's role in monitoring and overseeing social and environmental issues in the corporate governance realm. This thesis addresses this void in several ways. First a systematic literature review provides a comprehensive synthesis of the extant literature investigating the board of director's role as a core element of corporate governance in corporate social responsibility (CSR) performance. Critical assessment of a sample of 67 studies from 18 highly regarded scholarly journals published between 1992 and 2020 uncovers similarities and inconsistencies regarding the effects of various board attributes on CSR-performance. The review reveals these attributes do not work in isolation, but interact with each other and the context in which they are embedded in shaping CSR-performance. Second, empirical analysis of a cross-industry sample of 2891 firm-year observations from 789 FTSE350 and S&P500 listed companies during a 4-year period (2013-2016) investigates the role of the board attributes in driving CSR-performance. The influence of the board-level CSR-committee – a board attribute that despite the increased prevalence of such committees on the board is largely understudied – in driving CSR-performance is explored. This contributes to the growing literature on CSR-committees by investigating their presence, composition and interactive effects with various board attributes in driving CSR-performance. Additionally, contributing to the recent call for investigating interactions among board attributes and their impact on CSR-performance. Finally a configurational approach is used to further explore board attribute interactions and combined impacts on CSR-performance. The results of a Qualitative Comparative Analysis reveals nine board configurations leading to high CSR-performance. This contributes to the argument that "one-size" does not fit all, and different boards can achieve the same results via unique configurations of attributes.

Keywords:

Corporate social responsibility performance; social performance; environmental performance; board of directors; configurational approach; CSR-committee; board configuration;

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TABLE OF CONTENTS

ABSTRACT i
ACKNOWLEDGEMENTS iii
LIST OF FIGURES viii
LIST OF TABLES ix
LIST OF EQUATIONS xi
LIST OF ABBREVIATIONS xii
1 . Introduction 1
1.1 - A Reflective Overview of the Thesis 1
1.2 - Research Rationale 8
1.3 - Mapping the Field 14
1.3.1 - Corporate Governance 14
1.3.2 - Corporate Sustainability 17
1.4 - Theoretical Underpinning 20
1.5 - Research Aim and Objectives 23
1.6 - Research Methodology 23
1.6.1 - Sample and Data for Empirical papers 24
1.6.2 - Paper 2 Methodology 27
1.6.3 - Paper 3 Methodology 27
1.7 - Summary of Contributions 28
1.8 - Publications, Conference Presentations, and Future plans 30
1.9 - Thesis Structure 32
2 . The Impact of Corporate Governance on Corporate Social Responsibility at the Board-level: A Critical Assessment 34
2.1 - Introduction 35
2.2 - Theoretical Background 38
2.3 - Methodology 39
2.4 - Director Characteristic Attributes and CSR-performance 42
2.4.1 - Gender 42
2.4.2 - Knowledge, Skills, Expertise and Experience 50
2.4.3 - Age 56
2.4.4 - Tenure 59
2.5 - Board Structure Attributes and CSR-performance 61
2.5.1 - Board Independence 61
2.5.2 - CEO-Duality 68
2.5.3 - Board Size 72
2.5.4 - Board Committees 77
2.5.5 - Board Attribute Interactions 80
2.6 - Underlying Theories 83
2.7 - Discussion and Suggestions for Future Research 87

2.7.1 - Reasons for inconsistencies in the effects of board attributes on CSR-performance 87
2.7.2 - Directions for Future Research 89
2.8 - Theoretical and Practical Implications 90
2.9 - Conclusion 91
3 . Exploring the Role of Board-level Corporate Social Responsibility Committees in Corporate Social Responsibility Performance: An Empirical Investigation 93
3.1 - Introduction 94
3.2 - CSR-Committees and CSR-Performance 96
3.3 - Theoretical Framework and Hypotheses Development 98
3.3.1 - CSR-committees as a Board Attribute 98
3.3.2 - The Presence of Female-directors and NEDs on the CSR-committee 101
3.3.3 - Interaction of Board and Committee Attributes 103
3.4 - Methodology 105
3.4.1 - Sample and Data 105
3.4.2 - Analysis 106
3.4.3 - Measurements 107
3.5 - Results and Findings 109
3.6 - Discussion 119
3.6.1 - CSR-committee as a Board Attribute 119
3.6.2 - The Composition of the CSR-committee 121
3.6.3 - The Interaction of Board and CSR-committee attributes 122
3.7 - Conclusion and Directions for Future Research 122
4 . The Impact of Board Attributes on Corporate Social Responsibility Performance: A Configurational Approach 125
4.1 - Introduction 126
4.2 - Board Attributes and CSR-Performance 130
4.2.1 - Director Characteristics and CSR-performance 131
4.2.2 - Board structure and CSR-performance 132
4.2.3 - Board Attributes, CSR-performance and Country 134
4.3 - Data and Method 136
4.3.1 - Sample and Data 136
4.3.2 - Method and Calibration 136
4.4 - Data analysis and results 141
4.4.1 - Configurational analysis 141
4.4.2 - Necessity analysis 141
4.4.3 - Sufficiency analysis 141
4.4.4 - Supplement analysis 144
4.5 - Discussion 144
4.5.1 - Committee-boards 146

4.5.2 - Experience-boards 149
4.5.3 - Hybrid-boards 151
4.6 - Conclusion and Directions for Future Research 154
5 . Conclusion 157
5.1 - Linking the Papers 158
5.2 - Practical Implications 163
5.3 - Limitations and Directions for Future Research 164
5.4 - Personal Reflection 166
REFERENCES 170
APPENDICES 190
Appendix A . Chapter 1 190
Appendix B . Chapter 2 192
Appendix C . Chapter 3 193
Appendix D . Chapter 4 198

LIST OF FIGURES

Figure 1-1: Relevant literature domains 2

Figure 1-2: Overall research structure 13

Figure. 1-3: Map of relevant literature domains 14

Figure. 1-4: Three dimensions of sustainability (Dyllick and Hockerts, 2002)... 18

Figure. 1-5: The Relationship between Corporate sustainability and CSR (Source: Erasmus University, Wempe & Kaptein as cited by Van Marrewijk 2003) 19

Figure. 2-1: Research Framework 37

Figure. 2-2: Journals included in the Review 39

Figure. 2-3: Literature Identification and Coding Process 41

Figure. 3-1: The conceptual model on the role of CSR-committees as an attribute of the board 101

Figure. 3-2: The conceptual model on the role of CSR-Committee composition 103

Figure. 3-3: The conceptual model on the role of board and CSR-committee attribute interactions 104

Figure. 4-1: Impact of Board Attributes Configuration on CSR Performance.. 135

LIST OF TABLES

Table. 1-1: Board Attribute categorisation in this study 16

Table. 1-2: Theories Applied in the Thesis 22

Table. 1-3: Overall View of Sample 26

Table. 1-4: Social and Environmental Categories used 27

Table. 1-5: Summary of publications, presentations and future plans 31

Table. 2-1: The Impact of Director Gender Attributes on CSR-performance 44

Table. 2-2: The Impact of Director Knowledge, Skills, Expertise and Experience on CSR performance 52

Table. 2-3: The Impact of Director Age on CSR performance 57

Table. 2-4: The Impact of Director Tenure on CSR performance 60

Table. 2-5: The Impact of Board Independence on CSR performance 63

Table. 2-6: The Impact of CEO-Duality on CSR performance 69

Table. 2-7: The Impact of Board Size on CSR-performance 73

Table. 2-8: The Impact of Board Committees on CSR-performance 78

Table. 2-9: The Impact of Board Attribute Interactions on CSR-performance .. 81

Table. 2-10: Theory Used in Research explaining the impact of Board attributes on CSR-performance 85

Table. 3-1: Overall view of sample 106

Table. 3-2: Variable Explanation 109

Table. 3-3: Descriptive statistics of the variables 111

Table. 3-4: Correlation matrix for all variables used to test hypotheses 1 and 2 112

Table. 3-5: Correlation matrix for all variables used to test hypotheses 3 to 6 113

Table. 3-6: The impact of the CSR-committee 115

Table. 3-7: The impact of CSR-committee attributes on CSR-performance ... 118

Table. 4-1: Overall View of Sample 136

Table. 4-2: Set Explanation 137

Table. 4-3: Descriptive statistics and calibration rules for set-membership 140

Table. 4-4: Distinct configuration of board attributes leading to high CSR-performance 143

LIST OF EQUATIONS

Equation 3-1: 114

Equation 3-2: 116

LIST OF ABBREVIATIONS

CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
ESG	Environment, Social and Governance
KLD	Kinder, Lydenberg, and Domini
NED	Non-Executive Director

1 . Introduction

1.1 - A Reflective Overview of the Thesis

Corporate Social Responsibility (CSR) has become a concept of growing significance to both scholars and practitioners alike (Endrikat et al., 2020; Flammer, 2013; Ioannou and Serafeim, 2015). As stakeholders increasingly hold companies accountable for their environmental and social conduct, companies engage more and incorporate social and environmental concerns in their business models, organisational structures and processes (Burke, Hoitash and Hoitash, 2019; Klettner, Clarke and Boersma, 2014; Kolev et al., 2019). The achievement and realisation of social and environmental objectives are often investigated through the notion of CSR-performance (e.g. Galbreath, 2017; Harjoto, Laksmana and Lee, 2015). By adopting various indices, researchers examine CSR-performance in terms of the company's social performance, environmental performance and/or the overall CSR-performance: the combination of the company's social and environmental performance (Bai, 2013; Galbreath, 2016; Oh, Chang and Jung, 2019; Ortiz-de-Mandojana and Aragon-Correa, 2015). Scholars increasingly recognise that director characteristics and board structure (board attributes) play a vital role in shaping organisational performance, including social and environmental issues (Johnson, Schnatterly and Hill, 2013). Although empirical findings appear to agree regarding the importance of board attributes in shaping CSR-performance, they demonstrate distinct inconsistent results, raising many questions and opening the door for many interesting research pathways.

The topic of this PhD originated from my personal interest in corporate governance and sustainability, my MBA project and work experience. My MBA project helped me realise social and environmental issues were acknowledged, but not directly applied in organisations' main corporate governance conversations. Literature was suggesting possible connections between these fields, which further intrigued me. Therefore, the idea of bridging the gap between these two topics became both fascinating and vital.

The main literature domains for this research were set as 1) Corporate Governance and 2) Corporate Sustainability, with the focus being the overlap of these two domains.

As the research developed, by exploring the related literature, new elements started to appear, and the need to explore other relevant sub-fields such as the following emerged: a) Board of directors b) Board-level committees, and c) CSR-performance. Therefore, following prior studies (Chang et al., 2017; Harjoto, Laksmana and Lee, 2015; Mallin and Michelon, 2011), I decided the research needs to be positioned at the intersection of the domains of: CSR-performance and board of directors (Figure. 1-1). This figure will be revisited in section 1-3, where the main domains, related sub-fields, concepts, terminology and their role in this thesis will be explored and discussed in detail.

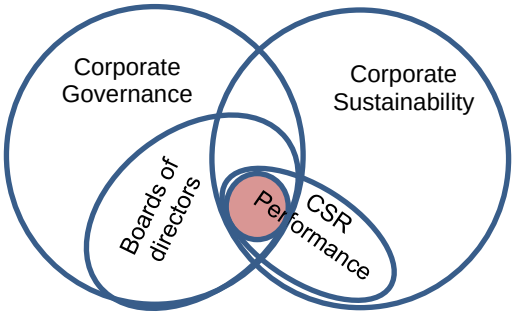


Figure 1-1: Relevant literature domains

Hence, by exploring the above-mentioned inconsistencies, the overall aim of this thesis is to investigate how board attributes impact the achievement and realisation of organisations' social and environmental goals. In other words, exploring the role of the board of directors in shaping CSR-performance. Therefore, the overarching research question can be stated as:

What is the role of the board of directors in shaping CSR-performance?

I have come to realise how important the first stages of the PhD are, particularly positioning the study and making sure the research is set on a solid foundation. I started my PhD more than two months later than my cohort and at the time my main aim was to catch up. Looking back now, during the initial planning stages, I

would not have been so impatient to move forward. Making sure the study is positioned correctly in the literature is critical to building the right search strings, which in turn are needed to conduct a comprehensive literature review, without having to go back to rethink and redo parts. Patience is the key at this stage.

To answer the overarching research question first a systematic literature review is conducted in chapter 2, providing a comprehensive synthesis of the extant literature investigating the board of director's role as a core element of corporate governance in corporate social responsibility (CSR) performance. Critical assessment of a sample of 67 studies from 18 highly regarded scholarly journals published between 1992 and 2020 uncovers similarities and inconsistencies regarding the effects of various board attributes on CSR-performance. For example, although the impact of female-directors on CSR-performance is reported as positive by a significant body of literature (e.g. Chams and García-Blandón, 2019; Galbreath, 2018; Nadeem, Gyapong and Ahmed, 2020), some studies have demonstrated a negative or non-significant impact (e.g. Harjoto, Laksmana and Lee, 2015; Olthuis and van den Oever, 2020). Similarly, the literature has reported a positive (e.g. Burke, Hoitash and Hoitash, 2019; Choi, Lee and Park, 2013), negative or non-significant (e.g. Deckop, Merriman and Gupta, 2006; Galbreath, 2018) relationship between board independence (the percentage/number of non-executive directors on the board) and CSR-performance. Inconsistencies have also been observed for CEO-duality (joint CEO and chair), where some studies reported a positive effect (e.g. Moussa et al., 2020) with others demonstrating negative (e.g. Naciti, 2019) or non-significant results (e.g. Hafsi and Turgut, 2013; Nadeem, Gyapong and Ahmed, 2020). The similarities and inconsistencies regarding the effects of various board attributes are discussed in detail in chapter two of the thesis.

The review reveals these attributes do not work in isolation. They interact with each other and the context in which they are embedded in shaping CSR-performance. Furthermore, the review uncovers considerable disparity in conceptualisations, theoretical frameworks, the use of measurements and contexts across studies.

The majority of studies exploring the impact of boards on CSR-performance have investigated the individual effects of board attributes (e.g. Adams, Hoejmose and Kastrinaki, 2017; Francoeur et al., 2019; Kassinis and Vafeas, 2002; Moussa et al., 2020). However, only relatively recently a limited number of studies have started exploring the interaction of board attributes. Such studies argue board attributes interact with each other and the context in which they are embedded in forming CSR-performance, hence they need to be investigated together (Galbreath, 2017; Homroy and Slechten, 2019; Hussain, Rigoni and Orij, 2018; McGuinness, Vieito and Wang, 2017). When it comes to understanding the role of the board in shaping CSR-performance, there are many unknown areas such as whether looking at only two attribute interactions at a time can provide a comprehensive picture. Also, finding which attributes interact with each other and need to be explored together should be considered. Hence, the many existing questions and uncertainty in this fast-growing area of interest, both from an academic and practical perspective (Endrikat et al., 2020; Flammer, 2013; Ioannou and Serafeim, 2015; Unruh et al., 2016; Wang et al., 2016), has made exploring the role of board attributes in shaping CSR-performance an even more rewarding area of research.

From the findings of the literature review, two empirical areas for future research – the role of board-level CSR-committees and the configuration of boards in shaping CSR-performance – were identified with the aim of providing answers to the overarching research question. Hence chapters 3 and 4 of the current thesis focus on exploring these areas. The sample for these empirical chapters – companies listed on the FTSE350 (FTSE 100 and FTSE 250) and S&P500 – was also built based on findings of the literature review.

Researchers have demonstrated the country and industry where the company is active influences the impact of board attributes on CSR-performance (Byron and Post, 2016; Chang et al., 2017; Endrikat et al., 2020; Harjoto, Laksmana and Lee, 2015; Jia and Zhang, 2013). The sample used in chapters 3 and 4 is multi-industry, enabling exploration and comparison of companies operating in two countries with different governance systems, rules, regulations and corporate

governance guides. I chose the UK and USA who both follow the Anglo-American corporate governance system, as opposed to the Continental European/Japanese stakeholder-oriented corporate governance systems (Aguilera et al., 2006; Tricker, 2011) for two main reasons: First, as both follow the same overall corporate governance system, comparing and contrasting results would be possible without different corporate governance systems causing more doubts in the differences. One of the main similarities being primary focus on the board of directors and their fiduciary duties to shareholders (Aguilera et al., 2006). Second, it has been argued that comparative studies looking at the UK and USA are limited and highly neglected (Aguilera et al., 2006; Toms and Wright, 2005), which provides a further chance to make possible contributions to the current area of research. Although the overall corporate governance system for both countries is similar, their codes, guidelines and practices of corporate governance differ at many levels including the board (Aguilera et al., 2006), Furthermore, it has been argued that board composition in the corporate governance realm depends on the country where the company operates (Aguilera, 2005). For instance in accordance with corporate governance guidelines, UK companies mostly appoint separate CEO and board-chairs, this is not the case in the USA were it is common for this position to be occupied by the same person (Aguilera et al., 2006; Hafsi and Turgut, 2013). In this thesis, such differences in board attributes were controlled and in places provisions were made to minimise obtaining false results in the empirical chapters. For example, since only 15 cases in the FTSE350 sample had a joint CEO and board-chair, in these companies this condition was removed from the Qualitative Comparative Analysis (QCA) used for determining the configurations leading to high CSR-performance in chapter 4. Relevant detailed discussion and explanations around the differences in board attributes and their implications on the current research are provided in the methodology and discussion sections of both chapters 3 and 4.

The size of the sample used in this thesis is relatively large - covering 2,891 year-companies with 347,309 different variables. The initial data collection was done manually, extracting data from three relevant databases, and was very time

consuming. I had not anticipated the amount of time it would need while designing the sample. The final result is a useful database used for both empirical papers in this thesis (in different ways), and with the potential use for further related research. There is no doubt in my mind that I have learned a lot from this experience and grown as a researcher. From a technical aspect I have had to learn how to use three different software packages to manage and work with the data, which added to my IT skills and knowledge. More importantly I have learned the value of resilience in research. Everything will not always go as planned and as a researcher you have to be ready to make changes to be able to progress. However, knowing what I do now, of all the issues concerning developing and managing such a large sample, I would have rethought this part of the research. In hindsight, I may have leaned towards a less quantitative heavy research, by collecting quantitative data on only two years. Then supplementing the results obtained from the quantitative analysis with qualitative data, such as interviewing board directors to acquire a more in depth understanding of the quantitative analysis. In future I will rethink the timeframe and necessary strategies before trying to develop such a large sample for research without the needed resources. I don't regret having gone through this process, as what I have taken away from this experience definitely outweighs the difficulties.

In chapter 3 empirical analysis starts investigating the board attributes' role in shaping CSR-performance. The influence of the board-level CSR-committee – a board attribute that despite increased prevalence of such committees on the board is largely understudied – in shaping CSR-performance is explored. This contributes to the growing literature on CSR-committees by investigating their presence, composition and interactive effects with some board attributes in shaping CSR-performance. Additionally, contributing to the recent call for investigating interactions among board attributes and their impact on CSR-performance (Bolourian, Angus and Alinaghian, 2021a; Endrikat et al., 2020; Homroy and Slechten, 2019). For instance in this chapter it was found that the positive effect of female-CEOs on CSR-performance appears to be stronger for boards with a CSR-committee. Additionally, the interaction of female-CEOs and non-executive members of CSR-committees has a positive impact on CSR-

performance. The results further indicated that the presence of female-directors on the CSR-committee positively impacts CSR-performance. Specifically, the findings in this chapter extend the understanding of the role of CSR-committees in CSR-performance by investigating the interactive effects of their presence and composition with various board attributes. Furthermore, these insights can guide companies in deciding the set-up and composition of CSR-committees in line with other board attributes to achieve their social and environmental objectives.

Finally, in chapter 4 a configurational approach is used to further investigate board attribute interactions and combined impacts on CSR-performance. Alternative new board archetypes based on distinct configurations of eight board attributes (largely explored individually in previous literature) leading to high CSR-performance are identified and explored. Their formation is shaped based on the main differences seen among them, leading to three distinct archetypes: committee-boards, experience-boards and hybrid-boards. The board attributes used in this chapter are the most explored board attributes identified in the literature review (chapter 2): Gender, Experience, Age, Tenure, board independence (the percentage/number of non-executive directors), CEO-duality, board size and the existence of CSR-committees.

Results of the configurational approach agrees with the argument that “one-size” does not fit all, and different boards can achieve the same results via unique configurations of attributes. Furthermore, by exploring FSTE350 and S&P500 companies separately, this chapter explored the differences and similarities between companies operating in two countries with slightly different rules and regulations, reaching the conclusion that geographical context and corporate governance guidance seem to impact board configuration. To the best of my knowledge this is the first study to introduce and use the configurational theory to explore and investigate the impact of corporate governance on corporate sustainability.

Additionally, the results from both empirical chapters demonstrate the findings from the literature review that board attributes do not work in isolation, but interact with each other in shaping CSR-performance. Hence, contributing to another

growing line of literature that argues corporate governance mechanisms need to be investigated in "bundles" (Aguilera, Bell and Filatotchev, 2014; García-Castro, Aguilera and Ariño, 2013; Greckhamer et al., 2018), and looking at each mechanism individually will not provide an accurate or full picture.

Although the overall theme and dominant field of my research is the same, the outcome and final results are different from what I imagined they would be when I started 4 years ago. I have come to realise in the dynamic world of academia, no research is ever really finished. There will always be areas for more development and understanding, and this is what I now find so attractive. However, my motivation for doing this research has remained the same throughout my PhD journey: to align the mind and the heart in an organisation. The mind referring to Corporate Governance as to me it represents principle, order and logic. The heart being Corporate Sustainability, as I believe it consists of more emotionally based factors and indicators. Now that my PhD journey is coming to an end it gives me great pleasure knowing I have been able to make small contributions to this interesting and vital research area in the form of three papers in the current thesis. The literature review (chapter 2) has been published (Bolourian, Angus and Alinaghian, 2021a) and the paper using a configurational approach to explore board attribute interactions and combined impacts on CSR-performance (chapter 4) has been given a decision of *revise and resubmit* by the Journal of Business Research. Many more questions needing answers have risen, which is normal and makes focusing on this area in future even more interesting.

1.2 **- Research Rationale**

The board of directors is a central component of corporate governance (Aguilera, 2005; Eccles, Ioannou and Serafiem, 2011), and are argued to be accountable for the overall achievement and oversight of the organisation's aims and objectives (Eccles, Ioannou and Serafeim, 2014; Elkington, 2006; Harjoto, Laksmana and Lee, 2015; Jamali, Safieddine and Rabbath, 2008; de Villiers, Naiker and van Staden, 2011). When exploring the board of directors, researchers often use the agency theory and resource dependence theory

together (for example: Bear et al. 2010; de Villiers et al. 2011; Dixon-Fowler et al. 2015; Mallin & Michelon 2011). The reason for this approach may lie on the basis that boards have two main functions, from the agency perspective to oversee and control, and from the resource dependence perspective to increase access to a variety of resources (Hillman and Dalziel, 2003)

Where environmental and social issues are primary concerns of the organisation, the board of directors will be responsible for such issues in the same manner as other organisational aims and objectives (Eccles, Ioannou and Serafeim, 2014; Elkington, 2006). Some studies have even argued that the board are pivotal to achieving and promoting environmental and social aims and objectives (Jamali, Safieddine and Rabbath, 2008). Organisations are beginning to understand that improvement to social and environmental conduct is not just expected by stakeholders, but creates value for the business too (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Klettner, Clarke and Boersma, 2014; Kolev et al., 2019; White, 2012) Simultaneously, boards are becoming increasingly more involved in social and environmental strategy development. Also, they are overseeing and ensuring these strategies are implemented by the organisation (Klettner, Clarke and Boersma, 2014). Realisation and fulfilment of the social and environmental aims and objectives are often explored through the concept of corporate social responsibility (CSR) performance (e.g. Galbreath, 2017; Harjoto, Laksmana and Lee, 2015). By using different indices, researchers have investigated CSR-performance in terms of the company's social performance (e.g. Bai, 2013; Mallin and Michelon, 2011), environmental performance (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Ortiz-de-Mandojana and Aragon-Correa, 2015; Rodrigue, Magnan and Cho, 2013) and/or the overall CSR-performance, which is the combination of both (e.g. Galbreath, 2016; Oh, Chang and Jung, 2019). Simultaneously, stakeholders are putting more pressure on companies to take responsibility for their social and environmental activities (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Kolev et al., 2019). Consequently, more researchers are focusing on social and environmental issues (Endrikat et al., 2020; Flammer, 2013). Organisations are increasingly engaging in and implementing such issues in their business models,

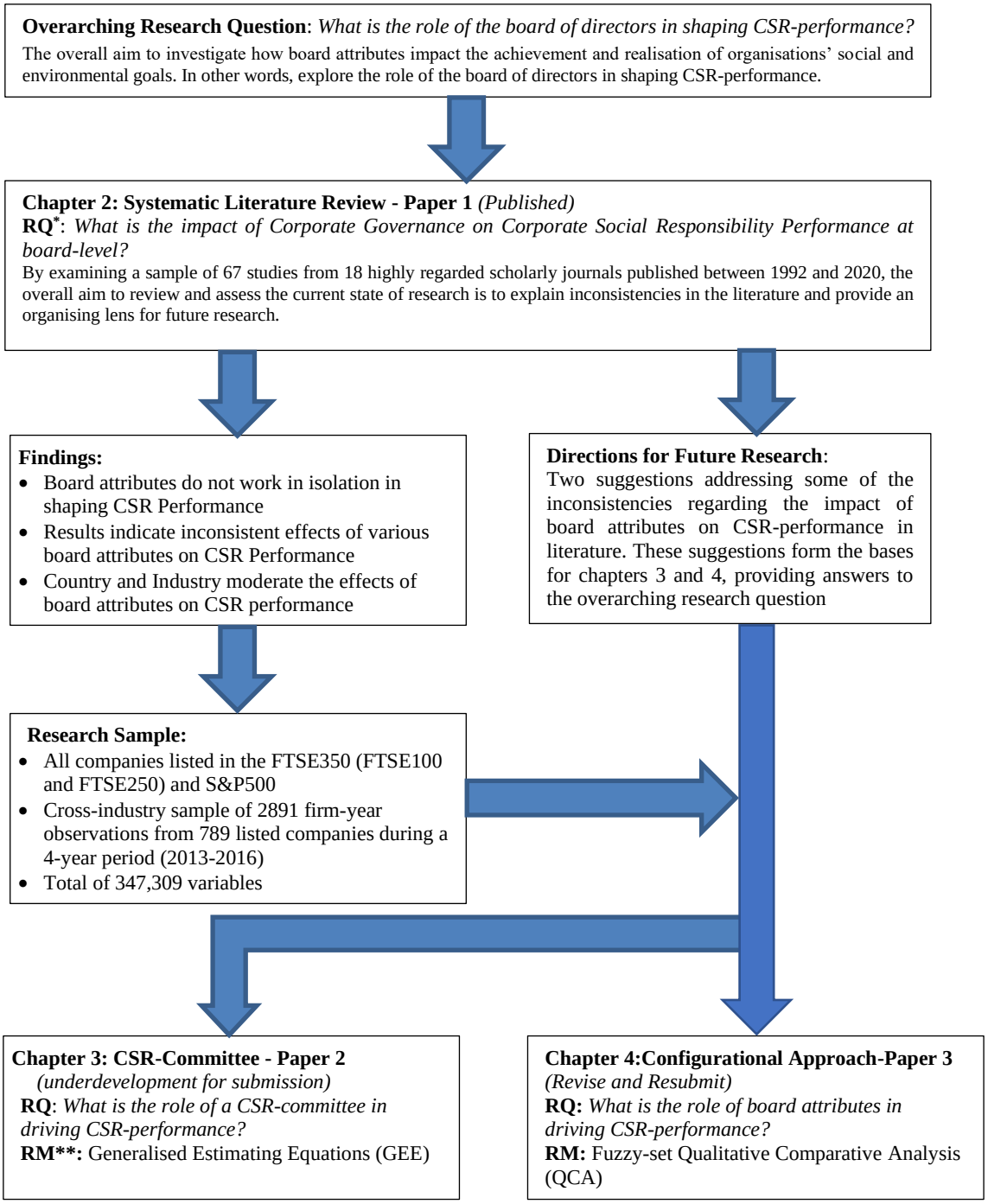
organisational structures and processes (Ioannou and Serafeim, 2015; Unruh et al., 2016; Wang et al., 2016).

A systematic literature review of 67 studies from 18 highly regarded scholarly journals published between 1992 and 2020 (conducted as part of this thesis and detailed in chapter 2) highlighted that the crucial role of board attributes in shaping organisational outcomes in general and CSR in particular, has progressively been recognised by researchers (Harjoto, Laksmana and Lee, 2015; Johnson, Schnatterly and Hill, 2013). Specifically, the critical impact of board attributes in terms of director characteristics (such as gender, age, expertise etc.) and different structures used by boards (such as independence, committees, CEO-duality etc.) on CSR, has been evidenced in prior studies (Crifo, Escrig-Olmedo and Mottis, 2018; Endrikat et al., 2020; Jain and Jamali, 2016; Marquis and Lee, 2013; Oh, Chang and Jung, 2019; Walls and Hoffman, 2013). The literature review demonstrated that the majority of studies exploring the impact of boards on CSR-performance have investigated the individual effects of board attributes (for example Adams, Hoejmose and Kastrinaki, 2017; Francoeur et al., 2019; Kassinis and Vafeas, 2002; Moussa et al., 2020). However, there is disagreement among scholars on the optimal board structures or director characteristics for shaping CSR-performance (Bolourian, Angus and Alinaghian, 2021a; Endrikat et al., 2020; Johnson, Schnatterly and Hill, 2013). The review also found that, more recently a limited number of studies have started exploring the interaction of board attributes. Such studies argue board attributes interact with each other and the context in which they are embedded in forming CSR-performance, hence they need to be investigated together (Galbreath, 2017; Homroy and Slechten, 2019; Hussain, Rigoni and Orij, 2018; McGuinness, Vieito and Wang, 2017). These studies, have thus far mainly used general linear regression models to investigate the impact of two board attributes at a time. By building on these findings, and concentrating on more than two attributes simultaneously, a new line of research was identified in the literature review with regard to investigating the combinations of multiple interrelated board attributes and their impact on CSR-performance (chapter 4). Exploring different configurations of board attributes can be seen as a step towards addressing

some of the inconsistencies found in the review around the impact of board attributes on CSR-performance. At the same time the effectiveness of a “one-size-fits-all” board governance approach is disputed (Dowell, Shackell and Stuart, 2011; Federo et al., 2020; García-Castro, Aguilera and Ariño, 2013; Veltrop et al., 2018), indicating more than one board composition can lead to achieving the aims and goals of the board. So, the need to look at different board configurations considered as “causal recipes” (Ragin, 2008) that achieve the same CSR-performance outcomes is further emphasised.

Additionally, the review highlighted that some board attributes such as the CSR-committee are less explored than others (Johnson, Schnatterly and Hill, 2013; Kesner, 1988; Kolev et al., 2019). The majority of important decisions made by a company’s board of directors are made in smaller groups or committees (Dixon-Fowler, Ellstrand and Johnson, 2017; Kesner, 1988; Kolev et al., 2019; Paine, 2014). The benefits of using committees have been noted from as early as 1973 by Bacon and Brown. Compared to boards, committees often lead to more input and debate from members (Kesner, 1988; Kolev et al., 2019; Paine, 2014). Specifically, scholars have argued that by delegating a specific task to fewer decision makers, the efficiency of the board will increase (Burke, Hoitash and Hoitash, 2019; Kolev et al., 2019; Spira and Bender, 2004). As stakeholders increasingly hold companies responsible for their environmental and social conduct (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Kolev et al., 2019; White, 2012), more and more companies are choosing to set up board-level committees to enable more focused and specialised attention to such issues. (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017; Kolev et al., 2019). With it being argued that establishing board-level CSR-committees allows companies to demonstrate their social and environmental accountability to both internal and external stakeholders (Burke, Hoitash and Hoitash, 2019; Mallin and Michelon, 2011; Walls, Berrone and Phan, 2012). Furthermore, such committees have been identified as one of the significant factors for successful implementation of CSR in organisations (Klettner, Clarke and Boersma, 2014). Whilst the role of CSR-committees as an attribute of the board shaping CSR-performance is acknowledged in the literature, evidence

does not go beyond indicating the mostly positive performance implications of their presence (Burke, Hoitash and Hoitash, 2019; Hussain, Rigoni and Orij, 2018; Walls, Berrone and Phan, 2012). Therefore, despite the increased prevalence of CSR-committees on organisation boards, little is known on how committee attributes (structure and member characteristics), and their interaction with other board attributes influence CSR-performance (Burke, Hoitash and Hoitash, 2019; Endrikat et al., 2020). This has been explored in detail in chapter 3 of this thesis, where three models are used to analyse the direct and interactive impact of committee and board attributes on CSR-performance. Figure 1-2, demonstrates the overall research structure.



* RQ: Research Question
** RM: Research Method

Figure 1-2: Overall research structure

As can be seen in the above figure, findings and areas identified for further research in the systematic literature review set the foundation and basis for the current research. In other words, with the goal of better understanding the role of

the board of directors in shaping CSR-performance, this research sets to explore and investigate the results and findings of the literature review

1.3 - Mapping the Field

The main literature domains for this research were set as 1) Corporate Governance and 2) Corporate Sustainability, with the focus being the overlap of these two domains.

As the research developed, by exploring the related literature, new elements started to appear, and the need to explore other relevant sub-fields such as the following emerged: a) Board of directors b) Board-level committees, and c) CSR-performance. Therefore, following prior studies (Chang et al., 2017; Harjoto, Laksmana and Lee, 2015; Mallin and Michelon, 2011), it was decided the research would be positioned at the intersection of the domains of: CSR-performance and board of directors (Figure. 1-1).

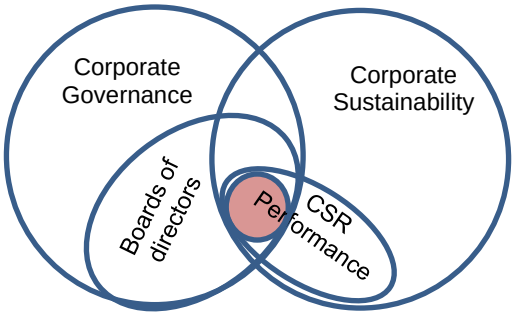


Figure. 1-3: Map of relevant literature domains

The main domains, related sub-fields, concepts, terminology and their role in this thesis will be explored and discussed in the next section.

1.3.1 - Corporate Governance

Beginning with Berle and Means (1932), the rich literature of corporate governance has provided various definitions for this concept. It is widely accepted to contain mechanisms for coordinating managers' decisions and actions with shareholders' desires (Aguilera and Jackson, 2010; Core, Guay and Larcker, 2003; Davis, 2005; Jensen and Meckling, 1976; Shleifer and Vishny, 1997;

Tihanyi, Graffin and George, 2014). However, it can also be viewed as a setting for trust and ethics between the corporate sector and stakeholders (Aras and Crowther, 2008). The demand for greater transparency from companies, and accountability to shareholders and other stakeholders such as customers, is another reason for emphasising the importance of corporate governance (Bushman and Smith, 2001). Therefore, it has been argued that in a broader conceptualisation of corporate governance, it emphasises on the organisation's responsibility towards all stakeholders (Macmillan et al., 2004).

The board of directors, as one of the lead players in corporate governance (Aguilera, 2005; Eccles, Ioannou and Serafiem, 2011), are one of the main focuses of studies in this field (Kumar and Zattoni, 2014). They are responsible for providing advice and monitoring the organisation's aims and objectives (Eccles, Ioannou and Serafeim, 2014). When exploring boards, the role of structure and demographics have been investigated (Daily, Dalton and Cannella, 2003). The terminology used by different studies to address various board attributes differs across the literature. Some studies have used "board characteristics" to address a broad range of attributes such as independence, CEO-duality (joint CEO and chair), director tenure, board size, director's experience and expertise (Desender et al., 2013; de Villiers, Naiker and van Staden, 2011). Others have used "board structure" when exploring attributes such as board size, CEO-duality, board-level committees, average director age, annual director pay and proportion of non-executive directors (Aguilera, 2005). Some studies have used different terminology to differentiate between the various attributes. For instance Mallin and Michelon (2011) used "board composition" when exploring director independence, "board diversity" for proportion of female-directors on the board and "board leadership" in regards to CEO-duality. Alternatively, Wand and Coffey (1992) have used "board composition" to investigate the ratio of executive to non-executive directors, percentage of stock owned by executive directors, percentage of stock owned by non-executive directors (NEDs) and proportion of female-directors. Crifo et al. (2018) have used the same terminology to explore board independence and director expertise. When exploring the impact of boards on CSR-performance, it

has been suggested diversity within the board and CSR-performance is moderated by diversity of the board. Diversity within the board relates to demographic characteristics of directors (such as director gender, ethnicity, age, tenure and experience), and diversity of the board relates to structural diversity (e.g. board independence, CEO-duality, size and stock ownership) (Hafsi and Turgut, 2013). This indicates that to understand the board attributes fully in shaping CSR-performance, there is a need to differentiate between demographic characteristics and structure characteristics.

Therefore, to stop any possible confusion regarding terminology and in accordance with Hafsi and Turgut (2013), in this study board attributes are separated into two distinct categories: director characteristic attributes and board structure attributes (Table. 1-1). Similar to findings by Hafsi and Turgut (2013), another benefit of such a categorisation is the possibility of identifying nuances in the research area that might otherwise go unnoticed.

Table. 1-1: Board Attribute categorisation in this study

Board Structure	Director Characteristics
Non-executive directors (NEDs)	Director gender
CEO-duality	Director age
Board-size	Director tenure
Board-level committee	Director experience

The synergies and interrelationship between corporate governance and CSR has long been acknowledged in the literature (Aras and Crowther, 2009; Jamali, Safieddine and Rabbath, 2008; Unerman and Bennett, 2004). It has been suggested that CSR is a development of good governance (Harjoto and Jo, 2011; Jo and Harjoto, 2012), where companies with better governance are often found to be more socially responsible (Ntim and Soobaroyen, 2013). Furthermore, the need to incorporate CSR at board-level has been emphasised in the prior

literature (Aguilera et al., 2006; Elkington, 2006; Jamali, Safieddine and Rabbath, 2008; Paine, 2014). This is particularly important, as the manner in which firms are governed impacts internal stakeholders such as managers or shareholders, and also influences their external stakeholders (Aguilera and Jackson, 2010). However, to fully understand CSR one needs to first look at corporate sustainability.

1.3.2 - Corporate Sustainability

Corporate sustainability generally refers to company activities that take every dimension of a business operation on economic, environmental and social levels into consideration (van Marrewijk, 2003). This definition is consonant with the concept of the accounting framework, triple bottom line (TBL) coined by John Elkington (1998) that merges three elements of performance: social, environmental and economic.

The starting point for society awareness regarding corporate sustainability is the Brundtland report (1987) and the concept of sustainability development: ‘‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’’. By the turn of the century sustainability had become a common topic in senior managers and directors’ conversation (Grayson and Kakabadse, 2013).

However, sustainability is a contested concept, interpreted differently by different people (Aras and Crowther, 2009). To complicate matters, the word sustainable has been used in management literature to imply business continuity for a long time (for instance in Reed and DeFillippi, 1990). Also, an analysis of statements by organisations reveals the word sustainability often means the organisation will continue to function in the future (Aras & Crowther 2009). Dyllick and Hockerts (2002) suggested a definition for corporate sustainability that very closely resembles the Brundtland report’s definition used for sustainability development. They argued that to integrate corporate sustainability at a business level it should be defined as: “meeting the needs of a firm’s direct and indirect stakeholders. . . without compromising its ability to meet the needs of future stakeholders as well” (Dyllick and Hockerts, 2002, p.131). They went on to emphasise that

sustainability is only possible if stakeholders' social, environmental and economic needs are met simultaneously (Figure. 1-2).

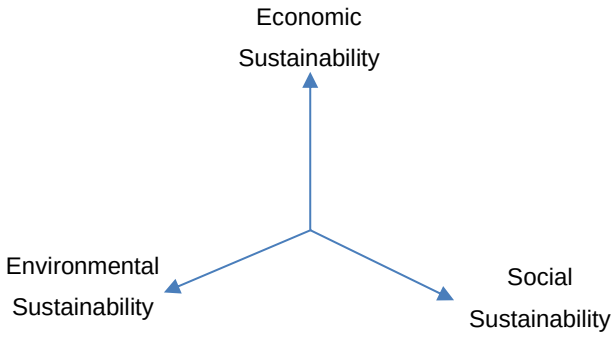


Figure. 1-4: Three dimensions of sustainability (Dyllick and Hockerts, 2002)

A terminology often used interchangeably with corporate sustainability in academic literature and business reports is corporate social responsibility (CSR) (Aras and Crowther, 2009; Landrum and Ohsowski, 2018; Montiel, 2008). Although both typically refer to company activities that take social and environmental concerns into consideration, a distinction should be considered (van Marrewijk, 2003; Montiel, 2008). Corporate sustainability has been viewed as the "ultimate goal" and CSR as an approach for companies to tackle the three aspects of sustainability – economic, social and environmental. In other words, the stage where organisations try to balance the triple bottom line (van Marrewijk, 2003). This point of view is shown in Figure.1-3. It has been claimed a corporate sustainability approach sees the social, environmental and economic dimensions as connected. However, CSR separates the economic (financial) dimension from the social and environmental (non-financial) ones (Montiel, 2008).

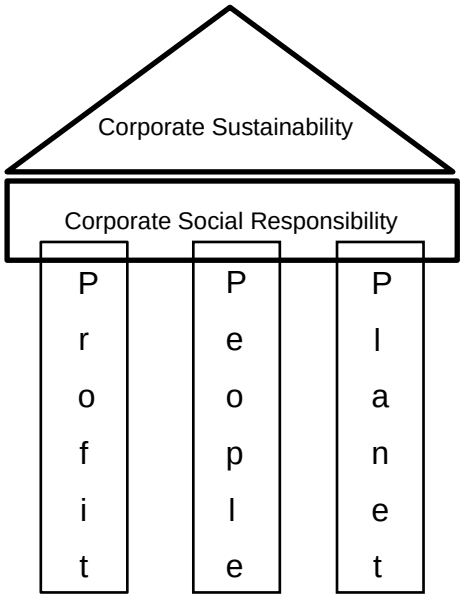


Figure. 1-5: The Relationship between Corporate sustainability and CSR (Source: Erasmus University, Wempe & Kaptein as cited by Van Marrewijk 2003)

The achievement and outcome of decisions made to fulfil stakeholders' social and environmental needs are often investigated through the concept of CSR-performance (e.g. Galbreath, 2017; Harjoto, Laksmana and Lee, 2015). Additionally, the term "corporate social performance" has been used interchangeably with CSR-performance (e.g. Francoeur et al., 2019; Hafsi and Turgut, 2013; Wood, 2010). Depending on the aim of the study, researchers have examined CSR-performance in terms of the company's social performance. (e.g. Bai, 2013; Mallin and Michelon, 2011), environmental performance (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Rodrigue, Magnan and Cho, 2013), and/or the overall combination of both (e.g. Galbreath, 2016; Oh, Chang and Jung, 2019).

CSR-performance is quantified and measured through various indices. It is made publicly available by numerous databases under terms such as "CSR rating", "CSR scores" (Ioannou and Serafeim, 2015). Different databases have been used in the literature investigating CSR-performance. For instance some researchers are inclined to use the Kinder, Lydenberg, and Domini (KLD) index (e.g. Cook and Glass, 2018; Post, Rahman and Rubow, 2011). There have been studies where the Dow Jones Sustainability index has been used (e.g. Chams

and García-Blandón, 2019; López, Garcia and Rodriguez, 2007). Others have preferred the Asset4 (e.g. Nadeem, Gyapong and Ahmed, 2020; Shaukat, Qiu and Trojanowski, 2016), and more recently some have used Sustainalytics (e.g. Francoeur et al., 2019; Lu and Herremans, 2019).

All databases that provide CSR-performance measurements, provide social and environmental performance under two separate catagories. Each category is then divided into sub-catagories, which may vary slightly between databases (Antolín-López, Delgado-Ceballos and Montiel, 2014; FTSE Russel, 2016; Thomson Reuters, 2017). Also, some databases like KLD and Sustainalytics are inclined to include corporate governance scores in their index (Antolín-López, Delgado-Ceballos and Montiel, 2014). Therefore, the term ESG (environment, social and governance) scores is sometimes used by such databases (Antolín-López, Delgado-Ceballos and Montiel, 2014; FTSE Russel, 2016; Thomson Reuters, 2017).

Databases also tend to follow different measurements and methodologies, with some using positive screening criteria like Dow Jones or negative screening criteria like KLD, and others a mix of both like FTSE4Good (Antolín-López, Delgado-Ceballos and Montiel, 2014; Boulouta, 2013; Fowler and Hope, 2007). Also, some indices are made up of CSR-performance concerns, strengths or both (Antolín-López, Delgado-Ceballos and Montiel, 2014; Boulouta, 2013).

1.4 - Theoretical Underpinning

When exploring corporate governance in relation to corporate sustainability, particularly when focused on the implementations of board attributes on CSR-performance, the literature has used a wide range of theories. This will be explored and discussed in the literature review. However, three main theoretical frameworks have been applied more frequently: agency, resource-dependence and stakeholder theory (Jain and Jamali, 2016).

Agency theory, as one of the main theories in corporate governance (Raelin and Bondy, 2013), implies directors have the shareholders' best interests in mind, and as their agents, ensure managers have the same interests (Fama and Jensen,

1983; Jensen and Meckling, 1976). This theory has mostly been used to clarify the role of board attributes, particularly board structure, from a monitoring view (Hillman and Dalziel, 2003). As a result, is argued to be centred around economic concerns and isn't adequate to demonstrate why and/or how social goals should be seen in corporate strategic aims (Walls, Berrone and Phan, 2012). The stakeholder theory – where the relationship of a firm is seen to go beyond shareholders (Freeman, 2010) – appears to provide a better perspective when exploring the influence of board attributes on issues centred around the interests of all stakeholders (Adams, Hoejmose and Kastrinaki, 2017; Chams and García-Blandón, 2019; Wang and Coffey, 1992). From a corporate governance view, board diversity is not just heterogeneity around the boardroom table. It is the means in which this diversity can contribute to the different board processes, and outcomes (van der Walt and Ingley, 2003). For such reasons, researchers have started applying resource-dependence theory when investigating the influence of board attributes on CSR-performance (Endo, 2020; Hafsi and Turgut, 2013). More recently researchers have turned to other theories when exploring the impact of board attributes on CSR-performance (e.g. upper echelon, legitimacy, accountability: Burke, Hoitash and Hoitash, 2019; Moussa et al., 2020; Olthuis and van den Oever, 2020) Furthermore, to overcome limitations of existent theories and capture all intricacies of the pertinent literature, some researchers have implemented more than one theory in their theorisation. Such researchers argue that a single theory is insufficient to comprehensively clarify the relationship between different board attributes and CSR-performance (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Hussain, Rigoni and Orij, 2018; Moussa et al., 2020).

Aligned with such studies and to help fully explain the impact of various board attributes, several theoretical perspectives have been applied in this thesis. These theories are fully explained in the relevant sections of each paper. An overview is provided in the table below.

Table. 1-2: Theories Applied in the Thesis

Theory	Description in relation to the research	Application in research
Accountability	A person (directors) or group (board of directors) will be accountable when they acknowledge and take responsibility for their actions and decision-making processes (Lerner and Tetlock, 1999; Tetlock, 1983).	• Chapter 3: Hypothesis development • Chapters 3 and 4: Discussion
Agency	Directors have shareholders' best interests in mind, and as their agents, ensure managers have the same interests (Fama and Jensen, 1983; Jensen and Meckling, 1976).	• Chapter 3: Hypothesis development • Chapters 3 and 4: Discussion
Resource dependence	Different director characteristics and board structures can increase the access of the board to a variety of resources, allowing access to information beyond company boundaries (Hillman, Withers and Collins, 2009; Pfeffer and Salancik, 1978).	• Chapter 3: Hypothesis development • Chapters 3 and 4: Discussion
Critical Mass	Commonly used in studies focused on the political representation of women, critical mass theory is rooted in seminal contributions by Rosabeth Moss Kanter and Drude Dahlerup (Childs and Krook, 2008). In literature focused on the influence of female-directors on social and environmental performance, it is argued the presence of one or two female-directors can make a positive contribution, this has been referred to as "tokenism". To acquire the full benefit of women on boards, the presence of three or more (critical mass) female-directors is needed (Bear, Rahman and Post, 2010; Konran, Kramer and Erkut, 2008).	• Chapter 3: Hypothesis development • Chapter 4: Methodology • Chapters 3 and 4: Discussion
Configurational	A configurational perspective presumes complex causality and nonlinear relationships, where "variables found to be causally related in one configuration may be unrelated or even inversely related in another" (Meyer, Tsui and Hinings, 1993, p.1178). This theory is the bases for Qualitative Comparative Analysis (QCA) (Fiss, 2007).	• Chapter 4: Methodology

1.5 - Research Aim and Objectives

The overall aim of this thesis is to investigate how board attributes impact the achievement and realisation of organisations' social and environmental goals. In other words, explore the role of the board of directors in shaping CSR-performance. Stakeholders are increasingly holding companies accountable for their environmental and social conduct (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Kolev et al., 2019; White, 2012). Thus, developing this understanding is important to both managers and board directors. Organisations are engaging in, and incorporating, social and environmental issues in their business models, organisational structures and processes (Burke, Hoitash and Hoitash, 2019; Ioannou and Serafeim, 2015; Unruh et al., 2016; Wang et al., 2016). Therefore, the organisation must understand how board attributes will help them attain the best outcome when it comes to social and environmental issues. There is a void in the field of corporate governance when it comes to CSR concerns (Paine, 2014). The overarching research question can be stated as:

What is the role of the board of directors in shaping CSR-performance?

In line with this overarching question, several objectives were set:

- The first was to critically assess and review the existing literature investigating the role of board of directors in driving CSR-performance.
- The second was to explore the influence of the board-level CSR-committee – a board attribute largely understudied despite the increased prevalence of such committees on the board – in driving CSR-performance, specifically its presence, composition and interaction with other board attributes.
- The third was to investigate and identify multiple board configurations that lead to high CSR-performance by exploring more than two attributes at a time through a configurational approach.

1.6 - Research Methodology

The methodology and tools applied in chapters 2 to 4 of this thesis have been chosen according to the main aim of each chapter. Full explanation is provided

in the relevant section of each chapter. However, to provide an overview of how this thesis was conducted, a brief summary of the methodology, sample and data used is given here.

In chapter 2 a systematic literature review was conducted using an evidence-based approach. As the research progressed the review was updated several times. The finalised version, which has now been published in the “Journal of Cleaner Production” (Bolourian, Angus and Alinaghian, 2021b), included 67 articles in a time span between 1992 and May 2020 from 18 highly regarded peer-reviewed journals.

The review followed the three stages of Planning the Review, Conducting the Review and Reporting and Dissemination suggested by Tranfield et al. (2003). The literature search was executed in *EBSCO*, *Scopus*, and A*BI/INFORM Collection* by allowing a combination of keywords reflecting the core phenomena of interest (Appendix B). Chapter 2 provides the full process applied to identify the set of articles reviewed.

1.6.1 - Sample and Data for Empirical papers

The sample used in this research for both empirical papers (chapters 3 and 4) includes all companies listed in the FTSE350 (FTSE 100 and FTSE 250) and S&P500 at the end of March 2018 (Table. 1-3). This sample is multi-industry and enables exploration and comparison of companies operating in two countries with different governance systems, rules, regulations and corporate governance guides. This is important, because researchers have demonstrated the country and industry where the company is active influences the impact of board attributes on CSR-performance (Byron and Post, 2016; Chang et al., 2017; Endrikat et al., 2020; Harjoto, Laksmana and Lee, 2015; Jia and Zhang, 2013).

The current sample covers the years 2013 to 2016. However, considering that CSR reporting and scoring is an annual activity and to allow time for results of decisions made today to become evident in the future, (consistent with previous research such as Chang et al., 2017; Cook and Glass, 2018; Walls and Berrone, 2017), the data collected on board and CSR-committee attributes and financial

performance is lagged by one year (2012-2015). CSR-performance scores and financial performance indicators are taken from the Thomson Reuters databases, and the board of directors and CSR-committee attributes are collected from BoardEx (full list of board attributes collected in Appendix A).

CSR-committees with only one member have been removed from the sample. Also, to ensure a consistent sample, companies with more than one board-level committee dedicated to CSR activities have been omitted. Since different companies tend to use different titles for a CSR-committee, one of the following methods has been used to identify CSR-committees:

- The name of the committee was self-explanatory; it was a committee dedicated to social and environmental issues (names such as CSR, sustainability, social performance, environmental performance, etc.)
- Where the committee's name did not explicitly indicate a relationship to social and environmental issues, and it was not one of the three main board committees (i.e. nomination, audit and remuneration/compensation), the committee charter was accessed through the company website. If the responsibilities of the committee involved any aspect of social and environmental issues, the committee was considered a CSR-committee and added to the sample.

Table. 1-3 provides an overview of the full sample. Considering the aim of the first empirical paper and the need to focus on CSR-committees, columns 3 and 4 of this table are used in the analysis of chapter 3. In chapter 4, where there is a need to explore the FTSE350 and S&P500 companies separately, columns 1 and 2 have been applied. A more detailed table, broken down into the number of directors and explored variables, is provided in Appendix A.

Table. 1-3: Overall View of Sample

Year	1-No. Companies - FTSE350	2-No. Companies - S&P 500	3-No. Companies Analysed	4-No. Committees Selected	5-No. Committees Deleted
2013	222	452	674	138	15
2014	224	461	685	149	9
2015	287	474	761	154	17
2016	303	468	771	168	14
Total	1036	1855	2891	609	55

CSR-performance, defined as the subtotal of company's social and environmental performance was sourced from Thomson Reuters ESG Scores index due to the following reasons:

- The methodology behind the calculation of the scores are clear and transparent (Thomson Reuters, 2017).
- The calculation of the "Thomson Reuters ESG Scores" incorporates industry, making the comparison of companies in different industries possible.
- The scores are disaggregated to social, environmental and governance scores. Each section is further disaggregated to more relevant categories. This makes omitting governance scores which incorporate board attributes simpler.

Furthermore, it has been suggested some indices like Asset4 are more comprehensive than others like KLD (Shaukat, Qiu and Trojanowski, 2016). Thomson Reuters ESG Scores model is an enhancement and replacement for Asset4, and scores based on the old model were not generated as of 2018 (Thomson Reuters, 2017). To measure CSR-performance the governance performance scores has been omitted. The overall total of social and environmental performance scores is used. Table. 1-4 demonstrates the categories of the Thomson Reuters model that have been used in this research. The CSR-performance scores are used in both chapters 3 and 4.

Table. 1-4: Social and Environmental Categories used

Variables	Weights
Environmental	**34%**
Resource Use	11%
Emissions	12%
Innovation	11%
Social	**35.5%**
Workforce	16%
Human Rights	4.5%
Community	8%
Product Responsibility	7%

1.6.2 - Paper 2 Methodology

Following the results of the literature review, the first empirical paper focused on the board-level CSR-committee. In this paper three models are proposed and hypotheses for each model is developed. In line with more recent empirical investigations (Chang et al., 2017; Oh, Chang and Jung, 2019), a generalised estimating equations (GEE) is implemented for this part of the thesis. When there is autocorrelation because of possible dependence, in comparison to the fixed or random effects models, the GEE model is considered more robust and consistent (Liang and Zeger, 1986). Also, a robust test has been carried out using the random effect model, with no significant differences seen (Appendix C.2). In addition to the correlation matrix, inflation factors (VIFs) is used to control for multicollinearity.

1.6.3 - Paper 3 Methodology

Considering the argument and theorisation laid out in chapter 4, that board attributes do not work in isolation but interact with each other and the context they are in, this study uses fuzzy-set Qualitative Comparative Analysis (QCA) (Ragin, 2008) to analyse the data. The theorisation of this method assumes interconnected configurations of conditions (board attributes) are better able to explain outcomes (for this research the role of boards in driving CSR-performance) than isolated or selected interactions of two conditions. QCA uses Boolean logic and set-theory, treating each case (board) as a member of multiple

sets and considering both the conditions and outcome (CSR-performance) as sets (Ragin, 2008; Rihoux and Ragin, 2009).

Aligned with the QCA methodology, cases (boards) need to be assigned with membership scores for each set, indicating whether the case is fully in, out or somewhere in-between; this is referred to as calibration (Fiss, 2007; Greckhamer et al., 2018; Ragin, 2008). The calibration technique used in this study is suitable for quantitative large N-samples, following date structure for crisp sets (i.e. binary data of 0 and 1) and distributions' parameters for fuzzy sets (Cooper and Glaesser, 2016). As it is considered best practice to use theory and substantive knowledge where possible (Greckhamer et al., 2018; Misangyi and Acharya, 2014), this has also been taken into consideration. The process followed is fully explained in chapter 4.

1.7 **- Summary of Contributions**

This thesis contributes to the existing literature in several ways. By addressing the first objective in chapter 2, it extends the understanding of the role of board attributes in CSR-performance by critically assessing the extant literature through a transparent and replicable systematic review (Petticrew and Roberts, 2006; Rousseau, Manning and Denyer, 2008; Tranfield, Denyer and Smart, 2003). Specifically, the running similarities are uncovered. Also, the existing inconsistencies in current literature regarding the role of director characteristics, board structure and their interactions in CSR-performance are highlighted. The literature review also explains some of the uncovered inconsistencies by identifying the variations in conceptualisations, theoretical frameworks and the measurement scales.

Chapter 3 of this thesis contributes to the growing literature on board-level CSR-committees by investigating these committees beyond their presence, and exploring the role of committee composition in driving CSR-performance. There is limited research on board-level CSR-committees as a component of board structure (Appendix C.1). This chapter also contributes to the recent call for exploring the interactions between board attributes and their effect on CSR-performance (Endrikat et al., 2020; Homroy and Slechten, 2019). Specifically,

moving beyond the existing literature, the chapter develops and expands the understanding of the role of board-level CSR-committees in CSR-performance by examining the interactive impact of CSR-committee presence and attributes with various board attributes.

Furthermore, in chapter 4, this thesis adds to the growing literature on the role of board attributes in CSR-performance by identifying alternative configurations of various attributes that lead to high CSR-performance (Endrikat et al., 2020; Homroy and Slechten, 2019). Through a configurational approach, our study sheds critical light on how the simultaneous interactions of eight board attributes (largely explored individually in previous literature) can lead to high CSR-performance. Additionally, alternative new board archetypes based on distinct combinations of board attributes that yield high CSR-performance are explored. Three different archetypes are identified and named based on the main attributes that differ between them: *committee-boards*, *experience-boards* and *hybrid-boards*. Thus, contributing and helping to strengthen the arguments for a "one-size" *doesn't* fit all board governance approach (Dowell, Shackell and Stuart, 2011; Federo et al., 2020; García-Castro, Aguilera and Ariño, 2013; Veltrop et al., 2018). Although this approach has been used to analyse other topics related to corporate governance mechanisms – for instance the impact of corporate governance mechanisms on investor's perception of foreign initial public offerings (IPO) value (Aguilera, Bell and Filatotchev, 2014), and the impact of corporate governance practices in different geographical context on firm performance (return on equity (ROE)) (García-Castro, Aguilera and Ariño, 2013) – it has not been used to explore board of directors as a core element of corporate governance, particularly its impact on CSR-performance. Furthermore, by investigating board configurations in the UK and the USA, this study contributes and helps advance understanding of the role of geographical context in CSR-performance.

Additionally, the results from both empirical papers demonstrate board attributes do not work in isolations, but interact with each other in driving CSR-performance. Hence, contributing to another growing line of literature that argues corporate

governance mechanisms need to be investigated in “bundles”, and looking at each mechanism individually will not provide the full or accurate picture (Aguilera, Bell and Filatotchev, 2014; García-Castro, Aguilera and Ariño, 2013; Greckhamer et al., 2018).

Finally, this thesis uses a unique sample in that it is multi-industry and covers companies listed in two countries. Previous literature have mostly focused on only one country (Chang et al., 2017; Dixon-Fowler, Ellstrand and Johnson, 2017; Moussa et al., 2020). One of the reasons identified in chapter 2 for inconsistency in the literature with regard to the impact of board attributes on CSR-performance is the geographical context of where the company operates. Some studies suggest that contextual factors such as the country and industry where the company is active moderates the impact of board attributes on CSR-performance (Chams and García-Blandón, 2019; Chang et al., 2017; Harjoto, Laksmana and Lee, 2015; Jia and Zhang, 2013). The multi-industry sample used in this thesis incorporates all companies listed on FTSE350 (FTSE100 and FTSE250) and S&P500 allowing exploration and comparison of companies operating in two countries with different governance systems, regulations and corporate governance guides.

1.8 - Publications, Conference Presentations, and Future plans

As mentioned in the previous sections, this thesis is formed by three standalone journal articles. This format is favourable as circulation of the research outputs can be achieved when each part is concluded. Additionally, each chapter can be read independently, making it easier to share parts of the research without waiting for the whole thesis to be completed. Table. 1-5 presents a summary of where each paper was published and/or presented throughout the PhD journey, and future plans where applicable. The feedback and comments resulting from these publications and presentations were beneficial in developing each section and improving the thesis as a whole. It must be noted that both my supervisors are co-authors on the all publications. However, co-author contribution is in line with a conventional supervision approach.

Table. 1-5: Summary of publications, presentations and future plans

Article	Title	Journal Submission	Conference Submission
1	The Impact of Corporate Governance on Corporate Social Responsibility at the Board-level: A Critical Assessment	• Published in the Journal of Cleaner Production April 2021 (available online Dec. 2020)	
2	Exploring the Role of Board-level Corporate Social Responsibility Committees in Corporate Social Responsibility Performance: An Empirical Investigation	• Underdevelopment to be shortly submitted to the journal of Business Ethics	• Early abbreviated version accepted and presented (virtually live) at EURAM 2020. Published in conference proceedings • Early abbreviated version (slightly different to the above version) accepted at BAM 2020. Published in conference proceedings
3	The Impact of Board Attributes on Corporate Social Responsibility Performance: A Configurational Approach	• A decision of "Revise and Resubmit" by the journal of Business Research	• Early abbreviated version accepted and presented at the International QCA Paper Development Workshop 2020

In March 2019 I was invited as guest speaker to attend the "False Thinking Conference" in Riga. I presented parts of the systematic literature review and initial empirical results in relation to corporate sustainability, boards and board-level CSR-committees. Attending and presenting at this conference helped me better understand how to present my work to an audience who were not necessarily in my field of research, and in some cases even from a purely business background. The Q&A session was also very useful as I realised what practitioners look for when it comes to my research area. As an academic in business and management, I strongly believe it is important to be able to apply theory and concepts to practice.

Furthermore, I presented a development paper (not included in the current thesis) related to CSR-performance scores at the BAM2018 conference (also published

in the conference proceedings). Data and methodology developed in the master's thesis of a previous Cranfield MSc student was used for this paper. However, a completely different view was taken than that of the original master's thesis. The reason for writing this paper lies in one of the results of the systematic review. Considering the CSR-performance indices used by researchers tend to follow different methodologies and incorporate different sub-indicators, it has been suggested that using different indices may lead to different results (Antolín-López, Delgado-Ceballos and Montiel, 2014; Boulouta, 2013; Shaukat, Qiu and Trojanowski, 2016). As a result, I felt looking at the mentioned research from a different angle would help me develop a better understanding of the research undertaken in this thesis.

1.9 - Thesis Structure

This thesis proceeds as follows: Chapters 2 to 4 are dedicated to papers written to address the research aim and objectives. Chapter 2 provides the systematic literature review. This review was accepted for publication in the Journal of Cleaner Production (Bolourian, Angus and Alinaghian, 2021b). After passing through the journal's revision and resubmission process, the finalised paper was accepted for publication in December 2020. This paper is provided largely unchanged from the final revised version submitted and published in the journal. The references for this paper have been incorporated into a merged references section at the end of the thesis. This chapter sets the foundation for the next two chapters as both empirical papers were developed using the results of the literature review.

Chapter 3 provides the first empirical paper presented in this thesis. This chapter develops a more holistic and comprehensive view of the CSR-committee than previous literature. Two slightly different versions of the pilot study leading to this chapter were submitted and presented in the 2020 British Academy of Management (BAM) and European Academy of Management (EURAM) conferences. Building on the feedback and comments provided on these papers by the reviewers and audience, three separate models are developed to explore the impact of the CSR-committee in driving CSR-performance.

Chapter 4 presents the third paper, and the second empirical one, in this thesis. In this chapter a configurational approach to exploring and understanding the role of the board of directors on CSR-performance is taken. Although the methodology used in this paper is called Qualitative Comparative Analysis (QCA), the method generates results based on numbers and numerical analysis. These results can be generalised across wider populations, particularly for large N-samples like the current study, effectively making it a quantitative analysis (Misangyi et al., 2017; Ragin, 2008).

By drawing together the contributions of the systematic review and empirical analysis, chapter 5 brings this thesis to a close. Also, practical implications, limitations of the current research and directions for future research are outlined. The chapter is concluded with a personal reflection on the PhD journey.

2 . The Impact of Corporate Governance on Corporate Social Responsibility at the Board-level: A Critical Assessment

ABSTRACT

The purpose of this research is to synthesise and critically evaluate the extant literature investigating the role of board of directors as a core element of corporate governance in corporate social responsibility (CSR) performance. Adopting a systematic review approach, a sample of 67 studies from 18 highly regarded scholarly journals published between 1992 and 2020 is examined. Distinguishing between two board attributes of director characteristics and board structures, our study uncovers similarities and inconsistencies regarding the effects of various board characteristics and board structures on CSR-performance. Our study reveals these attributes do not work in isolation but interact with each other and the context in which they are embedded in shaping CSR-performance. Additionally, our review identifies substantial variation in conceptualisations, theoretical frameworks, the use of measurements and contexts across studies providing a basis to offer a comprehensive synthesis of dominant scholarly discourses and an organising lens for future scholarship.

Keywords: Corporate governance; corporate social responsibility performance; social performance; environmental performance; board directors

2.1 - Introduction

The critical importance of the relationship between corporate governance and sustainability has long been acknowledged in the literature (Aras and Crowther, 2009; Unerman and Bennett, 2004). Corporate social responsibility (CSR) has been noted as a development of good governance (Harjoto and Jo, 2011; Jo and Harjoto, 2012), where companies with better governance are often found to be more socially responsible (Ntim and Soobaroyen, 2013). While corporate governance is the force behind CSR aims and objectives in organisations (Elkington, 2006; Jamali, Safieddine and Rabbath, 2008), the board of directors as a core element of corporate governance (Eccles, Ioannou and Serafiem, 2011) are responsible for achieving and monitoring the set aims and objectives (Eccles, Ioannou and Serafiem, 2011; Elkington, 2006; Harjoto, Laksmana and Lee, 2015; Jamali, Safieddine and Rabbath, 2008; de Villiers, Naiker and van Staden, 2011). The achievement and realisation of these objectives are often investigated through the notion of CSR-performance (e.g. Galbreath, 2017; Harjoto, Laksmana and Lee, 2015). Specifically, adopting various indices, researchers have examined CSR-performance in terms of the company's social performance (e.g. Community, Employee Relations and Human Rights, Bai, 2013; Mallin and Michelon, 2011), environmental performance (e.g. environmental strength, energy-related CO_2 emissions, regulatory performance and pollution prevention Dixon-Fowler, Ellstrand and Johnson, 2017; Ortiz-de-Mandojana and Aragon-Correa, 2015; Rodrigue, Magnan and Cho, 2013), and/or the overall CSR-performance: the combination of a company's social and environmental performance (e.g. Galbreath, 2016; Oh, Chang and Jung, 2019).

Scholars increasingly recognise that the board composition plays an instrumental role in driving the organisations' outcomes in general (Johnson, Schnatterly and Hill, 2013) and CSR in particular (Harjoto, Laksmana and Lee, 2015). Specifically, the critical impact of board attributes in terms of director characteristics (such as gender, age, expertise etc.) and different structures used by boards (such as independence, committees, CEO-duality etc.) on CSR, has been evidenced in prior studies (Crifo, Escrig-Olmedo and Mottis, 2018; Marquis and Lee, 2013; Oh, Chang and Jung, 2019; Walls and Hoffman, 2013). For instance, literature has

explored the influence of board attributes on CSR reporting, disclosure (e.g. Jizi, 2017; Nekhili et al., 2017) and engagement (e.g. Harjoto and Jo 2011). Similarly, scholars have devoted their research to investigating the impact of board attributes on CSR- performance (e.g. Bai, 2013; Glass, Cook and Ingersoll, 2016; Walls and Berrone, 2017).

While there appears to be a consensus among scholars regarding the importance of board attributes in driving CSR-performance, there are a number of inconsistencies and a lack of overall clarity regarding their specific effects in the literature. For instance, some studies suggest female-directors negatively impact environmental performance (Walls, Berrone and Phan, 2012). Contrary to this view, others (Cook and Glass, 2018; Hussain, Rigoni and Orij, 2018; Lu and Herremans, 2019) have demonstrated female-directors' positive or non-significant effects on environmental performance. Similarly, while the positive effects of board independence (the percentage of non-executive directors (NEDs) on the board) on CSR-performance have been demonstrated by some studies in the literature (Burke, Hoitash and Hoitash, 2019; Choi, Lee and Park, 2013), others have reported a negative (Deckop, Merriman and Gupta, 2006; Naciti, 2019) or non-significant effect (Galbreath, 2018).

In recent years, some review studies have addressed different elements of the overlap between corporate governance and CSR. For example, Jain and Jamali (2016) conducted a review highlighting the positive role of corporate governance on CSR-performance at three levels: firm, group and individual. Focusing on board diversity, particularly gender diversity, Rao and Tilt (2016) have critically reviewed the relationship between the composition of boards and both CSR performance and reporting from a strategy and decision making point of view. While these studies emphasise the link between corporate governance and CSR, a comprehensive account of various board attributes including both directors' characteristics and structure, their interaction and sometimes inconstant role on CSR performance has remained relatively unexplored. This issue is particularly salient as recent studies have highlighted the role of interactive effects of the two in shaping CSR-performance (Walls, Berrone and Phan, 2012). For instance,

Hafsi and Turgut (2013) suggested the relationship between diversity within the board and CSR-performance is moderated by the diversity of board structures. Similarly, Galbreath (2017) illustrated that while the executive directors have a negative impact on environmental and social performance, when explored together with executive directors CSR knowledge, the impact will be positive.

Thus, the purpose of this paper is to synthesise this rich and diverse literature in addressing the following question: *What is the impact of Corporate Governance on Corporate Social Responsibility Performance at board-level?* Specifically, using the framework demonstrated in Figure. 2-1, we aim to review and assess the current state of research to explain inconsistencies in the literature and provide an organising lens for future scholarship.

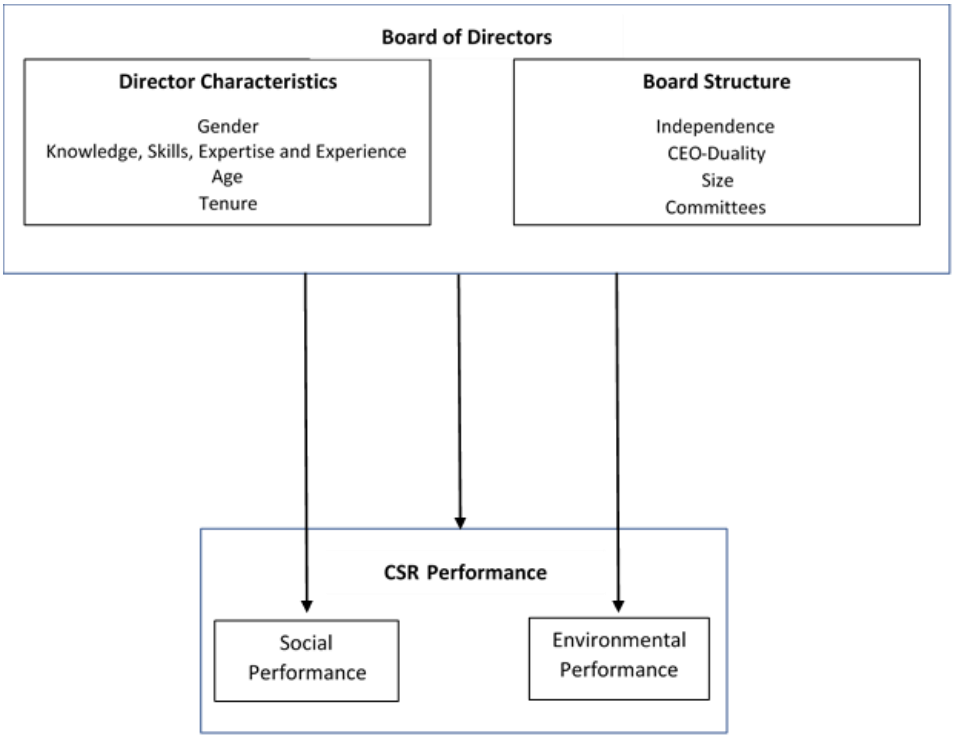


Figure. 2-1: Research Framework

Our study contributes to the existing literature in several ways. First, it extends the understanding of the role of board attributes on CSR-performance through a transparent and replicable systematic review of literature (Petticrew and Roberts, 2006; Rousseau, Manning and Denyer, 2008; Tranfield, Denyer and Smart, 2003). Specifically, we uncover similarities and highlight the existing

inconsistencies in current literature regarding the role of board composition, structure and their interactions on CSR-performance. Second, our study explains the inconsistencies that were uncovered by identifying the variations in conceptualisations, theoretical frameworks and the measurement scales. Furthermore, our work highlights the interactive effects of board attributes with each other as well as the context in which they are embedded in shaping CSR-performance. Having identified the possible reasons behind the inconsistent results of previous literature, the authors offer multiple avenues for advancing research in this field.

2.2 - Theoretical Background

Agency theory, as one of the dominant paradigms in corporate governance, implies that directors have the best interests of shareholders in mind and as their agents, ensure managers have the same interests (Fama and Jensen, 1983; Jensen and Meckling, 1976). While this theory has been largely applied to explain the role of board attributes, particularly board structure, from a monitoring perspective (Hillman and Dalziel, 2003), it cannot sufficiently explain why and/or how social aims should be considered in corporate strategic goals due to its focus on economic issues (Walls, Berrone and Phan, 2012). The stakeholder theory – where the relationship of a firm is seen to go beyond shareholders (Freeman, 2010) – appears to provide a better lens when examining the impact of board attributes on issues related to the benefits of all stakeholders (Adams, Hoejmose and Kastrinaki, 2017; Chams and García-Blandón, 2019; Wang and Coffey, 1992). From a corporate governance perspective, board diversity is not just variety within the board. It is the manner in which this diversity in characteristics and expertise of board members can contribute to the different board processes, decision making and outcomes (van der Walt and Ingley, 2003). This may be one of the main reasons that researchers have turned to resource-dependence theory when exploring the impact of board attributes on CSR performance (e.g. Endo, 2020; Hafsi and Turgut, 2013), and often empirically conducted studies imply that board diversity positively impacts CSR-performance (e.g. Hafsi and Turgut, 2013; Harjoto, Laksmana and Lee, 2015). In recent years researchers have turned to

other theories when exploring the impact of board attributes on CSR-performance (e.g. upper echelon, legitimacy, accountability Burke, Hoitash and Hoitash, 2019; Moussa et al., 2020; Olthuis and van den Oever, 2020). In section 2.6 this paper will explore the underlying theories used in the current sample and provide more insight regarding theoretical views in this area of research.

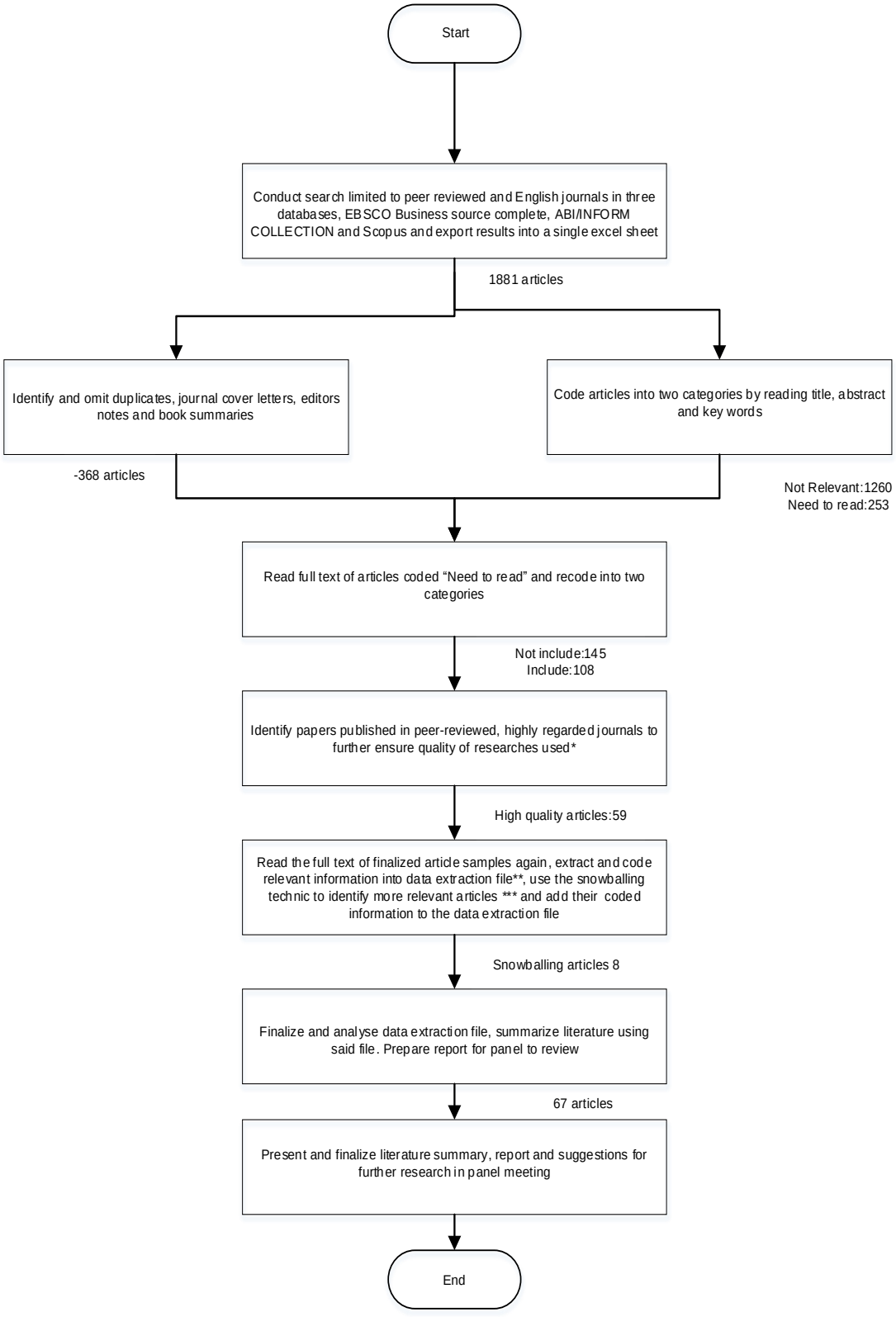
2.3 - Methodology

Using an evidence-based approach, a systematic review of 67 articles from 18 peer-reviewed, highly regarded journals (Figure. 2-2) associated within a time span between 1992 and May 2020 was conducted.

Figure. 2-2: Journals included in the Review

The research followed the three stages of Planning the Review, Conducting the Review and Reporting and Dissemination suggested by Tranfield, Denyer and Smart (2003). Figure. 2-3 illustrates and details the process followed to identify the set of articles we reviewed. The literature search was executed in *EBSCO, Scopus, and ABI/INFORM Collection* by allowing a combination of keywords (Appendix B) reflecting the core phenomena of interest (i.e. corporate governance, corporate sustainability and board attributes). Only articles examining both board attributes and CSR-performance were coded as “Include”. In other words, papers exploring anything outside the scope, for instance the impact of board attributes and CSR reporting and disclosure, CSR engagement, development and orientation were coded as “Not Include”. The investigation

incorporates a descriptive and thematic analysis to identify patterns that synthesise constructs and their relationships.



* and ** (Tranfield et al., 2003)
*** (Greenhalgh, 2005; Greenhalgh et al., 2005)

Figure. 2-3: Literature Identification and Coding Process

As mentioned in Figure. 2-1, the following sections set out the key themes that emerged from the review of articles.

2.4 - Director Characteristic Attributes and CSR-performance

Director characteristics have been considered in a variety of ways. Here we discuss four of the most commonly explored characteristics: Gender, Knowledge, skills, expertise and experience, Age and Tenure.

2.4.1 - Gender

One of the most widely considered director characteristics is the presence of female-directors (over 57% of current sample), explored mostly as either the number of female-directors (e.g. Cook and Glass, 2018) or the proportion of said directors on the board (e.g. Francoeur et al., 2019) (Table. 2-1). The literature has reported inconsistent association between this attribute and different dimensions of CSR-performance. Previous research argues that women tend to lean more towards social performance issues compared to men (Backhaus, Stone and Heiner, 2002). Compared to men, women are also typically more concerned with long-term outcomes and the interests of stakeholders, even if it means sacrificing short-term profits (Matsa and Miller, 2013). Female-directors are more likely to be community influencers from non-business backgrounds (Hillman, Cannella and Harris, 2002; Singh, Terjesen and Vinnicombe, 2008), and often engage more in charitable and philanthropic activities (Bear, Rahman and Post, 2010; Wang and Coffey, 1992; Williams, 2003). Also, women tend to use their experience and influence to form sustainability-themed alliances (Post, Rahman and McQuillen, 2015). Therefore, boards with female members are more likely to engage the firm in CSR activities (Bear, Rahman and Post, 2010; Périlleux and Szafarz, 2015; Williams, 2003).

Prior research has suggested that female-directors' communal characteristics such as being friendly, kind, unselfish and concern for others (Eagly, Johannesen-Schmidt and van Engen, 2003; Eagly and Karau, 2002) enhance their sensitivity towards various stakeholders (Mallin and Michelon, 2011; Nielsen and Huse, 2010). This in turn improves the role of the board in driving CSR

activities and leads to higher CSR performance (Mallin and Michelon, 2011). Women's collective decision-making style (Konran, Kramer and Erkut, 2008; Nielsen and Huse, 2010) also helps boost CSR performance strengths (Bear, Rahman and Post, 2010; Harjoto, Laksmana and Lee, 2015).

On the other hand, it has been argued that in transitional economies like China, where agency costs pose a critical problem for male-dominate boards, women directors have a significant role in increasing the decision-making quality and stopping unreasonable waste of corporate resources (Jia and Zhang, 2011). Unlike western countries where it has been suggested that women directors tend to support corporate philanthropy (Adams, Hoejmose and Kastrinaki, 2017; Bear, Rahman and Post, 2010; Kabongo, Chang and Li, 2013; Wang and Coffey, 1992), in some Asian countries, women directors will have a negative effect on corporate philanthropy, yet an overall positive impact on organisational performance (Jia and Zhang, 2011).

Although the presence of one or two female-directors can make a positive contribution – this has been referred to as "tokenism" – to acquire the full benefit of women on boards, it has been suggested that the 'magic number' is the presence of three or more (critical mass) female-directors (Bear, Rahman and Post, 2010; Konran, Kramer and Erkut, 2008). Also, a small female presence on boards is insufficient to effect CSR-performance (Périlleux and Szafarz, 2015) and boards with more women tend to act more socially responsible compared to boards with no or few women (Post, Rahman and McQuillen, 2015). Ellwood and Garcia-Lacalle (2015) argued that it is the importance of the position held by women that counts not the proportion.

Table. 2-1: The Impact of Director Gender Attributes on CSR-performance

Year	Author	Female-Director***		Other Female Attributes	CSR-performance Dimension*		CSR performance Index	Results with respect to CSR-performance **
		%	No.		Social	Environmental		
2020	Nadeem et al.	x			x		ASSET4	+
						x		+
2020	Olthuis and van-den-Oever			Gender Diversity (Blau-index)	CSR		Telos	0
2019	Chams and Garcia-Blandon	x			CSR		Dow-Jones Sustainability Index	+
2019	Cruz et al.	x			Employee and Community		CSRHub	+
					Employee			+
					Community			+
				Age	Employee and Community			0
					Employee and			0
					Community			0
				Tenure	Employee and Community			0
					Employee			0
					Community			0
				Minimum one family executive director	Employee and Community			+
					Employee			+
					Community			+
					Employee and Community			0

				Minimum one non-family executive director	Employee			0
					Community			0
				Minimum one family non-executive director	Employee and Community			0
					Employee			0
					Community			0
				Minimum one non-family non-executive director	Employee and Community			+
					Employee			+
					Community			+
2019	Francoeur et al.	x			CSR		Sustainalytics	+
						x		+
					Employees			0
					Contractors			+
					Customers			0
					Community			+
2019	Lu and Herremans			Gender Diversity (Blau-index)		x	Sustainalytics	+
2019	Oh et al.	x			CSR		Korea Economic Justice Institute	0
2018	Cook and Glass		x		Community Strength		KLD	+
					Product Strength			0
						Strengths		+
2018	Galbreath	x			CSR		Sustainable Investment Research Institute	+
2018	Hussain et al.	x				x	Company Sustainability Reports	0
					x			+

2017	Adams et al.	x			Donating		Annual reports, Accounts, Internet and Charity sources, and UK insurance company directories	+
					Amount			+
2017	Cho et al.	x			Community Donations		KLD	+
					Employee Benefits			+
					Diversity Commitment			+
					CSR			+
2017	McGuinness et al.	x			CSR		Rankins	+
				CEO/Vice-CEO				+
				Chair/Vice-Chair				+
2016	Byron and Post			Presence	CSR		Several(meta-analysis)	+
2016	Galbreath	x			CSR		Sustainable Investment Research Institute	+
2016	Glass et al.	x				Strengths/Concerns	KLD	+/0
				No. Interlinks				+/0
				CEO				0/0
2016	Jain and Jamali			Diversity	CSR		Review	
2016	Rao and Tilt			Diversity	CSR		Review	
2015	Ellwood and Garcia-Lacalle			% Executive director	Clinical negligence costs		Disclosure notes on financial statements of NHS Foundation Trust	0
				%non-executive director				0
				Chair				+
				CEO				+

2015	Harjoto et al.			Heterogeneity Index	CSR Overall		KLD	+
					CSR Strengths			+
					CSR Concerns			-
2015	Périlleux and Szafarz			Female-dominated boards	Average loan size		UM-PAMECAS	0
					%Female borrowers			+
2015	Post et al.	x				Strengths	KLD	+
2013	Boulouta	x			CSR Overall		KLD	+
					CSR Strengths			0
					CSR Concerns			-
2013	Hafsi and Turgut	x			CSR Strengths		KLD	+
2013	Jia and Zhang			Critical mass	Corporate Philanthropy disaster response		China Securities Regulatory Commission, corporate website and press release	+
				Age diversity				0
				Chair/CEO				0
2013	Kabongo et al.	x			Corporate Philanthropy		KLD	+
2013	Marquis and Lee	x			Corporate Philanthropy		National Directory of Corporate Giving	+
2013	Zhang et al.	x			Reputation-based CSR		FORTUNE magazine's America's Most Admired Corporations	+
2012	Walls et al.	x				Strength	KLD	0
						Concern		-
2011	Jia and Zhang			Gender Diversity (Blau-index)			Corporate Disclosure	0

				%Female on Supervisory Board	Corporate Philanthropy disaster			0
2011	Mallin and Michelon	x			CSR		KLD	+
					Community			+
					Employee Relations			+
						x		0
					Human Rights			+
					Product Quality			0
2011	Post et al.			3≥		Overall	KLD	0
						Strengths		+
						Concerns		0
2010	Bear et al.		x		Institutional strength		KLD	+
					Technical strength			+
2010	Galbreath	x				Board Oversight on climate-change governance	Coalition for Environmentally Responsible Economies	0
						Management Execution on climate-change governance		0
						Public Disclosure on climate-change governance		0
						Emissions Accounting on climate-change governance		0

						Strategic Planning on climate-change governance		0
2003	Williams	x			Corporate Philanthropy (total Donations)		Corporate500 Directory of Corporate Philanthropy and National Directory of Corporate Giving	+
					Community service Donations			+
					Arts and Cultural Donations			+
					Education Donations			0
					Public Policy Donations			0
1998	Coffey and Wang	x			Corporate Philanthropy		Council on Economic Priorities	0
1996	Siciliano			Diversity	x		240-YMCA Organizations Data and Survey	+
1992	Wang and Coffey			%Female and Minority	Corporate Philanthropy		Council on Economic Priorities	+

* If clearly mentioned a sub-dimension of social and environmental performance has been used in the study this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance has been used this was recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell.
** 0: non-significant, +: positive and -: negative
*** Where the proportion of female-directors on the board has been considered in the study “x” has been put under “%”. Where the number of female-directors has been considered in the study “x” has been put under “No.”

2.4.2 - Knowledge, Skills, Expertise and Experience

Relevant knowledge, skill, expertise and experience are attributes that the board needs to advise and monitor management (Hillman and Dalziel, 2003). As Table. 2-2 suggests, these attributes have been gaining attention in relation to CSR-performance. For example, the number of outside directorships, as a proxy for experience, held by directors has been suggested to have no significant relation to CSR performance (Harjoto, Laksmana and Lee, 2015). However, with a positive influence on CSR-performance, the percentage of community influential directors is explored for the experience they bring to the board in addition to their influence in the community (Mallin and Michelon, 2011). The number of other boards that directors may simultaneously sit on is explored as a proxy for experience brought to the boardroom and its positive impact on environmental performance (Ortiz-de-Mandojana and Aragon-Correa, 2015). Research conducted in countries such as South Korea, with male-dominant and ethnically homogeneous boards, have used education as a proxy for exploring the effect of diversity on CSR performance (Chang et al., 2017). Also, academic faculty members on firm boards appear to have a positive effect on CSR performance (Cho et al., 2017). This might be because of the knowledge brought through these directors' education, which is needed to effectively govern organisations (Hillman and Dalziel, 2003). By sifting through the literature it would appear that the impact of the expertise, experience and knowledge may depend on both the industry and the relevance of the expertise and experience. Bai (2013) reported having a physician on the board of a hospital will impact social performance positively, but government officials will impact this dimension of CSR performance negatively. Furthermore, it can be argued that the relevance of the experience and the dimension of CSR explored may also be important. Walls and Hoffman (2013) found a positive relationship between environmental deviance and environmental experience of board members. Similarly, Homroy and Slechten (2019) found the existence of NEDs with previous experience in environmental issues positively impacts environmental performance by lowering company greenhouse gas emissions. On the other hand, legal expertise on the

board has no impact on this dimension. Galbreath (2017) reasoned that CSR training among executive directors positively impacts both environmental and social performance. Again the literature is divided on this, as Rodrigue et al. (2013) found environmental awareness of board directors does not significantly impact environmental regulatory performance or pollution prevention. Also, de Villiers et al. (2011) argued that having a lawyer on the board will positively impact environmental performance strengths.

Table. 2-2: The Impact of Director Knowledge, Skills, Expertise and Experience on CSR performance

Year	Author	Factor	CSR-performance Dimension*		CSR-performance Index	Results Concerning CSR-performance **
			Social	Environmental		
2019	Chams and Garcia-Blandon	Higher Education	CSR		Dow-Jones Sustainability Index	0
		PhD				0
		MBA				0
		Engineering Degree				0
		Business Degree				0
		Western European Education				0
2019	Homroy and Slechten	Legal Expert		Greenhouse gas emissions	European Pollutant Release and Transfer Register	0
		Existence of non-executive directors with previous experience in environmental issues (EEDs)				+
		No. EEDs				+
2019	Oh et al.	Educational Diversity	CSR		Korea Economic Justice Institute	0
2018	Crifo et al.	%General Experts		x	Vigeo database	0
		%Sector Experts				0

2017	Adams et al.	Financial Expertise	Donating		Annual reports, Accounts, Internet and Charity sources, and UK insurance company directories	-
			Amount			-
2017	Chang et al.	Educational Diversity	CSR		Korea Economic Justice Institute	invert U-shaped
2017	Cho et al.	Professor-Director Existence	Community Donations/Employee Benefit/Diversity Commitment		KLD	+/+/+
		%Professor-Director				+/+/+
		%Business professor-directors				0/0/0
		%Specialized professor–directors				+/+/+
		Professor-Director Existence	CSR			0
		%Professor-Director				+
		%Business professor–directors				0
		%Specialized professor–directors				+
2017	Dixon-Fowler et al.	Environmental Stakeholder Representative on Board Environmental committee		Strengths	KLD	0
2017	Galbreath	Executive director CSR training		x	GES Investment Services	+
			x			+
2016	Jain and Jamali	Experience (Seniority, Functional, Occupational background)	CSR		Review	

2015	Harjoto et al.	Outside Directorship Heterogeneity	CSR Overall***/Strengths/Concerns		KLD	0/0/0
		Expertise Heterogeneity				+/0/-
2015	Ortiz-de-Mandojana and Aragon-Correa,	No. Interlock		x	US Environmental Protection Agency	+(when linked to a larger parent company)
		Industry Diversity Interlock				+(for low and high diversity)
2013	Bai	Government Official	x		Archival data from California for profit hospitals	-
		Physicians				+
2013	Hafsi and Turgut	Committee experience	CSR Strengths		KLD	0
2013	Rodrigue et al.	Environmental		Regulatory performance	KLD	0
				Pollution prevention		0
2013	Walls and Hoffman	Environmental		Positive Environmental Deviance	KLD	+
2011	Mallin and Michelon	Community Influence	CSR		KLD	+
			Community			+
			Employee Relations			0
			Human Rights			0
			Product Quality			-
				x		+
2011	Post et al.	%Directors Masters' Degree or above		Environment: Overall***/Strength/Concerns	KLD	0/0/0
		% Directors Educated in western Europe				0/0/0

2011	de Villiers et al.	Directors on multiple boards		Strengths	KLD	0
		CEOs of other firms				+
		Lawyer				+
2010	Bear et al.	Director Diversity (experience and knowledge)	Institutional strengths		KLD	0
			Technical strengths			0
1996	Siciliano	Occupational Diversity	x		240YMCA Organizations Data and Survey	+

* If clearly mentioned a sub-dimension of social and environmental performance has been used in the study this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance has been used this was recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell

** 0: non-significant, +: positive and -: negative

*** A linear aggregation of the strength and concerns scores

2.4.3 - Age

Directors' age, sometimes explored as board directors' average age (e.g. Chams and García-Blandón, 2019; Post, Rahman and Rubow, 2011) and sometimes studied as age diversity on the board (e.g. Hafsi and Turgut, 2013), is another characteristic studied by researchers in relation to CSR-performance. It has been suggested that younger directors are usually more concerned about environmental issues (Galbreath, 2010; Hafsi and Turgut, 2013). Specifically, younger directors' learning ability and innovativeness contribute more to practices that address climate-change, leading to a higher performance (Galbreath, 2010). Similar to previous characteristics (Table. 2-3.), the literature is divided on the role of directors' age in CSR-performance.

A negative effect of age diversity within the board could be caused by generation conflict and disagreement among directors (Hafsi and Turgut, 2013). However, contrary to men, it has been suggested that in boards with a critical mass of female representation, age diversity of the women directors strengthens the influence of women on corporate philanthropic disaster response (Jia and Zhang, 2013).

Table. 2-3: The Impact of Director Age on CSR performance

Year	Author	Age Measurement***		Other Measures	CSR-performance Dimension*		CSR-performance Index	Results Concerning CSR performance **
		Average	Diversity		Social	Environmental		
2019	Chams and Garcia-Blandon	x			CSR		Dow-Jones Sustainability Index	Curvilinear
2018	Cook and Glass	x			Community Strength		KLD	0
					Product Strength	Strengths		0
								+
2017	Chang et al.	x			CSR		Korea Economic Justice Institute	0
2016	Glass et al.	x				Strengths	KLD	+
						Concerns		+
2015	Harjoto et al.			Heterogeneity Index	CSR Overall****		KLD	0
					CSR Strengths			0
					CSR Concerns			0
2013	Hafsi and Turgut		x		CSR		KLD	-
2011	Post et al.	x				Overall****	KLD	0
						Strengths		0
						Concerns		0
2010	Galbreath	x				Board Oversight on Climate-change governance	Coalition for Environmentally Responsible Economies	-
						Management Execution on		-

						Climate-change governance		
						Public Disclosure on Climate-change governance		0
						Emissions Accounting on Climate-change governance		0
						Strategic Planning on Climate-change governance		0
1996	Siciliano		x		x		240-YMCA Organizations Data and Survey	+

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance were used this has been recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell

** 0: non-significant, +: positive and -: negative

*** Where age is measured as the average age of all directors on the board “x” has been put under “Average”. Where age is measured as a diversity of the directors age on the board “x” has been put under “Diversity”

**** A linear aggregation of the strength and concerns scores

2.4.4 - Tenure

It has been argued that director tenure is a driving factor of CSR activity in organisations (Harjoto, Laksmana and Lee, 2015). As another board attribute explored in relation to CSR-performance similar to age, either explored from a diversity aspect (e.g. Olthuis and van den Oever, 2020) or average directors' tenure (e.g. Homroy and Slechten, 2019), a review of the literature suggests mixed results (Table. 2-4.). It has been suggested tenure positively influences the overall CSR-performance by lowering CSR-performance concerns (Harjoto, Laksmana and Lee, 2015). When exploring the different dimensions of CSR-performance, de Villiers et al. (2011) concluded the relationship between total environmental performance strengths and tenure is insignificant. However, Hafsi and Turgut (2013) suggested the insignificant relationship may arise because when it comes to dealing with controversial CSR issues such as environmental matters, directors with shorter tenure are more hesitant to speak and higher tenured directors may prefer to follow management.

Table. 2-4: The Impact of Director Tenure on CSR performance

Year	Author	Tenure Measurement***		CSR-performance Dimension*		CSR-performance Index	Results Concerning CSR-performance **
		Average	Diversity	Social	Environmental		
2020	Olthuis and van-den-Oever		x	CSR		Telos	+
2019	Burke et al.	x		CSR Overall****		MSCI ESG STATS (formerly KLD)	0
				CSR Strengths			-
				CSR Concerns			0
2019	Homroy and Slechten	x			Greenhouse gas emissions	European Pollutant Release and Transfer Register	0
2015	Harjoto et al.		x	CSR Overall****		KLD	+
				CSR Strengths			0
				CSR Concerns			-
2013	Hafsi and Turgut		x	CSR Strengths		KLD	0
2013	Walls and Hoffman	x			Positive Environmental Deviance	KLD	0
2011	de Villiers et al.	x			Strengths	KLD	0

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance has been used this was recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell

** 0: non-significant, +: positive and -: negative

*** Where tenure is measured as the average tenure of all directors on the board “x” has been put under “Average”. Where tenure is measured as the diversity of directors’ tenure on the board “x” has been put under “Diversity”

**** A linear aggregation of the strength and concerns score

2.5 **- Board Structure Attributes and CSR-performance**

Board structures have also been considered in several ways. This section sets out four of the most commonly explored board structure attributes: Independence, CEO-duality, Size and Committees.

2.5.1 - Board Independence

One of the most frequently researched board structures in relation to CSR-performance is the number or percentage of non-executive/independent/outside directors (over 61% of current sample) (Table. 2.5). Similar to female-directors, NEDs tend to use their diverse experience and network ties to build sustainability-themed alliances to indirectly influence social performance (Post, Rahman and McQuillen, 2015). Prior studies have indicated NEDs tend to show more interest in the voluntary aspects of CSR than economic performance (Ibrahim, Howard and Angelidis, 2003; Ibrahim and Angelidis, 1995). Mallin and Michelon (2011) believed that because of their dedication to stakeholders' expectations, NEDs will increase their own reputation in society and lead the organisation towards engaging more in CSR activities. On the same note, NEDs' reputation is linked to addressing stakeholder issues. Therefore, these directors are more inclined to consistently satisfy stakeholder concerns compared to executive directors (Post, Rahman and McQuillen, 2015). For instance, they align themselves with stakeholders to improve environmental performance and reduce the likelihood of environmental litigation (Kassinis and Vafeas, 2002), and are argued to positively impact environmental performance (Endo, 2020).

As Table. 2.5 suggests, it is interesting to note some studies indicate NEDs have no significant impact on CSR-performance (Brown, Helland and Smith, 2006; Harrison and Coombs, 2012; McGuinness, Vieito and Wang, 2017; Parthiban, Bloom and Hillman, 2007). Chang et al. (2017) suggested that in countries like South Korea, where there is a minimum requirement of NEDs set by regulators, said directors tend to positively influence CSR-performance when regulatory requirements are exceeded. Contrary to the above findings, Naciti (2019) found a negative impact on social and overall CSR-performance, and argued that the

information passed on to NEDs from the company in regard to CSR can at times be deceptive. The possible threat of such misleading information on NEDs' reputation can influence their decisions and consequently impact CSR-performance negatively.

Table. 2-5: The Impact of Board Independence on CSR performance

Year	Author	NED***		Other Measurements	CSR-performance Dimension*		CSR-performance Index	Results Concerning CSR performance **
		%	No.		Social	Environmental		
2020	Endo	x				x	Nikkei newspaper's annual Environmental Management Survey	+
2019	Burke et al.	x			CSR Overall****		MSCI ESG STATS	+
					CSR Strengths			+
					CSR Concerns			0
2019	Chams and Garcia-Blandon	x			CSR		Dow-Jones Sustainability Index	0
2019	Cruz et al.	x			Employee + Community		CSRHub	0
					Employee			+
					Community			0
2019	Homroy and Slechten	x				Greenhouse gas emissions	European Pollutant Release and Transfer Register	0
2019	Oh et al.	x			CSR		Korea Economic Justice Institute	+
2019	Naciti	x			CSR		Sustainalytics	-
						x		0
					x			-
2018	Crifo et al.	x				x	Vigeo database	0

				%Executive Directors				+
2018	Galbreath	x			CSR		Sustainable Investment Research Institute	0
2018	Hussain et al.	x				x	Company Sustainability Reports	+
					x			+
2017	Adams et al.	x			Donation		Annual reports, Accounts, Internet and Charity sources, and UK insurance company directories	+
					Amount Donated			+
2017	Chang et al.	x			CSR		Korea Economic Justice Institute	Exponentially growing shape
2017	Cho et al.	x			Community Donations		KLD	+
					Employee Benefits			0
					Diversity Commitment			+
					CSR			0
2017	McGuinness et al.	x			CSR		Rankins	0
2017	Walls and Berrone	x				x	Trucost	0
2016	Galbreath	x			CSR		Sustainable Investment Research Institute	+
2016	Jain and Jamali			Independence	CSR		Review	

2015	Ellwood and Garcia-Lacalle	x			Clinical negligence costs		Disclosure on financial statements of NHS Foundation Trust	0
2015	Post et al.		x			Strengths	KLD	0
2014	Fabrizi et al.			%NED>33%	CSR		EIRIS	+
					Community			+
					Employee			0
						x		0
2013	Boulouta			Ratio: NEDs-to-Executive-Directors	CSR Overall****		KLD	0
					CSR Strengths			0
					CSR Concerns			0
2013	Choi et al.	x			CSR		Korea Economic Justice Institute	+
2013	Hafsi and Turgut	x			CSR Strengths		KLD	0
2013	Kabongo et al.	x			Corporate Philanthropy		KLD	0
2013	Walls and Hoffman	x				Positive Environmental Deviance	KLD	0
2013	Zhang et al.	x			Reputation-based CSR		FORTUNE magazine's America's Most Admired Corporations	+
2012	Harrison and Coombs	x			Community		KLD	0
2012	Walls et al.	x				Strengths	KLD	0
						Concerns		+
2011	de Villiers et al.	x				Strengths	KLD	+

2011	Harjoto and Jo	x			CSR		KLD	+
2011	Post et al.	x				Overall****	KLD	0
						Strengths		+
						Concerns		0
2011	Mallin and Michelon	x			CSR		KLD	+
					Community			0
					Employee Relations			0
					Human Rights			0
					Product Quality			0
						x		+
2010	Galbreath			Ratio: Executive-Directors-to-NEDs		Board Oversight on Climate-change governance	Coalition for Environmentally Responsible Economies	+
						Management Execution on Climate-change governance		+
						Public Disclosure on Climate-change governance		+
						Emissions Accounting on Climate-change governance		0
						Strategic Planning on Climate-change governance		+
2003	Williams			Ratio: Executive-Directors-to-NED	Corporate Philanthropy (total Donations)		Corporate 500 Directory of Corporate Philanthropy and National Directory	0
					Community service Donations			0

					Arts and Cultural Donations		of Corporate Giving	0
					Education Donations			0
					Public Policy Donations			0
2007	Parthiban et al.	x			CSR		KLD	0
2008	Surroca and Tribo			%NED with respect to the mean value of sector	CSR		Sustainable Investment Research Institute	-
2006	Brown et al.			%Executive-Directors	Corporate Philanthropy		Corporate Giving Directory	0
2006	Deckop et al.	x			CSR		KLD	-
1999	Johnson and Greening	x			People (Community, Employee relations)		KLD	+
						Product (Environment, Product quality)		+
1998	Coffey and Wang			Executive Directors/NED	Corporate Philanthropy		Council on Economic Priorities	+
1992	Wang and Coffey			Executive Directors /NED	Corporate Philanthropy		Council on Economic Priorities	+

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance were used this has been recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell

** 0: non-significant, +: positive and -: negative

*** Where the proportion of NEDs on the board has been considered in the study “x” has been put under “%”. Where the number of NEDs has been considered in the study “x” has been put under “No.”

**** A linear aggregation of the strengths and concerns scores

2.5.2 - CEO-Duality

CEO-duality or joint CEO and board chair, whilst also used as a factor to examine leadership structure, is another attribute explored in relation to CSR-performance. From an agency view, said roles should be separated to prevent the influence and dominance of a powerful CEO over the board (van der Walt and Ingley, 2003). Like previous board attributes, the literature is divided on the association between this structural attribute and CSR-performance (Table. 2-6). Drawing upon an agency view, some studies demonstrated CEO-duality negatively influences CSR-performance (Hussain, Rigoni and Orij, 2018; Mallin and Michelon, 2011; Naciti, 2019), whereas others suggested no significant relationship between the two (Chams and García-Blandón, 2019; McGuinness, Vieito and Wang, 2017; Surroca and Tribo, 2008). In contrast, Fabrizi et al. (2014) found a positive relation when the CEO holds the position of the chair of the board with a high tenure. The authors further argued that power and establishment of such a CEO will encourage them to engage more in CSR activities. Similar to NEDs, Hafsi and Turgut (2013) argued that as CEO-duality is a norm in countries like the USA, results regarding the impact of this attribute on CSR-performance will have no significant influence when using a sample from such countries. This may be a reason why in a study using a diverse geographical context, results suggested that firms with a separate CEO and board chair demonstrate higher performance on board oversight in regards to climate change (Galbreath, 2010). When explored as a control variable, CEO-duality has recently been seen to have a positive impact on greenhouse gas emissions in high carbon-intensive industries and no significant impact in low carbon-intensive industries (Moussa et al., 2020), indicating the industry where the company operates also plays a role in this attributes' impact.

Table. 2-6: The Impact of CEO-Duality on CSR performance

Year	Author	CSR-performance Dimension*		CSR-performance Index	Results Concerning CSR-performance **
		Social	Environmental		
2020	Moussa et al.		Greenhouse gas emissions	ASSET4	+ (high carbon-intensive industries)
					0 (low carbon-intensive industries)
					+
2020	Nadeem et al.		x	ASSET4	0
		x			0
2019	Chams and Garcia-Blandon	CSR		Dow-Jones Sustainability Index	0
2019	Homroy and Slechten		Greenhouse gas emissions	European Pollutant Release and Transfer Register	0
2019	Naciti	CSR		Sustainalytics	-
			x		-
		x			0
2018	Cook and Glass	Community Strengths		KLD	0
		Product Strengths			0
			Strengths		0
2018	Galbreath	CSR		Sustainable Investment Research Institute	0
2018	Hussain et al.		x	Company Sustainability Reports	-
		x			0
2017	Adams et al.	Donation		Annual reports, Accounts, Internet and Charity sources, and UK	0
		Amount Donated			0

				insurance company directories	
2017	Cho et al.	Community Donations		KLD	-
		Employee Benefits			0
		Diversity Commitment			0
		CSR			0
2017	Galbreath		x	GES Investment Services	0
		x			0
2017	McGuinness et al.	CSR		Rankins	0
2016	Galbreath	CSR		Sustainable Investment Research Institute	0
2016	Glass et al.		Strengths	KLD	0
			Concern		+
2016	Jain and Jamali	CSR		Review	
2013	Hafsi and Turgut	CSR Strengths		KLD	0
2013	Walls and Hoffman		Positive Environmental Deviance	KLD	0
2012	Walls et al.		Strengths	KLD	0
			Concern		0
2011	de Villiers et al.		Strengths	KLD	0
2011	Mallin and Michelon	CSR		KLD	-
		Community			0
		Employee Relations			-
		Human Rights			0
		Product Quality			0

			x		0
2011	Post et al.		Overall****	KLD	0
			Strengths		0
			Concerns		0
2010	Bear et al.	Institutional strengths		KLD	+
		Technical strengths			0
2010	Galbreath	Board Oversight on Climate-change governance		Coalition for Environmentally Responsible Economies	-
		Management Execution on Climate-change governance			-
		Public Disclosure on Climate-change governance			-
		Emissions Accounting on Climate-change governance			0
		Strategic Planning on Climate-change governance			0
2008	Surroca and Tribo	CSR		Sustainable Investment Research Institute	0

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance were used this has been recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell

** 0: non-significant, +: positive and -: negative

*** A linear aggregation of the strength and concerns scores

2.5.3 - Board Size

The literature has generally suggested larger boards are linked to better stakeholder representation, which in turn can lead to higher sensitivity towards stakeholder interests and participation in more CSR activities (Chams and García-Blandón, 2019; Ntim and Soobaroyen, 2013; Siciliano, 1996). However, there is no consensus in the literature on the impact of board size on CSR-performance (Table. 2-7). For instance, while it has even been suggested a larger board is more inclined to break environmental laws and negatively impact environmental performance (Kassinis and Vafeas, 2002) and the overall CSR performance (Olthuis and van den Oever, 2020), some scholars (e.g. Cook and Glass, 2018; Endo, 2020) demonstrated the positive impact of size on environmental performance. Conversely, there are a number of studies that have reported a non-significant relationship between the two (Post, Rahman and Rubow, 2011; Walls, Berrone and Phan, 2012).

Table. 2-7: The Impact of Board Size on CSR-performance

Year	Author	CSR-performance Dimension*		CSR-performance Index	Results Concerning CSR-performance **
		Social	Environmental		
2020	Endo		x	Nikkei newspaper's annual Environmental Management Survey	+
2020	Moussa et al.		Greenhouse gas emissions	ASSET4	0 (high carbon-intensive industries)
					0 (low carbon-intensive industries)
					+
2020	Olthuis and van-den-Oever	CSR		Telos	-
2019	Burke et al.	CSR Overall***		MSCI ESG STATS	+
		CSR Strengths			+
		CSR Concerns			-
2019	Chams and Garcia-Blandon	CSR		Dow-Jones Sustainability Index	+
2019	Homroy and Slechten		Greenhouse gas emissions	European Pollutant Release and Transfer Register	0
2019	Lu and Herremans		x	Sustainalytics	+
2019	Oh et al.	CSR		Korea Economic Justice Institute	0
2018	Cook and Glass	Community Strengths		KLD	+
		Product Strengths			0
			Strengths		+
2018	Galbreath	CSR		Sustainable Investment Research Institute	0

2018	Hussain et al.		x	Company Sustainability Reports	0
			x		0
2017	Chang et al.	CSR		Korea Economic Justice Institute	+
2017	Cho et al.	CSR		KLD	+
		Community Donations			+
		Employee Benefits			0
		Diversity Commitment			+
2017	McGuinness et al.	CSR		Rankins	+
2016	Jain and Jamali	CSR		Review	
2015	Ellwood and Garcia-Lacalle	Clinical negligence costs		Disclosure notes on financial statements of NHS Foundation Trust	0
2015	Ortiz-de-Mandojana and Aragon-Correa		x	US Environmental Protection Agency	0
2011	Post et al.		Overall***	KLD	0
			Strengths		0
			Concerns		0
2013	Bai	x		Archival data from California hospitals	-(for-profit)/+(non-profit)
2013	Choi et al.	CSR		Korea Economic Justice Institute	0
2013	Jia and Zhang	Corporate Philanthropy disaster response		China Securities Regulatory Commission, corporate website and press release	0
2013	Kabongo et al.	Corporate Philanthropy		KLD	+
2013	Marquis and Lee	Corporate Philanthropy		National Directory of Corporate Giving	+

2013	Walls and Hoffman		Positive Environmental deviance	KLD	-
2012	Walls et al.		Strengths	KLD	0
			Concerns		+
2011	de Villiers et al.		Strengths	KLD	+
2011	Jia and Zhang	Corporate Philanthropy disaster		Corporate Disclosure	+
2011	Mallin and Michelon	CSR		KLD	0
		Community			0
		Employee Relations			0
		Human Rights			+
		Product Quality			0
			x		0
2010	Galbreath		Board Oversight on Climate-change governance	Coalition for Environmentally Responsible Economies	+
			Management Execution on Climate-change governance		+
			Public Disclosure on Climate-change governance		+
			Emissions Accounting on Climate-change governance		+
			Strategic Planning on Climate-change governance Board		+
2006	Brown et al.	Corporate Philanthropy		Corporate Giving Directory (2000)	+

2002	Kassinis and Vafeas		Violation	Enforcement and Compliance Assurance Accomplishments Report	+ (breaks law)
1996	Siciliano	x		240 -YMCA Organizations Data and Survey	+

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance were used this has been recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell

** 0: non-significant, +: positive and -: negative

*** A linear aggregation of the strength and concerns scores

2.5.4 - Board Committees

The important decisions made by the board often occur in smaller groups or board-level committees (Kesner, 1988). The benefits of using committees has been acknowledged in the literature since 1973 by Bacon and Brown. Therefore, as an advised structural method for improving corporate governance (Spira and Bender, 2004), the effect of board-level committees dedicated to different CSR issues (here onwards referred to as CSR-committee) have been explored in relation to CSR-performance. Most studies have investigated the existence of such board-level committees as an independent or control variable (Table. 2-8.). Also, more recently in addition to exploring the effect of the existence of said committees on CSR performance, Burke et al. (2019) have focused on the impact of the extent of such committees' diverse responsibilities on CSR-performance. The authors argued the relationship between a CSR-committee and performance increases when the committee focuses on a specific stakeholder groups' interests (i.e. social or environmental) in relation to the relevant performance. Similarly, Homroy and Slechten (2019) found that a firms' greenhouse gas emissions lower with the existence of an environmental committee. By exploring CSR-performance as a strategy to complement entrenchment initiatives by managers, Surroca and Tribo (2008) argued that having independent Audit, Nomination and Remuneration board-level committees – what they referred to as independent control committees – will have a negative impact on CSR-performance stopping managers from misusing CSR performance.

Table. 2-8: The Impact of Board Committees on CSR-performance

Year	Author	Committee	CSR performance-Dimension*		CSR-performance Index	Results Concerning CSR-performance **
			Social	Environment		
2019	Burke et al.	CSR	CSR Overall***		MSCI ESG STATS	0
			CSR Strength			+
			CSR Concern			+
			Community Strengths			Focus>No focus
			Employee relations Strengths			Focus>No Focus
			Consumer and Supplier Strengths			Focus>No Focus
				Strengths		Focus>No Focus
			Community Concerns			Focus=No Focus
			Employee relations Concerns			0
			Consumer and Supplier Concerns			Focus=No Focus
				Concerns		Focus>No Focus
2019	Chams and Garcia-Blandon	No. Committees	CSR		Dow-Jones Sustainability Index	+
		CSR				0
2019	Homroy and Slechten	Environment		Greenhouse gas emissions	European Pollutant Release and Transfer Register	+
2018	Hussain et al.	CSR		x	Company Sustainability Reports	+
			x			+

2017	Dixon-Fowler et al.	Environmental		Strengths	KLD	+
2017	Walls and Berrone	CSR		x	Trucost	0
2013	Rodrigue et al.	Environmental		Regulatory performance	KLD	0
				Pollution prevention		0
2012	Walls et al.	Environmental		Strengths	KLD	+
				Concerns		+
2011	de Villiers et al.	Governance		Strengths	KLD	+
2011	Mallin and Michelon	CSR/Director responsible for CSR	CSR		KLD	0
			Community			+
			Employee Relations			0
			Human Rights			+
			Product Quality			0
				x		0
2008	Surroca and Tribo	Control Committee (existence of Audit, Nomination and Remuneration committees with NEDs)	CSR		Sustainable Investment Research Institute	-

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance has been used this was recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell
** 0: non-significant, +: positive and -: negative
*** A linear aggregation of the strength and concerns scores

2.5.5 - Board Attribute Interactions

While the literature has predominantly focused on specific board attributes in explaining CSR-performance, more recently studies have begun to shift the emphasis to the interactions between two board attributes (Table. 2-9). Although limited, these recent studies indicate board attributes do not work in isolation, but affect each other's impact on CSR-performance. For instance, Walls et al. (2012) argued that when explored separately board size and CEO-duality had positive and non-significant impacts on environmental concerns respectively, yet their interaction had a negative impact on environmental concerns.

Table. 2-9: The Impact of Board Attribute Interactions on CSR-performance

Year	Author	Interactions	CSR-performance Dimension*		CSR-performance Index	Results Concerning CSR-performance **
			Social	Environmental		
2019	Homroy and Slechten	EED[1]*average tenure of EEDs		Greenhouse gas emissions	European Pollutant Release and Transfer Register	+
		EEDs*Environmental-Committee				+
2018	Hussain et al.	CEO-Duality*Non-executive		x	Company Sustainability Reports	-
			x			0
2017	Galbreath	Insider*Insider CSR Training		x	GES Investment Services	+
			x			+
2017	McGuinness et al.	Female CEO*Female-Director	CSR		Rankins	0
		Female Chair*Female-Directors				0
2016	Galbreath	Non-executive*Female-Director	CSR		Sustainable Investment Research Institute	+
2013	Jia and Zhang	Critical Mass of Female-Directors*Age Diversity of Female-Directors	Corporate Philanthropy disaster response		China Securities Regulatory Commission, corporate website and press release	+
2013	Walls and Hoffman	Degree-centrality[2]*Environmental Expertise		Positive Environmental deviance	KLD	+

[1] Non-executive directors with previous experience in environmental issues
[2] "short-term influencing effects"

		Eigenvector[3]*Environmental Expertise				+
2012	Walls et al.	Non-executive*CEO-duality		Strengths	KLD	-
				Concerns		-
		Board Size*CEO-duality		Concerns		-

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used this has been recorded under related CSR-dimension. If the environmental/social strengths, concerns or overall performance has been used this was recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell
**0: non-significant, +: positive and -: negative

[3] “friends-of-friends influence”

2.6 **- Underlying Theories**

When exploring corporate governance in relation to CSR, especially concerning the implementations of board attributes on CSR-performance, the literature has used a wide range of theories. Consistent with previous reviews (Jain and Jamali, 2016), our review identified three main theoretical frameworks that have underpinned the relationship between board attributes and CSR performance; namely agency theory, resource-dependence and stakeholder theory (Table. 2-10). Additionally, to overcome limitations of existent theories and capture all complexities of the relevant literature, in recent years some researchers (over 35% of the current sample) have used more than one theory in their theorisation. They believe one single theory cannot comprehensively explain the relationship between various board attributes and CSR performance (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Hussain, Rigoni and Orij, 2018; Moussa et al., 2020). Often agency and resource-dependence theories are coupled together or alongside other theories (Table. 2-10). The reason for this approach may lie in the fact that boards have two main functions: from the agency perspective to overlook and control, and from the resource-dependence perspective to increase access to a variety of resources (Hillman and Dalziel, 2003; Mallin, Michelon and Raggi, 2013). The belief that board diversity influences performance is also based on the latter perspective (Pfeffer and Salancik, 1978; van der Walt and Ingley, 2003). Often empirically conducted studies imply board diversity positively impacts CSR-performance (e.g. Hafsi and Turgut, 2013; Harjoto, Laksmana and Lee, 2015)

It has been argued that multiple theoretical perspective is a means to fully recognise the diverse roles the board plays (Moussa et al., 2020; de Villiers, Naiker and van Staden, 2011). Considering the results obtained in the current review, and echoing previous research (Jain and Jamali, 2016), it would seem this approach is a positive step in developing theory to fully understand the overlap between corporate governance and CSR. Nonetheless, Walls et al. (2012) argued that with all the progress made to understand this, there is still no dominant paradigm to help explain the phenomenon completely. They suggested

stronger evidence is needed from a “facts” perspective before more theory based empirical research could be conducted.

Table. 2-10: Theory Used in Research explaining the impact of Board attributes on CSR-performance

Year	Author*	Theory						
		Agency	Resource-Dependence	Stakeholder	Critical mass	Resource-based view	Upper Echelons	Others**
2020	Endo	x	x					
2020	Moussa et al.	x	x					x
2020	Nadeem et al.		x	x				
2020	Olthuis and van-den-Oever						x	
2019	Burke et al.							x
2019	Chams and Garcia-Blandon			x				
2019	Cruz et al.							x
2019	Francoeur et al.							x
2019	Homroy and Slechten		x					
2019	Lu and Herremans		x					
2019	Naciti	x		x				
2019	Oh et al.	x	x					x
2018	Cook and Glass				x			x
2018	Galbreath			x				
2018	Hussain et al.	x		x				
2017	Adams et al.			x				
2017	Chang et al.	x	x					
2017	Dixon-Fowler et al.	x	x					
2017	McGuinness et al.				x			
2016	Byron & Post						x	
2016	Galbreath	x				x		
2016	Shaukat et al.	x	x			x		
2015	Ellwood and Garcia-Lacalle			x			x	x
2015	Ortiz-de-Mandojana and Aragon-Correa					x		x
2015	Harjoto et al.			x				

2015	Périlleux and Szafarz							x
2015	Post et al.		x				x	
2013	Boulouta							x
2013	Hafsi and Turgut	x	x					
2013	Jia & Zhang				x			
2013	Kabongo et al.		x					
2013	Marquis and Lee						x	
2013	Rodrigue et al.							x
2013	Walls and Hoffman							x
2013	Zhang et al.							x
2012	Harrison and Coombs	x		x				
2011	Post et al.	x			x			
2011	de Villiers et al.	x	x					
2011	Harjoto and Jo	x						
2011	Jia and Zhang	x						
2011	Mallin and Michelon	x	x	x				x
2010	Bear et al.	x	x					x
2010	Galbreath	x						
2008	Surroca and Tribo	x						
2006	Brown et al.	x						
2002	Kassinis and Vafeas	x	x					
1999	Johnson and Greening	x	x	x				
1996	Siciliano		x					x
1992	Wang and Coffey	x						

* Only studies included where the theory/theories used/contributed to were clearly stated by the researchers

** Includes theories that have been used in one or maximum two of the sample literatures and are as follows: Accountability, Social Role, Stewardship, Social Capital, Token, Role Congruity, Systematic, Substantive, Institutional, Legitimacy, Signalling, Impression Management and Pluralism

2.7 - Discussion and Suggestions for Future Research

Our review sought to unravel multiple attributes of boards and their impact on CSR-performance. Specifically, in examining the underpinning effects, our study has distinguished the two prevailing attributes of director characteristics and board structure, where we have highlighted and identified a number of inconsistencies regarding their specific effects in the literature.

2.7.1 - Reasons for inconsistencies in the effects of board attributes on CSR-performance

First, researchers believe contextual factors such as the country and industry where the company is active moderates the effects of board attributes on CSR-performance (Chams and García-Blandón, 2019; Chang et al., 2017; Harjoto, Laksmana and Lee, 2015; Jia and Zhang, 2013). Conducting a meta-analysis of 87 independent samples from over 20 countries, Byron and Post (2016) concluded that in countries with greater gender parity and shareholder protection, the relationship between women directors and CSR performance is more positive. This line of reasoning is echoed by Chang et al. (2017) who believed that existing theories used by western countries in regard to the overlap of corporate governance and CSR may not apply in the exact same way in eastern countries, and depends on the institutional contexts of where the organisation lies.

Second, the reason for said discrepancies could lie with conceptualisation and theorisation of the relationship between board attributes and CSR performance. Some researchers have theorised this relationship as linear (Bear, Rahman and Post, 2010; Harjoto and Jo, 2011; Johnson and Greening, 1999). However, more recently it has been suggested the relationship might be non-linear for some attributes. For instance, Chang et al. (2017) demonstrated that the relationship between diversity in directors education and CSR performance is convex (U-shaped). Similarly, de Villiers et al. (2011) suggested the relationship between board independence and environmental performance is concave (invert U-shaped). Furthermore, some scholars have stated that board attributes in relation

to CSR performance are exogenous (e.g. Mallin and Michelon, 2011; Rodrigue, Magnan and Cho, 2013). Yet, taking into consideration that in corporate governance the relationship between director characteristics and organisation performance often tends to be considered endogenous (Adams et al., 2010), some researchers have recently begun treating the relationship as such (e.g. Harjoto, Laksmana and Lee, 2015; Shaukat, Qiu and Trojanowski, 2016) . Shaukat et al. (2016) have even found there is a positive cyclical relation between boards CSR attributes, strategies and CSR performance, and suggested this cyclical relation as an indication of the leaders and laggards in CSR activities.

Furthermore, it has been argued that CSR performance is a complex and multidimensional concept (Harjoto, Laksmana and Lee, 2015; Mallin and Michelon, 2011; Walls, Berrone and Phan, 2012), where different attributes affect different dimensions differently (Francoeur et al., 2019; Galbreath, 2010; Harjoto, Laksmana and Lee, 2015; Mallin and Michelon, 2011; Naciti, 2019). For instance, Mallin and Michelon (2011) found that the proportion of NEDs affects the overall CSR performance by influencing environmental performance but has no significant effect on other CSR performance dimensions. Also, the authors found board-size (as a control variable) has no significant effect on the overall CSR performance but positively affects human rights performance. Therefore, as industries tend to implement the social and environmental dimensions differently (Bansal, Gao and Qureshi, 2014), in explaining the effects of board attributes, recent research suggests an examination of individual CSR performance dimensions (Mallin and Michelon, 2011; Nadeem, Gyapong and Ahmed, 2020; Shaukat, Qiu and Trojanowski, 2016; Walls, Berrone and Phan, 2012)

Lastly, the inconsistent results can be explained by the way CSR is measured. Using different indices may lead to different results (Boulouta, 2013; Shaukat, Qiu and Trojanowski, 2016). Particularly as the CSR performance indices used by researchers tend to follow different methodologies, with some using positive screening criteria like Dow Jones or negative screening criteria like KLD and others a mix of both (FTSE4Good) (Fowler and Hope, 2007). Also, some indices are made up of CSR performance concerns or strength or both (Boulouta, 2013).

Therefore, just considering the overall score of CSR performance (a linear aggregation of the strength and concerns) may not present the whole picture (Walls, Berrone and Phan, 2012).

2.7.2 - Directions for Future Research

Taking all of the above into consideration, it is only natural to reiterate previous literature and suggest future studies are necessary to help shed more light on the aforementioned issues. Specifically, we have identified two suggestions that could address some of the inconsistencies regarding the impact of board attributes on CSR-performance in literature.

2.7.2.1 - Identifying the combined impact of board attributes on CSR-performance

As mentioned above, it has been argued that the interaction of some board attributes affects CSR-performance. By building on these findings, and focusing on more than two attributes at a time, a new line of research may lie in identifying the combinations of multiple interrelated attributes and their impact on CSR-performance, where exploring different configurations of board attributes can be seen as a step towards finding a better understanding of the phenomenon. While general linear regression models may be limited in interpreting interactions of more than two variables, new methodological advancements such as Qualitative Comparative Analysis (QCA) would enable the exploration of multiple configurations of board attributes that lead to CSR performance (Misangyi et al., 2017). Board attributes do not work in isolation but interact with each other in shaping CSR-performance. For instance, as suggested by some studies, female board members, female CEO, female board chair or executive family female-directors positively impact CSR-performance (Cruz et al., 2019; Galbreath, 2010; Mallin and Michelon, 2011; McGuinness, Vieito and Wang, 2017). However, the interaction of a female board chair and female-directors has no significant impact (McGuinness, Vieito and Wang, 2017). Thus, we may conclude that gender when combined with all these attributes can create different outcomes than in isolation.

2.7.2.2 - Identifying board-level CSR-Committee attributes and their combined impact on CSR-performance

The composition of board-level committees are also important as they may differ from the boards as a whole (Kesner, 1988). In business, where the importance of relations with key stakeholders have become paramount, organisations voluntarily set up additional board-level committees dedicated to stakeholder interests and concerns (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017). However, it has been argued that prior studies have predominantly focused on exploring the implication of the board as a whole (Johnson, Schnatterly and Hill, 2013; Kesner, 1988). There is limited research on board-level sustainability committees as a component of board structure. While the literature is divided on the role of the existence of these committees on CSR-performance (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017), the composition of these committees and their effect on CSR-performance have remained largely unexplored – notwithstanding the efforts of Eberhardt-Toth (2017) who examined the composition of the board-level CSR-committees of 177 non-financial companies in relation to obtaining higher CSR-performance. The results indicate higher CSR-performance has a positive relation with some characteristics within the CSR-committee. Therefore, another new line of research could examine the effect of board-level CSR-committee attributes, composition and interaction with other board attributes on CSR-performance.

2.8 - Theoretical and Practical Implications

From a theoretical perspective by identifying and distinguishing between two prevailing board attributes, namely board characteristics and board structures, our study uncovers similarities and inconsistencies regarding the effects of board attributes on CSR-performance. Specifically, we find substantial variation in conceptualisations, theoretical frameworks applied, measurements used and the contexts across studies. The identified factors provided a basis to explain the inconsistent results, determine research gaps and offer directions for future research. While there has been a call for examining corporate social responsibility

in light of corporate governance mechanisms (Jain and Jamali, 2016; Walls, Berrone and Phan, 2012), only a few comparative studies have adopted a corporate governance view in explaining CSR-performance. Our study contributes to this line of research by extending the understanding of the role of board attributes in CSR-performance through offering a synthesis of dominant scholarly discourses and an organising lens for future scholarship. The move towards multi-theory usage in recent literature is seen as a positive step to better understand this research area, and the need to explore culture and country when applying theory is suggested.

From a practical point of view our study reveals that board attributes do not work in isolation but interact with each other in shaping CSR-performance. This calls for practitioners to consider the combinatory effects of these attributes in forming a board that can help promote CSR-performance. For instance, based on previous studies, appointing female-directors, chairs and CEOs positively impacts CSR-performance (Cruz, Justo and Larraza-Kintana, 2019; Galbreath, 2010; Mallin and Michelon, 2011; McGuinness, Vieito and Wang, 2017). However, companies would need to consider appointed positions simultaneously as it has been suggested the interaction of a female board-chair and female-directors has no significant impact on CSR-performance (McGuinness, Vieito and Wang, 2017). On the other hand, the number of female-directors and the diversity of age among these directors is argued to have a positive impact on CSR-performance (Jia and Zhang, 2013). Indicating not only the role, but the number and age of females appointed at board-level matters. Relevant CSR specific training and knowledge is also important, and it has been indicated that directors with CSR knowledge and training have a positive impact on CSR-performance (Galbreath, 2017; Homroy and Slechten, 2019). Overall, it can be argued that the composition of the director attributes sitting at the board table, not individual attributes, needs to be considered.

2.9 - Conclusion

This systematic review of literature was conducted with the aim of identifying what literature says regarding board attributes associated with directing CSR goals in

the organisation. The effect of director characteristics and board structure, as two dimensions of board attributes, on CSR-performance and the external elements impacting the effect of this relationship – that contribute to the inconsistent results found in the current literature – was explored. To the knowledge of the authors, this is the first review to take this point of view. This is especially important as it has been suggested board structures, though fundamental components in corporate governance, can only fully explain CSR-performance alongside director characteristics (Hafsi and Turgut, 2013). By building on the literature, some answers were provided for the main research question. *What is the impact of Corporate Governance at board-level on Corporate Social Responsibility Performance?* However, new questions have arisen, particularly in regard to exploring the impact of more than two board attributes simultaneously. The answers to such questions may lie in exploring the areas identified for future research in this paper.

3 . Exploring the Role of Board-level Corporate Social Responsibility Committees in Corporate Social Responsibility Performance: An Empirical Investigation

ABSTRACT

This paper examines the role of Corporate Social Responsibility (CSR) committees in driving CSR-performance. Empirical analysis of a cross-industry sample of 2891 firm-year observations from 789 listed companies during a 4-year period (2013-2016) showed that CEOs who chair boards with a CSR-committee are more likely to acknowledge and take responsibility for CSR activities. Thus, they are more influential in driving CSR-performance. The positive effect of female-CEOs on CSR-performance appears to be stronger for boards with a CSR-committee. Additionally, the interaction of female-CEOs and non-executive members of CSR-committees has a positive impact on CSR-performance. The results further indicated the presence of female-directors on the CSR-committee positively impact CSR-performance. Our study contributes to the growing literature on CSR-committees by investigating these committees beyond their presence, and exploring the role of committee composition in driving CSR-performance. Additionally, our work contributes to the recent call for investigating the interactions among board attributes and their impact on CSR-performance. Specifically, our findings extend the understanding of the role of CSR-committees in CSR-performance by investigating the interactive effects of their presence and composition with various board attributes. These insights can guide companies in deciding the set-up and composition of CSR-committees in line with other board attributes to achieve their social and environmental objectives.

Keywords:

CSR-committee; accountability theory; resource-dependence theory; social performance; environmental performance; board of directors

3.1 - Introduction

The majority of important decisions made by a company's board of directors are made in smaller groups or committees (Dixon-Fowler, Ellstrand and Johnson, 2017; Kesner, 1988; Kolev et al., 2019; Paine, 2014). The benefits of using committees have been noted from as early as 1973 by Bacon and Brown. Committees often lead to more input and debate from members (Kesner, 1988; Kolev et al., 2019; Paine, 2014). Specifically, scholars have argued that by delegating a specific task to fewer decision makers, the efficiency of the board will increase (Burke, Hoitash and Hoitash, 2019; Kolev et al., 2019; Spira and Bender, 2004). In most countries with official corporate governance codes and guides, three committees tend to be mandatory or advised as good practice, namely nomination, audit and remuneration/compensation committee (Burke, Hoitash and Hoitash, 2019; Financial Reporting Council, 2018; German Corporate Governance Code, 2017; NYSE Governance Services, 2014).

Stakeholders are increasingly holding companies responsible for their environmental and social conduct (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Kolev et al., 2019; White, 2012). The board of directors plays a pivotal role in setting and monitoring the companies' environmental and social aims and objectives (Eccles, Ioannou and Serafiem, 2011; Elkington, 2006; Harjoto, Laksmana and Lee, 2015; Jamali, Safieddine and Rabbath, 2008; de Villiers, Naiker and van Staden, 2011). Achievement and realisation of these objectives are often measured through the notion of corporate social responsibility (CSR) performance (Galbreath, 2017; Harjoto, Laksmana and Lee, 2015). As the importance of relations with key stakeholders becomes more apparent, companies voluntarily choose to set up additional board-level committees to enable more focused and specialised attention on social and environmental issues; thus achieving their set aims and objectives (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017; Kolev et al., 2019). Establishing board-level committees further allows companies to demonstrate their social and environmental accountability to both internal and external stakeholders (Burke, Hoitash and Hoitash, 2019; Mallin and Michelon, 2011; Walls, Berrone and Phan, 2012). In recent years this has led to a gradual

increase in the number of companies setting up committees dedicated to social and environmental activities as part of their board structure (hereafter referred to as CSR-committee). For example, according to the sample used in the current study, between 2012 and 2015 the number of FTSE350 and S&P500 companies with a CSR-committee has increased by nearly 22%.

Despite the prevalence of CSR-committees, the literature on the role of these committees in CSR-performance has remained somewhat ambiguous (Burke, Hoitash and Hoitash, 2019; Endrikat et al., 2020). First, where the role of CSR-committees in CSR-performance has been investigated, it is largely assumed these committees exist in isolation. Specifically, while recent studies suggest board attributes interact with each other in shaping CSR-performance (e.g. Galbreath, 2017; Homroy and Slechten, 2019; Walls, Berrone and Phan, 2012), the interactive effects of CSR-committees and other board attributes have remained largely unexplored. Second, most of the extant literature has only focused on the existence of CSR-committees and its impact on CSR-performance (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Homroy and Slechten, 2019; Hussain, Rigoni and Orij, 2018). Indeed, these studies are inadequate to fully explain the nuances of CSR-committees – in terms of the characteristics of members and committee structure – that are influential in shaping CSR-performance. Using a cross-industry sample of 2891 firm-year observations from 789 listed companies during a 4-year period (2013-2016), this study addresses the question of: *What is the role of a CSR-committee in driving CSR-performance?* Specifically, our study aims to investigate the interaction of CSR-committees and a set of key board attributes including female-directors, non-executive directors (NEDs), CEO-duality (joint CEO and board-chair) and female-CEOs in explaining CSR-performance. Furthermore, this study seeks to unpack the composition of the CSR-committee in terms of female-directors on the committee and the independence of the committee (proportion of NEDs on the committee). We attempt to explore their role and interactions with board attributes (CEO-duality and female-CEOs) in shaping CSR-performance.

This study contributes to the existing literature in several ways: First, it adds to the growing literature on CSR-committees by investigating these committees beyond their presence and exploring the role of committee composition in driving CSR-performance. Second, this study contributes to the recent call for investigating the interactions among board attributes and their impact on CSR-performance (Endrikat et al., 2020; Homroy and Slechten, 2019). Specifically, the findings extend the understanding of the role of CSR-committees in CSR-performance by investigating the interactive effects of committee presence and composition with various board attributes.

This research has important practical implications too. Considering the voluntary move by companies to set up CSR-committees at board-level and the lack of detail in the corporate governance realm regarding the boards' role in monitoring corporate social responsibility and sustainability (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017; Paine, 2014), this study helps businesses understand the CSR-committees' role, its interaction with other key board attributes and its composition. These insights can guide companies in deciding the set-up of committees in line with other board attributes to achieve their social and environmental objectives.

This paper proceeds as follows: In the next section, the theoretical background of the study is established and a literature review on CSR-committees is provided. Then the theoretical framework and hypotheses exploring the possible role of the CSR-committee and its attributes is developed and presented. This is followed by a description of the methodology and a report of results. Finally, a discussion of the results and future research directions are provided.

3.2 **- CSR-Committees and CSR-Performance**

While literature on the attributes of board of directors and CSR-performance is well developed, research associated with CSR-committees as an important component of board governance structure is still in an early stage (Burke, Hoitash and Hoitash, 2019; Johnson, Schnatterly and Hill, 2013; Kesner, 1988; Kolev et al., 2019). The evidence does not go much beyond exploring the influence of such committees' existence on CSR-performance, with some demonstrating a

positive relationship (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Homroy and Slechten, 2019; Hussain, Rigoni and Orij, 2018) and others reporting a non-significant effect (e.g. Chams and García-Blandón, 2019; Rodrigue, Magnan and Cho, 2013) (Appendix C.1).

More recently, a few studies have gone beyond this to explore the focus of the CSR-committee and its impact on social and environmental performance. For instance, Burke et al. (2019) demonstrated the relationship between the CSR-committee and performance strengthens when the committee focuses on a specific stakeholder groups' interests (i.e. social or environment) compared to when there is no focus. Similarly, Homroy and Slechten (2019) found that a firms' greenhouse gas emissions are lowered with a board-level committee that focuses on environmental issues. On the other hand, Rodrigue et al. (2013) were not able to find any significant association between board environmental committees and environmental regulatory performance or pollution prevention.

Overall, except for a limited number of studies, there are important aspects that have remained largely unexplored through empirical literature. For instance, despite the efforts of Dixon-Fowler et al. (2017) – who were not able to find any support for the influence of stakeholder representation on the boards' environmental committee – the composition of CSR-committees, the interaction of board and CSR-committee attributes and their effect on social and environmental performance have not been investigated. Specifically, clarifying the relationships between board attributes, Endrikat et al.'s (2020) recent meta-analysis of 82 empirical studies has called for further research into the interactive effects of board attributes including CSR-committees on CSR-performance. The current study addresses this issue, advancing this body of work by simultaneously examining a comprehensive set of CSR-committees and board attributes and their role in driving social and environmental performance.

3.3 - Theoretical Framework and Hypotheses Development

3.3.1 - CSR-committees as a Board Attribute

From an accountability theory perspective, a person or group will be accountable when they acknowledge and take responsibility for their actions and decision-making processes (Lerner and Tetlock, 1999; Tetlock, 1983). Accountability theory is based on the assumption that one may need to justify actions and behaviour to another party based on formal and informal expectations. In turn this perception will increase the probability one will feel accountable for such decision-making processes (Lerner and Tetlock, 1999). As mentioned, boards voluntarily set up CSR-committees. Doing so requires they publish the main responsibilities of these committees in the annual proxy filings. Communicating their presence and responsibilities towards environmental and social issues to stakeholders (Burke, Hoitash and Hoitash, 2019) will then create expectations and hold them accountable to such expectations (Frink and Klimoski, 2004). Specifically, the board may be called upon and held accountable by stakeholders to justify the actions and decision-making processes resulting in CSR-performance. Thus, from an accountability theory perspective, it is predicted the existence of a CSR-committee will increase CSR-performance:

H1*: The presence of a CSR-committee positively impacts CSR-performance.*

Recent studies have suggested board attributes do not work in isolation and interact with each other in driving CSR-performance (e.g. Bolourian, Angus and Alinaghian, 2021; Endrikat et al., 2020; Galbreath, 2016; McGuinness, Vieito and Wang, 2017). Furthermore, being held accountable for CSR actions and decision-making processes collectively and individually motivates the board to consider and execute the decisions made by the CSR-committee (Burke, Hoitash and Hoitash, 2019; Lerner and Tetlock, 1999). Therefore, it can be reasonably expected that the CSR-committee influences board attributes and how they impact CSR-performance.

Previous research suggests women, when compared with men, tend to lean more towards social performance issues (Backhaus, Stone and Heiner, 2002). Women

heighten the sensitivity of boards towards multiple stakeholders' interests and needs (Bear, Rahman and Post, 2010; Mallin and Michelon, 2011; Williams, 2003). Women's collective decision-making style (Konran, Kramer and Erkut, 2008; Nielsen and Huse, 2010) also helps improve CSR strengths (Bear, Rahman and Post, 2010; Harjoto, Laksmana and Lee, 2015). It can be argued accountability and responsibility felt by female-directors – due to setting up voluntary CSR-committees (Burke, Hoitash and Hoitash, 2019; Frink and Klimoski, 2004) – can heighten their existing concern for stakeholders and tendency towards social performance. Thus, it can be predicted the CSR-committee positively influences the impact of female-directors on CSR-performance:

H2a*: The CSR-committee positively moderates the impact of female-directors on CSR-performance.*

Scholars have argued that it is the importance of the position, rather than number, held by women that counts (Ellwood and Garcia-Lacalle, 2015). Females in leadership roles are seen to be important in driving CSR-performance (McGuinness, Vieito and Wang, 2017), and are typically more concerned with long-term outcomes and the interests of stakeholders – even if it means sacrificing short-term profits (Cook and Glass, 2018; Matsa and Miller, 2013). Therefore, it is predicted female-CEOs' individual acknowledgement of responsibility towards social and environmental issues caused by CSR-committees (Burke, Hoitash and Hoitash, 2019; Frink and Klimoski, 2004) will enhance their concerns towards stakeholder interests and consequently increase CSR-performance[1] :

H2b*: The CSR-committee positively moderates the impact of the presence of female-CEOs on CSR-performance.*

[1] Initially a female board-chair was considered as well. However, as only 41 year-companies out of the 2891 year-companies in the current sample and only 2 year-companies out of the 609 year-companies with a CSR-committee had female-chairs, exploring this attribute was not possible

From an agency theory perspective, the roles of the CEO and board-chair should be separated to prevent the influence and dominance of a powerful CEO over the board (Naciti, 2019; van der Walt and Ingley, 2003). Therefore, by drawing upon an agency view, some studies have argued and demonstrated that CEO-duality negatively influences CSR-performance (e.g. Hussain, Rigoni and Orij, 2018; Mallin and Michelon, 2011; Naciti, 2019). From this point of view, the CEO and board-chair are two powerful roles that can influence the discussions and decisions made by the board. On the other hand, setting up voluntary CSR-committees where the duty and responsibility of the committee is transparent to stakeholders can be a mechanism for accountability of board members (Burke, Hoitash and Hoitash, 2019). It can be argued that this acknowledgement of responsibility for CSR-performance and accountability to stakeholders by an influential and powerful CEO and chair can have a positive impact on CSR-performance. Therefore, it is predicted the CSR-committee positively influences the presence of CEO-duality on CSR-performance:

***H2c**: The CSR-committee positively moderates the impact of CEO-duality on CSR-performance.*

Prior studies have indicated that NEDs tend to show more interest in the voluntary aspects of CSR than economic performance (Ibrahim, Howard and Angelidis, 2003; Ibrahim and Angelidis, 1995). Mallin and Michelon (2011) believe because of their dedication to stakeholders' expectations, NEDs will increase their own reputation in society and lead the organisation towards engaging more in CSR activities. On the same note, NEDs' reputation is linked to addressing stakeholder issues. Therefore, compared to executive directors, these directors are more inclined to consistently satisfy stakeholder concerns (Post, Rahman and McQuillen, 2015). On one hand it can be argued that NEDs have acknowledged taking responsibility for social and environmental issues through the CSR-committee (Burke, Hoitash and Hoitash, 2019; Frink and Klimoski, 2004). On the other hand, they are focused on maintaining their reputation among stakeholders. So, it is predicted the CSR-committee will positively influence the impact of NEDs on CSR-performance:

***H2d**: The CSR-committee positively moderates the impact of NEDs on CSR-performance.*

Figure. 3-1. demonstrates the conceptual model for the predictions made on the role of the CSR-committee in driving CSR-performance.

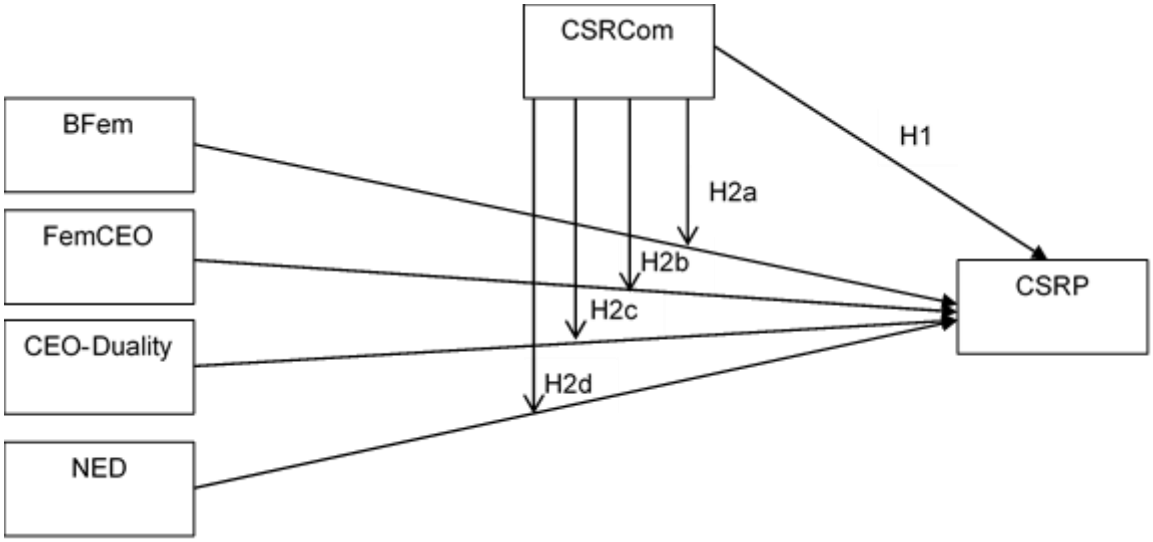


Figure. 3-1: The conceptual model on the role of CSR-committees as an attribute of the board

3.3.2 - The Presence of Female-directors and NEDs on the CSR-committee

Female-directors are more likely to be community influencers from non-business backgrounds (Hillman, Cannella and Harris, 2002; Singh, Terjesen and Vinnicombe, 2008), and will contribute different resources and skill sets. They increase attention towards multiple stakeholders' interests and needs (Bear, Rahman and Post, 2010; Mallin and Michelon, 2011; Williams, 2003). Boards with female-directors are more likely to engage in CSR activities (Bear, Rahman and Post, 2010; Périlleux and Szafarz, 2015; Williams, 2003). Also, it has been suggested female-directors are more likely to have higher levels of educational qualifications (Hillman, Cannella and Harris, 2002; Singh, Terjesen and Vinnicombe, 2008). Cho et al. (2017) demonstrated boards with academic faculty (professor-directors) members exhibit higher CSR-performance. Building on

resource-dependence theory, it can be argued that female-directors increase access to a variety of resources allowing access to information beyond the boundaries of the company (Pfeffer and Salancik, 1978). Furthermore, it has been suggested a small female presence on boards is insufficient to affect CSR-performance (Périlleux and Szafarz, 2015). Boards with more women tend to act more socially responsible compared to boards with no or few women (Post, Rahman and McQuillen, 2015). Therefore, as a sub-structure of the board, it is predicted that with female-directors on the CSR-committee, attention to stakeholder interests and non-business resources will be transferred to the committee and ultimately increase CSR-performance:

***H3**: A larger proportion of female-directors on the CSR-committee positively impacts CSR-performance.*

Similar to female-directors, NEDs tend to use their diverse experience and network ties to build sustainability-themed alliances to indirectly influence social performance (Post, Rahman and McQuillen, 2015). Also, compared to executive directors, these directors are more inclined to consistently satisfy stakeholder concerns (Post, Rahman and McQuillen, 2015). For instance, they align themselves with stakeholders to improve environmental performance and reduce the likelihood of environmental litigation (Kassinis and Vafeas, 2002). They are shown to positively impact social and environmental performance (Endo, 2020; Hussain, Rigoni and Orij, 2018; Oh, Chang and Jung, 2019). These directors are suggested to be more knowledgeable about other organisations' different strategies (Fama and Jensen, 1983; McDonald and Westphal, 2010), and consequently increase the access of the board to a variety of resources (Hillman and Dalziel, 2003; Mallin, Michelon and Raggi, 2013). Therefore, similar to what was argued in regard to female-directors on the CSR-committee, it is predicted NEDs will transfer their diverse experience, knowledge and sustainability-themed alliances to the CSR-committee and increase CSR-performance:

***H4**: A larger proportion of NEDs on the CSR-committee positively impacts CSR-performance.*

Figure. 3-2 demonstrates the predicted impact of female and non-executive committee members on CSR-performance.

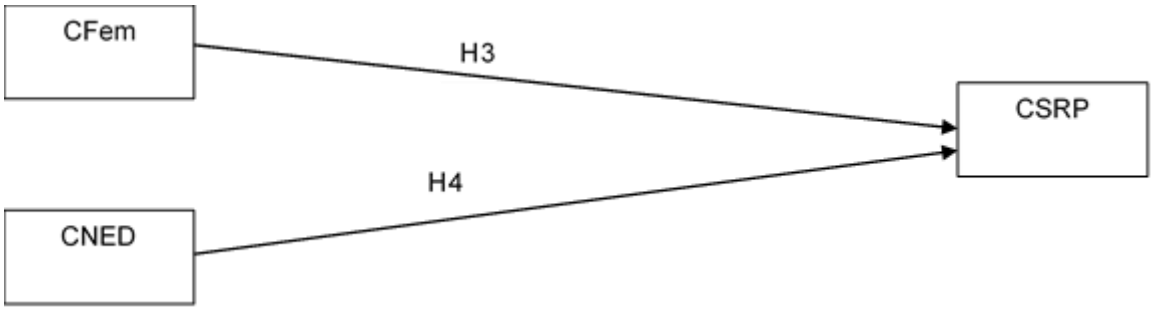


Figure. 3-2: The conceptual model on the role of CSR-Committee composition

3.3.3 - Interaction of Board and Committee Attributes

Female-directors and NEDs tend to use their diverse experience and network ties to build sustainability-themed alliances and indirectly influence social performance (Post, Rahman and McQuillen, 2015). Consequently, both help increase access to resources that are out of the company's internal boundaries (Hillman and Dalziel, 2003; Mallin, Michelon and Raggi, 2013; Pfeffer and Salancik, 1978), and increase social and environmental performance (Hussain, Rigoni and Orij, 2018; Lu and Herremans, 2019; Nadeem, Gyapong and Ahmed, 2020). It is argued the presence of female-directors and NEDs on the CSR-committee will transfer these alliances and resources to the committee and ultimately increase CSR-performance. At the same time female-CEOs, compared to men, are generally more inclined to focus on the interests of stakeholders (Cook and Glass, 2018; Matsa and Miller, 2013). Due to the CSR-committee presence, they feel accountable towards social and environmental issues (Burke, Hoitash and Hoitash, 2019). Therefore, it is predicted that such a female-CEO would take into consideration the decisions made in the CSR-committee, positively impacting the influence of female-directors and NEDs on the CSR-committee and increasing CSR-performance:

H5a*: A female-CEO positively moderates the impact of female members of the CSR-committee on CSR-performance.*

***H5b**: A female-CEO positively moderates the impact of non-executive members of the CSR-committee on CSR-performance.*

Building on accountability theory, we argued that when a voluntary CSR-committee is set up, an influential and powerful CEO who holds the position of board-chair acknowledges responsibility for CSR-performance. Now we go on to predict that such a powerful CEO and chair would positively impact the influence of female-directors and NEDs on the CSR-committee, and ultimately increase CSR-performance:

***H6a**: CEO-duality positively moderates the impact of female members of the CSR-committee on CSR-performance.*

***H6b**: CEO-duality positively moderates the impact of non-executive members of the CSR-committee on CSR-performance.*

Figure. 3-3 demonstrates the hypotheses proposed in regard to the interaction of board and committee attributes

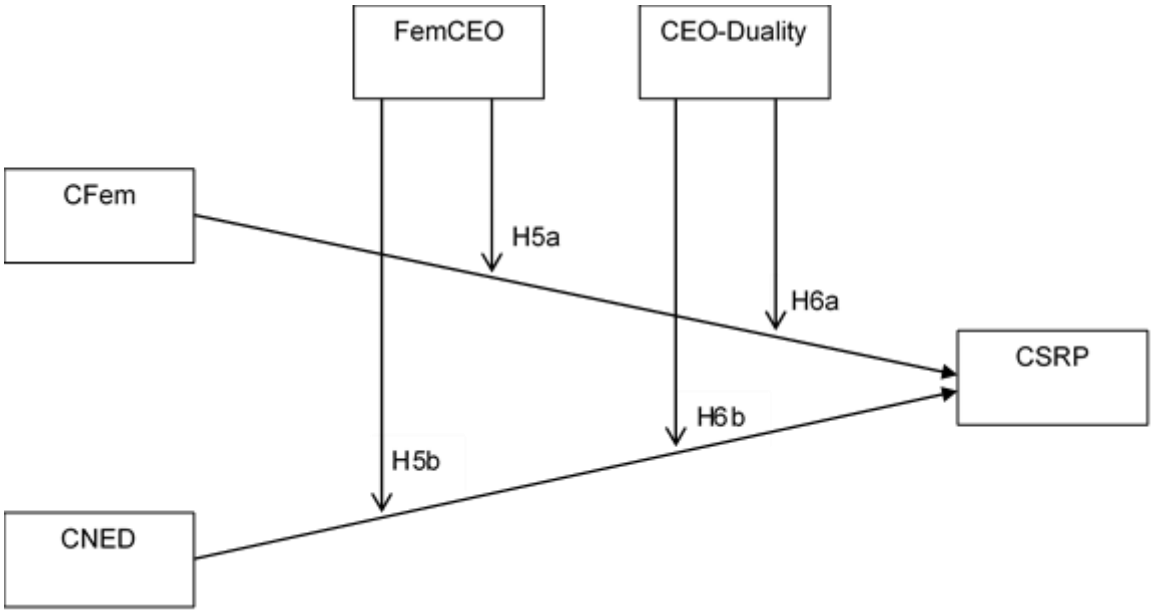


Figure. 3-3: The conceptual model on the role of board and CSR-committee attribute interactions

3.4 **- Methodology**

3.4.1 - Sample and Data

The sample used in this research includes all companies listed in the FTSE350 (FTSE100 and FTSE250) and S&P500 at the end of March 2018. This sample is multi-industry and enables exploration and comparison of companies operating in two countries with different governance systems, different rules, regulations and corporate governance guides. This is important because researchers have demonstrated the country and industry where the company is active influences the impact of board attributes on CSR-performance (e.g. Byron and Post, 2016; Chang et al., 2017; Endrikat et al., 2020; Harjoto, Laksmana and Lee, 2015; Jia and Zhang, 2013).

The current sample covers the years 2013 to 2016. However, considering CSR reporting and scoring is an annual activity, and to allow time for results of decisions made today to become evident in future (consistent with previous studies such as Chang et al., 2017; Cook and Glass, 2018; Walls and Berrone, 2017), the data collected on board and CSR-committee attributes and financial performance was lagged by one year. CSR-performance scores and financial performance indicators were taken from the Thomson Reuters databases, and the board of directors and CSR-committee attributes were collected from BoardEx.

Table. 3-1 provides a summary of the collected data. CSR-committees with only one member were removed from the sample. Also, to ensure a consistent sample, companies with more than one board committee dedicated to CSR activities were omitted. Since different companies tend to use different titles for a CSR-committee, one of the following methods to identify CSR-committees is used:

- The name of the committee was self-explanatory; it was a committee dedicated to social and environmental issues (names such as CSR, sustainability, social performance, environmental performance, etc.)

- Where the committee's name did not explicitly indicate a relationship to social and environmental issues, and it was not one of the three main board committees (i.e. nomination, audit and remuneration/compensation), the committee charter was accessed through the company website. If the responsibilities of the committee involved any aspect of social and environmental issues, the committee was considered a CSR-committee and added to the sample.

Table. 3-1: Overall view of sample

Year	No. Companies Analysed	No. Committees Selected	No. Committees Deleted
2013	674	138	15
2014	685	149	9
2015	761	154	17
2016	771	168	14
Total	2891	609	55

3.4.2 - Analysis

Consistent with more recent empirical investigations (e.g. Chang et al., 2017; Oh, Chang and Jung, 2019), a generalised estimating equations (GEE) estimation has been implemented in this study. When possible dependence can result to autocorrelation, the GEE model is considered more robust and consistent in comparison to the fixed or random effects models (Liang and Zeger, 1986). Also, a robust test was carried out using the random effect model, with no significant differences seen (Appendix C.2). In addition to the correlation matrix, inflation factors (VIFs) was used to control for multicollinearity. As seen in Table. 3-1, an unbalanced panel data consisting of companies covered in all three data bases for the above years (2013-2016 Thomson Reuter ESG Scores and 2012-2015 BoardEx and Thomson Reuters financial database) was constructed. The final full data set comprises of 2891 company-year observations from 789 companies. The data set for companies with CSR-committees consists of 609 company-year observations from 171 companies. Company observations are considered correlated across years (Oh, Chang and Jung, 2019). Therefore, the assumption of independence across observations is violated and pooled ordinary least squares (OLS) regression analysis is not suitable for this sample (Wooldridge,

2010). Furthermore, using pooled OLS will not allow for the controlling of unobserved firm heterogeneity or omitted variable bias (Benson et al., 2011; Liu, Zhang and Liang, 2019).

3.4.3 - Measurements

Independent Variables: Similar to other recent research in this area, board and CSR-committee attributes for the years 2012-2015 were collected from BoardEx (e.g. Homroy and Slechten, 2019; Walls and Berrone, 2017; Walls and Hoffman, 2013). For hypotheses 1 and 2, where the focus is at board-level, the existence of a CSR-committee (CSRCom) was seen as a binary variable. 1 for companies with a committee and 0 for companies with no committee. For hypotheses 3 and 4, where the focus was at committee-level – specifically CSR-committee attributes and companies with said committees – two independent variables were taken into consideration. To measure the presence of female-directors on the CSR-committee (CFem), the proportion of female-directors on the committee was used. The presence of NEDs (CNED) of the committee was measured as the proportion of NEDs on the CSR-committee.

***Dependent Variables*:** CSR-performance, defined as the subtotal of social and environmental performance of companies was sourced from Thomson Reuters ESG Scores index. For the following reasons this database was used for CSR-performance:

- The methodology behind the calculation of the scores are clear and transparent.
- The calculation of the Thomson Reuters ESG Scores incorporates industry, making the comparison of companies in different industries possible.
- The scores are disaggregated to social, environmental and governance scores. Each section is further disaggregated to more relevant categories. This makes omitting governance scores which incorporate board attributes simpler.

Furthermore, it has been suggested that some indices like Asset4 are more comprehensive than others such as KLD (Shaukat, Qiu and Trojanowski, 2016).

Thomson Reuters ESG Scores model is an enhancement and replacement for Asset4, and as of 2018 scores based on the old model have not been generated (Thomson Reuters, 2017). To measure CSR-performance (CSRP) the governance performance scores was omitted and the overall total of social and environmental performance scores was used.

Control Variables: For hypotheses 1 and 2 where the focus is at a board-level, the board attributes that were identified to impact CSR-performance by previous studies were controlled (Bolourian, Angus and Alinaghian, 2021b; Endrikat et al., 2020; Jain and Jamali, 2016; Rao and Tilt, 2016). Specifically, board-size (the number of directors on the board) (BSize), average director tenure (BTenure), average director age (BAge), average years of director experience (both external (BExExp) and internal (BInExp)), proportion of non-executive directors (BNED), proportion of female-directors (BFem), CEO-duality (Duality) (a binary variable with 1 allocated for when the CEO and board-chair were occupied by the same person and 0 when the said roles were separate), and female-CEO (FemCEO) (a binary variable with 1 allocated when the CEO of the company was female and 0 when that role was occupied by a male) were used as control variables.

For hypotheses 3 to 6 where the focus moves to committee-level and the interaction of board and committee attributes, equivalent board attributes on the CSR-committee were controlled. Specifically, committee-size (the number of directors on the committee) (CSize), average director tenure (CTenure), average director age (CAge), and average number of years' experience (both external (CExExp) and internal (CExInt)) of directors on the committee are controlled. CEO-duality was seen as either 1 when the role of CEO and board-chair was occupied by one individual, or 0 when these two roles were separate for companies with CSR-committees. Female-CEO (FemCEO) was also seen as a binary variable, 1 allocated when the CEO of the company was female and 0 when that role was occupied by a male. Also, considering that the number of directors on the committee can relate back to the number of directors on the board, the related board size (BSize) was used as a control variable too. Finally, firm performance has been argued to influence CSR-performance (Waddock and

Graves, 1997; Zhao and Murrell, 2016). Consistent with previous studies, Return on Assets (ROA) was used to control for profitability in testing all the hypotheses (e.g. Galbreath, 2017; Harjoto, Laksmana and Lee, 2015). As mentioned, industry is taken into consideration in the calculation of the Thomson Reuter ESG score, therefore, our study does not control for industry. Considering the sample is made up of UK (FTSE350) and US (S&P500) listed companies, country was controlled in both analyses. However, as no significant change was seen in the results, this variable was omitted. Table. 3-2 presents the explanation for all variables used in the current study.

Table. 3-2: Variable Explanation

Variable	Explanation
CSRCom	Existence of a board-level CSR-committee
CFem	Proportion of female-directors on CSR-committee
CExExp	Average years directors on the CSR-committee have served on other boards
CInExp	Average years directors on the CSR-committee have worked in the company excluding years on the board
CNED	Proportion of NEDs on CSR-committee
CTenure	Average board tenure of directors on the CSR-committee
CAge	Average age of directors on the CSR-committee
CSize	The number of directors on the CSR-committee
BFem	Proportion of female-directors on the board
BExExp	Average years directors on the board have served on other boards
BInExp	Average years directors on the board have worked in the company excluding years on the board
BNED	Proportion of NEDs on the board
BTenure	Average board tenure of directors on the board
BAge	Average age of directors on the board
BSize	The number of directors on the board
CEODuality	CEO and chair are the same
FemCEO	Company CEO is female
ROA	% Return on assets is calculated as net income divided by its average total assets
CSRP	Aggregated environmental and social performance scores

3.5 - Results and Findings

Table. 3-3 presents the descriptive statistics for the board and the CSR-committee. The mean proportion of female-directors on CSR-committees is 21.55%. On boards this is slightly less at 17.9%, indicating that similar to boards most of the committees within the sample are dominated by male directors. The mean proportion of NEDs on said committees is nearly 93% compared to 82% on the board, demonstrating that most CSR-committee members are NEDs. The

average external experience is over 4 years for both CSR-committees and boards. This can be an indication that on average, boards and CSR-committees are able to draw on over 4 years' worth of experience from other boards and committees. However, the mean internal experience is just 1 year on the board and only 0.26 year on the CSR-committee. This is unsurprising as the majority of directors are non-executive and not involved in the management of the companies. The mean average age for directors on the CSR-committee is 61.74 years (slightly higher than the board average age of 60.6), which is consistent with the report by PWC on overall age of board directors (PWC, 2019). The mean CSR-committee size is 4.4 and the mean board size is 10. Nearly 35% of the companies (1002 year-companies) have CEOs that are the board-chair and only 5% (121 year-companies) have female-CEOs.

Table. 3-3: Descriptive statistics of the variables

Variables	Mean	Median	St.D	Min	Max
Board					
No. Female	1.9	2.0	1.1	0.0	7.0
BFem	17.9	18.2	9.7	0.0	57.1
No.NED	8.4	8.0	2.6	1.0	28.0
BNED	81.7	86.7	11.8	37.5	100.0
BSize	10.2	10.0	2.5	2.0	30.0
BExExp	4.2	4.0	1.8	0.0	15.3
BInExp	1.0	0.5	1.2	0.0	7.9
BTenure	7.8	7.5	3.5	0.1	24.8
BAge	60.6	60.9	4.2	46.2	75.6
CSRCom	0.2	0.0	0.4	0.0	1.0
ROA	8.1	6.8	11.5	-61.4	269.1
CSRP	43.0	44.4	12.6	7.8	67.4
No. FemCEO	121				
No. CEODuality	1002				
No. Year-Company	2891				
Committee					
No. Female	1.264	1	0.85	0	4
CFem	21.55	20	21.2	0	100
No.NED	4.107	4	1.45	0	11
CNED	92.89	100	14.5	0	100
CSize	4.399	4	1.38	2	11
CExExp	4.44	4.35	2.22	0	12.5
CInExp	0.263	0	0.89	0	11.75
CTenure	7.164	6.4	3.66	0.1	22.23
CAge	61.74	62	4.42	47.33	75.33
ROA	6.002	5.82	6.59	-53.2	39.93
CSRP	49.55	51.23865	9.62	16.43	66.23
No. Year-Company	609				

Table. 3-4 provides the correlation matrix for all variables used to test hypotheses 1 and 2, showing no possible multicollinearity problems among variables. Table. 3-5 provides the correlation matrix for all variables used to test hypotheses 3 to 6, again demonstrating no possible multicollinearity among the variables. Furthermore, as demonstrated in both tables, the variance inflation factors (VIFs) for both sets of variables was calculated. The range of both sets of VIFs falls below 10, reiterating the nonexistence of multicollinearity

Table. 3-4: Correlation matrix for all variables used to test hypotheses 1 and 2

	VIF	*CSRP*	*CSRCom*	*BSize*	*BExExp*	*BInExp*	*BTenure*	*BAge*	*BNED*	*BFem*	*CEODuality*	*FemCEO*	*ROA*
CSRP		1											
CSRCom	1.08	0.27**	1										
BSize	1.24	0.33**	0.19**	1									
BExExp	1.64	0.10**	0.14**	0.26**	1								
BInExp	1.18	0.11**	-0.04*	0.15**	-0.08**	1							
BTenure	1.59	-0.05*	-0.06**	0.07**	0.31**	0.18**	1						
BAge	2.45	0.04*	0.10**	0.28**	0.59**	-0.04*	0.53**	1					
BNED	1.71	0.06**	0.13**	0.27**	0.44**	-0.23**	0.12**	0.53**	1				
BFem	1.14	0.29**	0.12**	0.16**	0.03	0.02	-0.11**	-0.04*	0.14**	1			
CEODuality	1.28	0.08**	0.14**	0.23**	0.32**	0.00	0.24**	0.38**	0.37**	0.10**	1		
FemCEO	1.07	0.10**	-0.01	0.04*	-0.03	-0.02	-0.09**	-0.02	0.01	0.24**	0.00	1	
ROA	1.03	-0.02	-0.09**	-0.09**	-0.09**	0.04*	0.03	-0.10**	-0.11**	0.02	-0.04*	-0.03	1
Mean VIF	1.40												

* p < .05 ** p < .01

Table. 3-5: Correlation matrix for all variables used to test hypotheses 3 to 6

	VIF	*CSRP*	*CNED*	*CFem*	*CEODuality*	*FemCEO*	*CSize*	*BSize*	*CExExp*	*CInExp*	*CTenure*	*CAge*	*ROA*
CSRP		1											
CNED	1.68	0.10*	1										
CFem	1.09	0.12**	0.13**	1									
CEODuality	1.26	0.14**	0.38**	0.05	1								
FemCEO	1.05	0.05	0.04	0.08*	0.08*	1							
CSize	1.13	0.02	0.10*	-0.03	0.17**	0.07	1						
BSize	1.32	0.29**	0.34**	0.09*	0.25**	-0.01	0.30**	1					
CExExp	1.41	0.15**	0.28**	-0.01	0.24**	0.07	0.07	0.28**	1				
CInExp	1.15	0.01	-0.28**	-0.06	-0.04	-0.05	0.08	-0.02	0.00	1			
CTenure	1.34	0.09	0.13**	0.06	0.20**	-0.09*	0.09*	0.22**	0.31**	0.12**	1		
CAge	1.91	0.13**	0.50**	-0.09*	0.30**	0.05	0.11*	0.30**	0.50**	-0.14**	0.39**	1	
ROA	1.02	0.12**	0.03	-0.01	0.09*	-0.03	0.04	0.06	0.01	0.01	0.12**	0.05	1
Mean VIF	1.31												

* p < .05 ** p < .01

The first two hypotheses propose that the presence of a CSR-committee positively impacts CSR-performance, and this committee moderates the impact of other board attributes on CSR-performance. The below regression equation is estimated (Equation 3-1), where i denotes the company and t the year. Z_{it-1} contains the various control variables used for testing hypotheses 1 and 2 as discussed in the previous section. Table. 3-6 presents the obtained results.

Equation 3-1:

$$CSRP_{it}=\alpha_0+\alpha_1 CSRCOM_{it-1}+\alpha_2 CSRCom*BNED_{it-1}+\alpha_3 CSRCom*CEODuality_{it-1}+\alpha_4 CSRCom*BFem_{it-}+\alpha_5 CSRCom*FemCEO_{it-1}+\alpha Z_{it-1}$$

The results of the regression analysis indicate the presence of a CSR-committee positively impacts CSR-performance resulting in the acceptance of H1. Similarly, both H2b and H2c are accepted as the analysis demonstrates a very strong positive significant result for the interactions of CSR-committee with both female-CEOs and CEO-duality. On the other hand, the interaction of the CSR-committee with the proportions of NEDs on the board is insignificant, resulting in the rejection of H2d. The interaction of the CSR-committee with the proportions of female-directors on the board is significant, but with a negative impact again resulting in the rejection of H2a.

Table. 3-6: The impact of the CSR-committee

Variables	CSRP		
	Model 1	Model 2	Model 3
BSize	0.55***	0.53***	0.52***
	(-0.08)	(-0.08)	(-0.09)
BExExp	0.33**	0.31**	0.32**
	(-0.16)	(-0.16)	(-0.16)
BInExp	0.49***	0.50***	0.51***
	(-0.18)	(-0.18)	(-0.18)
BTenure	0.06	0.08	0.09
	(-0.08)	(-0.08)	(-0.08)
BAge	0	-0.02	-0.02
	(-0.08)	(-0.08)	(-0.08)
BNED	-0.04*	-0.04*	-0.04
	(-0.02)	(-0.02)	(-0.02)
BFem	0.10***	0.10***	0.12***
	(-0.02)	(-0.02)	(-0.02)
CEODuality	0.66*	0.62	0.24
	(-0.4)	(-0.4)	(-0.44)
FemCEO	1.62*	1.73*	1.05
	(-0.95)	(-0.95)	(-1.03)
ROA	0.04***	0.04***	0.04**
	(-0.02)	(-0.02)	(-0.02)
CSRCom		2.06***	5.82
		(-0.63)	(-3.79)
CSRComxBNED			-0.03
			(-0.05)
CSRComxBFem			-0.09**
			(-0.04)
CSRComxCEODuality			1.77**
			(-0.87)
CSRComxFemCEO			3.94**
			(-1.97)
Constant	37.49***	37.75***	37.74***
	(-4.5)	(-4.47)	(-4.52)
Year	controlled	controlled	controlled
Wald-chi2	569.2	583.63	595.43
∆ Chi-square		14.43	26.23
Observations	2,891	2,891	2,891
Number of ID	789	789	789

* p < 0.1, ** p < .05, *** p < .01
∆ Chi-square statistics represents change in Chi-square value over Model 1
Standard errors in parentheses

Hypotheses 3 to 6 propose that CSR-committee attributes positively impact CSR-performance, and board attributes moderate the impact of these committee attributes on CSR-performance. The below regression equation is estimated (Equation 3-2), where i denotes the company and t the year. V_{it-1} contains the various control variables used in the equation for testing hypotheses 3 and 6 as discussed in the previous section. Table. 3-7 presents the obtained results. In models 3 to 5 the interaction of the attributes have been introduced into the equation one board attribute at a time and then all together.

Equation 3-2:

$$CSRP_{it}=\beta_0+\beta_1 CNED_{it-1}+\beta_2 CFem_{it-1}+\beta_3 FemCEO_{it-1}*CFem_{it-1}+\beta_4 FemCEO_{it-1}*CNED_{it-1}+\beta_5 CEODuality_{it-1}*CFem_{it-1}+\beta_6 CEODuality_{it-1}*CNED_{it-1}+\beta V_{it-1}$$

The results of the regression analysis in model 2 support H3, showing a larger proportion of female-directors on the committee positively impacts CSR-performance. This is not the case for H4, as no significant relationship was found between the proportion of NEDs on the committee and CSR-performance in the results. However, it must be noted the non-significant result is based on p=0.11. In models 3 to 5 when the interaction of the board and committee attributes are considered, a significant negative relationship is observed. On a closer look at the data, an outlier of one company with no NEDs on the committee was noted for the years 2014 and 2015. After removing this outlier and rerunning all models, the significant negative impact of non-executive committee member on CSR-performance was confirmed at $p<0.05$ (Appendix C.3). Also, results from the robust test indicate the same significant negative relationship between NEDs on the committee and CSR-performance (Appendix C.2). Therefore, the results do not support the claim that a larger proportion of NEDs on the CSR-committee have a positive impact on CSR-performance. On the contrary, they seem to indicate NEDs have a significant negative impact on CSR-performance.

Models 3 to 5 are calculated to explore the interaction of the board and committee attributes. Although H5b is rejected, the results indicate that on boards with a CSR-committee, the existence of a female-CEO and a larger proportion of NEDs on the committee positively impacts CSR-performance. In other words,

considering the rejection of H4 and indication of the negative relationship between NEDs on the committee and CSR-performance, the existence of female-CEOs negatively moderates the impact of non-executive committee members on CSR-performance, rendering it positive. The other hypotheses are all rejected as no evidence is found to indicate the existence of a CEO-duality on boards with a CSR-committee moderates the impact of NEDs or female-directors on CSR-performance. Similarly, the existence of a female-CEO does not moderate the impact of female-directors on CSR-performance. It must be noted in the current sample none of the female-CEOs or CEO-duality sat on the board-level CSR-committees. Therefore, in testing hypotheses 5 and 6 endogeneity within the board and the board-level CSR-committee as its sub-group is not a cause for concern.

Table. 3-7: The impact of CSR-committee attributes on CSR-performance

Variables	CSRP				
	Model 1	Model 2	Model 3	Model 4	Model 5
CSize	-0.021	0.002	-0.006	0.035	0.029
	(-0.246)	(-0.248)	(-0.251)	(-0.249)	(-0.252)
CExExp	-0.08	-0.07	-0.084	-0.088	-0.104
	(-0.181)	(-0.182)	(-0.182)	(-0.182)	(-0.183)
CInExp	0.28	0.142	0.186	0.021	0.068
	(-0.463)	(-0.478)	(-0.482)	(-0.482)	(-0.486)
CTenure	0.172	0.13	0.126	0.124	0.12
	(-0.117)	(-0.119)	(-0.119)	(-0.119)	(-0.119)
CAge	-0.024	0.053	0.073	0.055	0.076
	(-0.107)	(-0.112)	(-0.114)	(-0.112)	(-0.114)
BSize	0.374**	0.430**	0.436**	0.397**	0.402**
	(-0.168)	(-0.17)	(-0.171)	(-0.17)	(-0.171)
CEODuality	1.675**	1.765**	-4.554	1.934***	-4.692
	(-0.709)	(-0.725)	(-9.407)	(-0.726)	(-9.401)
FemCEO	4.272**	3.977**	3.827**	-36.543***	-36.913***
	(-1.686)	(-1.706)	(-1.713)	(-12.835)	(-12.83)
ROA	0.133***	0.135***	0.133***	0.131***	0.129***
	(-0.038)	(-0.038)	(-0.038)	(-0.038)	(-0.038)
CNED		-0.054	-0.061*	-0.061*	-0.068*
		(-0.034)	(-0.035)	(-0.034)	(-0.035)
CFem		0.028**	0.037**	0.031**	0.040**
		(-0.014)	(-0.017)	(-0.014)	(-0.017)
CFEMxCEODuality			-0.017		-0.017
			(-0.018)		(-0.018)
CNEDxCEODuality			0.068		0.071
			(-0.096)		(-0.096)
CFEMxFEMCEO				-0.009	-0.007
				(-0.036)	(-0.036)
CNEDxFEMCEO				0.457***	0.459***
				(-0.142)	(-0.142)
Constant	45.532***	44.507***	43.746***	45.136***	44.343***
	(-6.118)	(-6.484)	(-6.509)	(-6.507)	(-6.533)
Year	controlled	controlled	controlled	controlled	controlled
Wald-chi2	78.34	83.16	84.41	93.86	95.37
∆ Chi-square		4.82	6.07	15.52	17.03
Observations	609	609	609	609	609

* p < 0.1, ** p < .05, *** p < .01

∆ Chi-square statistics represents change in Chi-square value over Model 1

Standard errors in parentheses

3.6 - Discussion

This study sought to explore the role of CSR-committees in CSR-performance. Considering CSR-committees are an inseparable sub-structure of the board, we first examined the role of CSR-committee in relation to other board attributes. Specifically, the existence of CSR-committee and its interaction with a number of key board attributes (including female-directors, NEDs, CEO-duality and female-CEOs) in explaining CSR-performance is explored. Then, we strived to unpack the composition of the CSR-committees in terms of female-directors on the committee and the independence of the CSR-committee and their role in CSR-performance. Finally, the interactive effects of CSR-committee attributes (female-directors and NEDs) and board attributes (CEO-duality and female-CEOs) were examined.

3.6.1 - CSR-committee as a Board Attribute

Consistent with several previous studies (e.g. Burke, Hoitash and Hoitash, 2019; Hussain, Rigoni and Orij, 2018), the existence of a CSR-committee positively impacts CSR-performance. As demonstrated in Table. 3-3, compared to the full sample, the mean CSR-performance score is higher in companies with a CSR-committee. The minimum score between companies with a committee is higher at 16.43 compared to 7.8 on the full sample. However, the maximum score is higher on the full sample, clearly showing at least one company without a CSR-committee was more successful at CSR-performance than all companies with such a committee. This indicates on average companies with a CSR-committee can expect a higher CSR-performance compared to companies that do not have this committee. However, setting up this committee does not necessarily seem to guarantee a higher CSR-performance. Other board attributes also appear to play a significant role in driving CSR-performance, and may even be able to replace it on the board when it comes to driving CSR-performance. It is not possible to fully explore this finding using general linear regression models such as GEE, since they can only provide the positive, negative or non-significant relationship of the independent and dependent variables (Misangyi et al., 2017).

Furthermore, the results indicated the interaction of the CSR-committee with both CEO-duality and Female-CEOs is positive. Fabrizi et al. (2014) found a similar positive relationship when the CEO holds the position of the board-chair with a high tenure, suggesting that power and establishment of such a CEO will encourage them to engage more in CSR activities. Using a simple t-test the tenure of CEOs that hold the position of board-chair on companies with and without a CSR-committee were compared to ensure the positive results found here are not related to the tenure of such a CEO. The results demonstrated significant difference between the two groups (p-value<0.05). With the mean tenure in companies without a CSR-committee being higher, indicating tenure does not seem to play a role in the positive effect mentioned above. This result also strengthens the theoretical arguments made in the hypothesis development section regarding CEO-duality, where the CSR-committee can be seen as a sign of accountability to stakeholders, resulting in stronger CSR-performance.

H2d was rejected as no significant support to the claim that the interaction of NEDs on the board and CSR-committees will positively impact CSR-performance was found. On closer inspection of the results, although seen as a control variable, the impact of NEDs on the board has a negative influence on CSR-performance. This was contrary to several previous studies (e.g. Burke, Hoitash and Hoitash, 2019; Galbreath, 2016; Oh, Chang and Jung, 2019) but consistent with others (e.g. Deckop, Merriman and Gupta, 2006; Naciti, 2019). So, although insignificant, the interaction of the CSR-committee with NEDs has actually cancelled the direct negative impact of NEDs on CSR-performance, and in reality the interaction is beneficial. In the current sample, 98% of companies have a majority (more than 50%) of NEDs on the board, with 3% of the boards made up of only NEDs. The current results show both external and internal experience have a positive impact on CSR-performance, indicating knowledge of the company and other companies may both be needed. Most NEDs bring external knowledge with them, but have limited knowledge of the company. Naciti (2019) suggests the information passed on to NEDs from the company in regard to CSR can at times be deceptive. The possible threat of such misleading information on NEDs' reputation can influence their decisions, and consequently impact CSR-

performance negatively. Although further detailed investigation is necessary, since internal knowledge is lost on the board, it can be seen as a sign that too much independence of boards in way of NEDs does not seem to be a beneficial board attribute.

H2a, the positive impact of the interaction between CSR-committee and female-directors on CSR-performance was also rejected. This hypothesis was rejected as it was significantly negative. So, the positive impact of both CSR-committees and female-directors becomes negative through their interaction. This indicates that with the existence of a CSR-committee, the female-directors responsibility and impact regarding CSR-performance becomes negative. One possible reason can relate back to having the same female-directors on the board and CSR-committee. In the current sample, in 68% of companies at least half of the female-directors of the board also sit on the CSR-committee, with 25% having all female-directors sit on the CSR-committee. Therefore, with the majority of female-directors on the CSR-committees, it can be argued that said directors have already made their impact on CSR-performance through the CSR-committee. These results agree with the argument made that the presence of one or two female-directors can make a positive contribution, but to acquire the full benefit of women on boards a critical mass of female-directors is needed (Bear, Rahman and Post, 2010; Konran, Kramer and Erkut, 2008).

3.6.2 - The Composition of the CSR-committee

The argument in regard to female-directors can be further strengthened by the fact that as predicted, the presence of female-directors on the CSR-committee positively impacts CSR-performance. However, over 83% of the CSR-committees in the current sample had a majority (over 50%) of male members with over 18% of the CSR-committees having no female members at all. This emphasises the importance of female-directors. Also, it indicates that similar to boards (Vinnicombe, Atewologun and Battista, 2019), companies need to consider more female-directors in the composition of CSR-committees. The hypothesis set for committee independence was rejected, meaning that the existence of NEDs does not positively influence CSR-performance. One reason

for this could be that over 97% of committees in the current sample had a majority (more than 50%) of NED members and more than 76% were made up of only NEDs. So, similar to the composition of the board, too many NEDs not only do not increase CSR-performance but seem to have a negative impact.

3.6.3 - The Interaction of Board and CSR-committee attributes

To acquire a better understanding of the role of the CSR-committee, in addition to exploring the impact of the CSR-committee as a board attribute and its composition, the interactive effects of board and CSR-committee attributes were explored. All hypotheses made in this section were rejected except the prediction. However, it was demonstrated that the existence of female-CEOs negatively moderates the impact of non-executive committee members on CSR-performance, making it positive. This hypothesis is in line with previous findings at board-level, where the interaction of NEDs and female-directors was found to have a positive impact on CSR-performance (Galbreath, 2016). This reiterates the importance of having a good mix of resources that can contribute to the different board processes (i.e. decision making and outcomes) from a resource-dependence theory and corporate governance aspect (Galbreath, 2016; van der Walt and Ingley, 2003). The results did not support the prediction that having a larger proportion of NEDs on the CSR-committee in companies with a CEO-duality is beneficial in driving CSR-performance; the interaction was insignificant. Considering the direct impact of NEDs on CSR-performance was negative, it can be argued in reality this interaction deterred the negative impact caused by the large proportion of NEDs, emphasising the point that board attributes do not work in isolation but interact with each other in shaping CSR-performance.

3.7 - Conclusion and Directions for Future Research

The current study was conducted with the aim of shedding light on the role of the CSR-committee in driving CSR-performance at a board and committee level. We demonstrated the importance of board and committee attributes in driving CSR-performance and their combined impact – by highlighting the impact of the CSR-committee, its interaction with other board attributes, and the interaction of board and CSR-committee attributes on CSR-performance. The results have also

highlighted the need to further explore CSR-committee attributes and their impact on CSR-performance. While the literature on the attributes of board and CSR-performance is well developed (such as director age, tenure, knowledge, skill, experience and expertise: Chang et al., 2017; Homroy and Slechten, 2019; Olthuis and van den Oever, 2020), this is not the case for CSR-committees. Although explored as control variables in this study, Tables. 3-6 and 3-7 demonstrate that the impact of some board attributes on CSR-performance is different to the same attributes on the CSR-committee (for instance internal and external experience). Therefore, similar to boards, it would be advisable to explore other CSR-committee attributes and their impact on CSR-performance in more depth than those explored in this study.

As seen with the interaction of the CSR-committee and echoing other studies (Bolourian et al. 2021; Endrikat et al. 2020; Homroy and Slechten 2019), board attributes do not work in isolation but interact with each other in shaping CSR-performance. Although general linear regression models may be limited in interpreting interactions of more than two variables, new methodological advancements such as Qualitative Comparative Analysis (QCA) would enable the exploration of multiple board attributes' configurations (Meuer and Rupietta, 2017; Misangyi et al., 2017) leading to CSR-performance. By building on these findings and focusing on more than two attributes at a time, a new line of research may lie in identifying the combinations of multiple interrelated attributes and their impact on CSR-performance. Exploring different configurations of board attributes can be seen as a step towards finding a better understanding of the phenomenon.

By conducting empirical research, some answers were provided for the main research question: *What is the role of a CSR-committee in driving CSR-performance?* The main answer being that a more comprehensive view is achieved when the CSR-committee is explored from various angles (i.e. as an individual board attribute, its interaction with other board attributes, it's composition and the interaction of the board and committee attributes) than just its' existence on the board. To the knowledge of the authors, this is the first study

to empirically take such an all-encompassing point of view in regard to CSR-committees. This is especially important as despite an increase of CSR-committees, little is known about the impact of such committees on CSR-performance. However, new questions have arisen, particularly in regard to exploring the impact of more than two board attributes at a time. The answers to such questions may lie in moving from the current regression methodology used in most research in this area to more new methodological advancements such as QCA.

4 . The Impact of Board Attributes on Corporate Social Responsibility Performance: A Configurational Approach

ABSTRACT

Board attributes interact with each other and the context in which they are embedded in shaping corporate social responsibility (CSR) performance, resulting in configurations of board attributes. By embracing a configurational approach, this study aims to explore how various configurations of director characteristics (female-directors, director's age, tenure and experience) and board structures (non-executive directors, CEO-duality, board-size and CSR-committee) drive CSR-performance in different countries. The results of a Qualitative Comparative Analysis (QCA) of 789 FTSE350 and S&P500 listed companies during a 4-year period (2013-2016) reveals nine board configurations leading to high CSR-performance. Specifically, three board archetypes were identified. Their formation is shaped on the main differences seen amongst them, leading to three distinct archetypes: committee-boards, experience-boards and hybrid-boards. The results of the configurational approach agrees with the argument that "one-size" does not fit all, and different boards can achieve the same results via unique configurations of attributes.

Keywords: Board configuration; social performance; environmental performance; qualitative comparative analysis (QCA); configurational approach

4.1 - Introduction

Corporate Social Responsibility (CSR) has become a notion of growing importance to both scholars and practitioners alike (Endrikat et al., 2020; Flammer, 2013; Ioannou and Serafeim, 2015; Wang et al., 2016). With increased stakeholders pressure holding companies accountable for their environmental and social conduct (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Kolev et al., 2019; White, 2012), companies increasingly engage in, and incorporate, social issues such as workforce, human rights and community (Flammer, 2013) alongside environmental concerns such as resource uses and emissions (Chams and García-Blandón, 2019; Flammer, 2013) in their business models, organisational structures and processes (Ioannou and Serafeim, 2015; Unruh et al., 2016; Wang et al., 2016). The achievement and realisation of social and environmental objectives are often investigated through the notion of CSR-performance (e.g. Galbreath, 2017; Harjoto, Laksmana and Lee, 2015). Specifically, by adopting various indices, researchers examined CSR-performance in terms of the company's social performance (e.g. Bai, 2013; Mallin and Michelon, 2011), environmental performance (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Ortiz-de-Mandojana and Aragon-Correa, 2015; Rodrigue, Magnan and Cho, 2013) and/or the overall CSR-performance: the combination of the company's social and environmental performance (e.g. Galbreath, 2016; Oh, Chang and Jung, 2019).

The board of directors are responsible for the overall achievement and monitoring the aims and objectives set by companies (Eccles, Ioannou and Serafiem, 2011; Elkington, 2006; Harjoto, Laksmana and Lee, 2015; Jamali, Safieddine and Rabbath, 2008; de Villiers, Naiker and van Staden, 2011). Scholars increasingly recognise that director characteristics and board structure (board attributes) play a pivotal role in driving organisational performance, including social and environmental issues (e.g. Endrikat et al., 2020; Harjoto, Laksmana and Lee, 2015). They appear to be in agreement regarding the importance of board attributes in driving CSR-performance, yet empirical findings demonstrate highly fragmented and contradictory results. For example, although the impact of female-directors on CSR-performance is reported as positive by a significant

body of literature (e.g. Chams and García-Blandón, 2019; Galbreath, 2018; Nadeem, Gyapong and Ahmed, 2020), some studies have demonstrated a negative or non-significant impact (e.g. Harjoto, Laksmana and Lee, 2015; Olthuis and van den Oever, 2020). Similarly, the literature has reported a positive (e.g. Burke, Hoitash and Hoitash, 2019; Choi, Lee and Park, 2013), negative or non-significant (e.g. Deckop, Merriman and Gupta, 2006; Galbreath, 2018) relationship between board independence (the percentage/number of non-executive directors on the board) and CSR-performance. Inconsistencies have also been observed for CEO-duality (joint CEO and chair), where some studies reported a positive effect (e.g. Moussa et al., 2020) with others demonstrating negative (e.g. Naciti, 2019) or non-significant results(e.g. Hafsi and Turgut, 2013; Nadeem, Gyapong and Ahmed, 2020).

Recent literature has begun to recognise board attributes interact with each other and the context in which they are embedded in driving CSR-performance (Endrikat et al., 2020; Galbreath, 2017; Homroy and Slechten, 2019; Walls, Berrone and Phan, 2012). For instance, Walls et al. (2012) demonstrated CEO-duality weakens the positive effect of large boards on environmental concerns to a point that the overall impact becomes negative. Similarly, it has been shown that CEO-duality undermines the positive impact of board independence on social (making it negative) and environmental (making it insignificant) performance (Hussain, Rigoni and Orij, 2018). Also, McGuinness et al. (2017) demonstrated female-directors and female-chairs positively impact CSR-performance when explored individually. However, the interaction of a female-chair eliminates the positive impact of female-directors on the board, rendering it insignificant.

At the same time it has been argued that “one-size-fits-all” board governance is not the best approach (Dowell, Shackell and Stuart, 2011; Federo et al., 2020; García-Castro, Aguilera and Ariño, 2013; Veltrop et al., 2018), indicating more than one board composition can lead to achieving the aims and goals of the board. Therefore, it can be argued different board configurations can be considered as “causal recipes” (Ragin, 2008) that achieve the same CSR-

performance outcomes. Take Unilever and Sky as an example. From 2013 to 2016 both companies were able to achieve comparable high CSR-performance scores (Unilever achieved an average CSR-score of 64.89 and Sky's average CSR-score is reported as 63.28). However, the configurations of their boards are different. While Unilever maintained a board-level committee dedicated to CSR activities, during the same years Sky did not have such a committee at board-level. Average director age on Unilever's board was just over 6 years older than Sky (respectively 60.83 and 54.19 years). On the other hand, average director tenure at Sky was nearly twice as much as Unilever (8.09 compared to 4.5 years). Although the presence of female-directors on both boards doubled during the four years studied, Unilever has always had a considerably higher female presence on their board (respectively 25% to 50% compared to 7.14% to 14.28%).

The majority of studies carried out in regard to board attributes and CSR-performance have used general linear regression models (e.g. Oh, Chang and Jung, 2019; Walls, Berrone and Phan, 2012) that are often limited in interpreting interactions of more than two variables (Misangyi et al., 2017). By adopting a Qualitative Comparative Analysis (QCA) approach based on the logic of fuzzy sets technique (Misangyi et al., 2017; Ragin, 2008), our study is able to explore interactions between multiple configurations of board attributes that lead to high CSR-performance. Using a cross-industry sample of 2891 firm-year observations from 789 listed companies of FTSE350 and S&P500 during a 4-year period (2013-2016), our study addresses the question of: *What is the role of board attributes in driving CSR-performance?* Specifically, our study aims to investigate the impact of board attributes by identifying configurations of various director characteristics (i.e. female-directors, experience, age and tenure) and board structures (i.e. non-executive directors, CEO-duality, board size and existence of board-level CSR-committees) that result in high CSR-performance outcomes.

It has been suggested that context, such as the country where the company operates, influences board composition (Aguilera, 2005) and the impact of some board attributes on CSR-performance (e.g. Hafsi and Turgut, 2013; Post, Rahman and Rubow, 2011). Thus, we analyse the FTSE350 and S&P500

companies separately, giving us the opportunity to compare and contrast the configurations resulting in high CSR-performance for each group.

Our study adds to the growing literature on the role of board attributes in CSR-performance by identifying alternative configurations of various attributes that lead to high CSR-performance (e.g. Endrikat et al., 2020; Homroy and Slechten, 2019). Specifically, by investigating both board structures and director characteristics, our study sheds critical light on how the interactions of several board attributes – largely explored individually in previous literature – can lead to high CSR-performance. Therefore, contributing to a growing line of literature that suggests corporate governance mechanisms need to be explored in "bundles", and looking at each mechanism in isolation will not provide the full picture (e.g. Aguilera, Bell and Filatotchev, 2014; García-Castro, Aguilera and Ariño, 2013; Greckhamer et al., 2018).

Furthermore, we explore alternative, new board archetypes based on distinct combinations of board attributes that yield higher CSR-performance. Three different archetypes are identified and named based on the main attributes that differ between them: committee-boards, experience-boards and hybrid-boards. Thus, contributing and helping strengthen arguments for a "one-size" *doesn't* fit all board governance approach (e.g. Dowell, Shackell and Stuart, 2011; Federo et al., 2020; García-Castro, Aguilera and Ariño, 2013; Veltrop et al., 2018). Lastly, we investigate board configurations in both the UK and the US, and advance understanding of the role of geographical context in CSR-performance.

This paper proceeds as follows: In the next section, the theoretical background of the study is established and a literature review on the impact of board attributes on CSR-performance is provided. Then the theoretical framework and proposed model for exploring the possible configurations of board attributes is developed and presented. This is followed by a description of the methodology and a report of results. Finally, a discussion of the results and future research directions are provided.

4.2 - Board Attributes and CSR-Performance

The rich and diverse literature addressing the impact of various board attributes in driving different dimensions of CSR-performance goes back at least 30 years (Endrikat et al., 2020; Jain and Jamali, 2016; Rao and Tilt, 2016). The three main theoretical frameworks that have anchored the relationship of board attributes and CSR-performance in literature are: agency theory, resource-dependence and stakeholder theory (Bolourian, Angus and Alinaghian, 2021b; Jain and Jamali, 2016). Additionally, in their theorisation scholars have drawn upon other theories such as critical mass, upper echelons and accountability (e.g. Burke, Hoitash and Hoitash, 2019; Byron and Post, 2016; Cook and Glass, 2018). Recent years have seen researchers use more than one theory in their theorisation, arguing that a single theory cannot fully explain the relationship between various board attributes and CSR-performance (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Nadeem, Gyapong and Ahmed, 2020; Oh, Chang and Jung, 2019).

The impact of board attributes on CSR-performance has predominantly been examined in terms of director characteristics (such as gender, age, experience etc.) and different structures used by boards (such as independence, committees, CEO-duality etc.) (e.g. Cook and Glass, 2018; Francoeur et al., 2019; Moussa et al., 2020; Post, Rahman and Rubow, 2011; Siciliano, 1996). More recently, studies have begun to examine the interactive effects of the board attributes in shaping CSR-performance (e.g. Galbreath, 2016; Homroy and Slechten, 2019). Also, adopting a broad perspective, Hafsi and Turgut (2013) suggested the relationship between diversity within board characteristics and CSR-performance is moderated by the diversity of board structures. The following sections highlight the main board attributes (separated into director characteristics and board structures) and their impact on CSR-performance that have been explored in the literature.

4.2.1 - Director Characteristics and CSR-performance

Director characteristics related to CSR-performance have been considered in a variety of ways. Four of the most explored characteristics are: Gender, Experience, Age and Tenure (Bolourian, Angus and Alinaghian, 2021b).

The presence of female-directors and their impact on CSR-performance, seen as either proportion (e.g. Cruz, Justo and Larraza-Kintana, 2019; Francoeur et al., 2019) or number of female-directors (e.g. Bear, Rahman and Post, 2010; Cook and Glass, 2018) on the board, is one of the most widely explored director characteristics (Bolourian, Angus and Alinaghian, 2021b). Previous research argues women tend to favour social performance issues more than men (Backhaus, Stone and Heiner, 2002). Female-directors are also more likely to be community influencers from non-business backgrounds (Hillman, Cannella and Harris, 2002; Singh, Terjesen and Vinnicombe, 2008), and often take part in more charitable and philanthropic projects (Bear, Rahman and Post, 2010; Wang and Coffey, 1992; Williams, 2003).

However, the literature has reported an inconsistent association between this attribute and different dimensions of CSR-performance. A number of studies found female-directors positively impact both social and environmental performance (e.g. Nadeem, Gyapong and Ahmed, 2020), and some found the same positive impact on the overall CSR-performance (e.g. Chams and García-Blandón, 2019; Harjoto, Laksmana and Lee, 2015). Other studies found a negative or non-significant impact on these dimensions (e.g. Boulouta, 2013; Oh, Chang and Jung, 2019).

Relevant knowledge and experience are attributes the board needs to advise and monitor management (Hillman and Dalziel, 2003). Various variables have been used to quantify experience and explore its impact on CSR-performance. For example, with a positive influence on CSR-performance, the percentage of community influential directors are explored for the experience they bring to the board in addition to their already determined influence in the community (Mallin and Michelon, 2011). The number of outside directorships held by directors has been shown to have no significant relation with CSR-performance (Harjoto et al.,

2015), but has a positive impact on environmental performance (Ortiz-de-Mandojana and Aragon-Correa, 2015). Alternatively, others have explored the number of directors that sit on multiple boards and found a non-significant relationship (de Villiers, Naiker and van Staden, 2011).

It has been said that younger directors are usually more concerned about environmental issues (Galbreath, 2010; Hafsi and Turgut, 2013). However, empirical literature does not fully agree on the impact of this attribute either. Some studies demonstrated a non-significant relationship between directors' age and CSR-performance (e.g. Chang et al., 2017; Harjoto, Laksmana and Lee, 2015), with others showing a positive (e.g. Cook and Glass, 2018; Glass, Cook and Ingersoll, 2016) or negative relationship (e.g. Hafsi and Turgut, 2013).

Director tenure is argued to be a driving factor of CSR activity in organisations (Harjoto, Laksmana and Lee, 2015). However, similar to age, either from a diversity aspect or average directors' tenure (e.g. Homroy and Slechten, 2019; Olthuis and van den Oever, 2020), a review of the literature on the relation between this board attribute and CSR-performance suggests mixed results. It has been argued tenure positively influences the overall CSR-performance by lowering CSR-performance concerns (Harjoto, Laksmana and Lee, 2015). However, when exploring the different dimensions of CSR-performance, de Villiers et al. (2011) concluded the relationship between environmental performance strengths and tenure is insignificant. Hafsi and Turgut (2013) believed when dealing with controversial CSR issues such as environmental matters, directors with shorter tenure are more hesitant to speak, and higher tenured directors may prefer to follow management, resulting in an insignificant relationship.

4.2.2 - Board structure and CSR-performance

Similar to director characteristics, board structures and their impact on CSR-performance have been considered in a variety of ways. Four mainly explored board structures are: Board independence (the percentage/number of non-executive directors), CEO-duality, board size and the existence of CSR-committees (Bolourian, Angus and Alinaghian, 2021b).

Similar to female-directors, non-executive directors (NEDs) tend to use their diverse experience and network ties to build sustainability-themed alliances and indirectly influence social performance (Post, Rahman and McQuillen, 2015). It is interesting to note some studies indicate NEDs have no significant impact on CSR-performance (e.g. Brown, Helland and Smith, 2006; Harrison and Coombs, 2012; McGuinness, Vieito and Wang, 2017; Parthiban, Bloom and Hillman, 2007). Hussain et al. (2018) demonstrated a positive influence on both environmental and social performance, while other studies found a negative impact on CSR-performance (e.g. Deckop, Merriman and Gupta, 2006; Naciti, 2019).

Drawing on agency theory, CEO-duality or joint CEO and board chair has been argued to have a negative impact on CSR-performance by some studies (e.g. Mallin and Michelon, 2011; Naciti, 2019). Several studies found a non-significant impact (e.g. Chams and García-Blandón, 2019; Nadeem, Gyapong and Ahmed, 2020), while others found a positive impact (e.g. Moussa et al., 2020). Fabrizi et al. (2014) found a positive relationship when the CEO holding the position of the board chair had a high tenure. Leading them to suggest the establishment and power of such an individual positively impacts CSR-performance.

The literature has generally suggested larger boards are linked to better stakeholder representation, which in turn can lead to higher sensitivity towards stakeholder interests and participation in more CSR activities (Chams and García-Blandón, 2019; Ntim and Soobaroyen, 2013; Siciliano, 1996). Several studies reported a positive relationship between board-size and CSR-performance (e.g. Chams and García-Blandón, 2019; Cook and Glass, 2018; Endo, 2020; Lu and Herremans, 2019), while a few demonstrated a negative impact (e.g. Kassinis and Vafeas, 2002; Olthuis and van den Oever, 2020). A number of studies also reported a non-significant relationship between the two (e.g. Homroy and Slechten, 2019; Post, Rahman and Rubow, 2011; Walls, Berrone and Phan, 2012).

As the importance of relations with key stakeholders becomes more apparent, companies voluntarily choose to set up additional board-level committees to

enable more focused and specialised attention on social and environmental issues (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017; Kolev et al., 2019). This has led to a gradual increase in the number of companies setting up committees dedicated to social and environmental activities as part of their board structure (Endrikat et al., 2020). Some have reported a positive influence (e.g. Dixon-Fowler, Ellstrand and Johnson, 2017; Homroy and Slechten, 2019; Hussain, Rigoni and Orij, 2018), while others have demonstrated a non-significant relationship (e.g. Chams and García-Blandón, 2019; Rodrigue, Magnan and Cho, 2013).

4.2.3 - Board Attributes, CSR-performance and Country

Contextual factors, such as the country where the company is active, moderates the effects of board attributes on CSR-performance (Chams and García-Blandón, 2019; Chang et al., 2017; Harjoto, Laksmana and Lee, 2015; Jia and Zhang, 2013). Conducting a meta-analysis of 87 independent samples from over 20 countries, Byron and Post (2016) concluded in countries with greater gender equality and shareholder protection, the positive relationship between women directors and CSR-performance was stronger. It has been suggested in some Asian countries where agency costs are a serious issue for male-dominant boards, female-directors will positively influence the decision-making process and stop unreasonable squandering of corporate resources (Jia and Zhang, 2011). Therefore, unlike western countries (Adams, Hoejmose and Kastrinaki, 2017; Bear, Rahman and Post, 2010; Kabongo, Chang and Li, 2013; Wang and Coffey, 1992; Williams, 2003), in some Asian countries like China female-directors will have a negative effect on corporate philanthropy, yet an overall positive impact on organisational performance (Jia and Zhang, 2011). Furthermore, in countries with male-dominant and ethnically homogeneous boards like South Korea, education is used as a proxy to explore the effect of board diversity on CSR-performance (Chang et al., 2017).

It has been argued in countries where a minimum requirement of NEDs are set by regulators, said directors tend to positively influence CSR-performance when regulatory requirements are exceeded (Chang et al., 2017). Similarly, in some

countries such as the USA, CEO-duality is a usual occurrence. For this reason, it has been argued that insignificant results are seen in these countries (Hafsi and Turgut, 2013).

Even though the literature has largely focused on individual board attributes in explaining CSR-performance, considering the inconsistent results found, there have been calls to shift the emphasis to exploring interactions between board attributes (e.g. Endrikat et al., 2020; Walls, Berrone and Phan, 2012). Although limited, some studies have demonstrated the significance of this view (e.g. Homroy and Slechten, 2019; Hussain, Rigoni and Orij, 2018; Jia and Zhang, 2013). Therefore, by focusing on attributes that have been empirically proven to significantly impact CSR-performance (positively or negatively) in previous studies, our study seeks to extend this understanding and try to identify configurations of various board attributes that separately result in high CSR-performance among FTSE350 and S&P500 companies (Figure. 4-1).

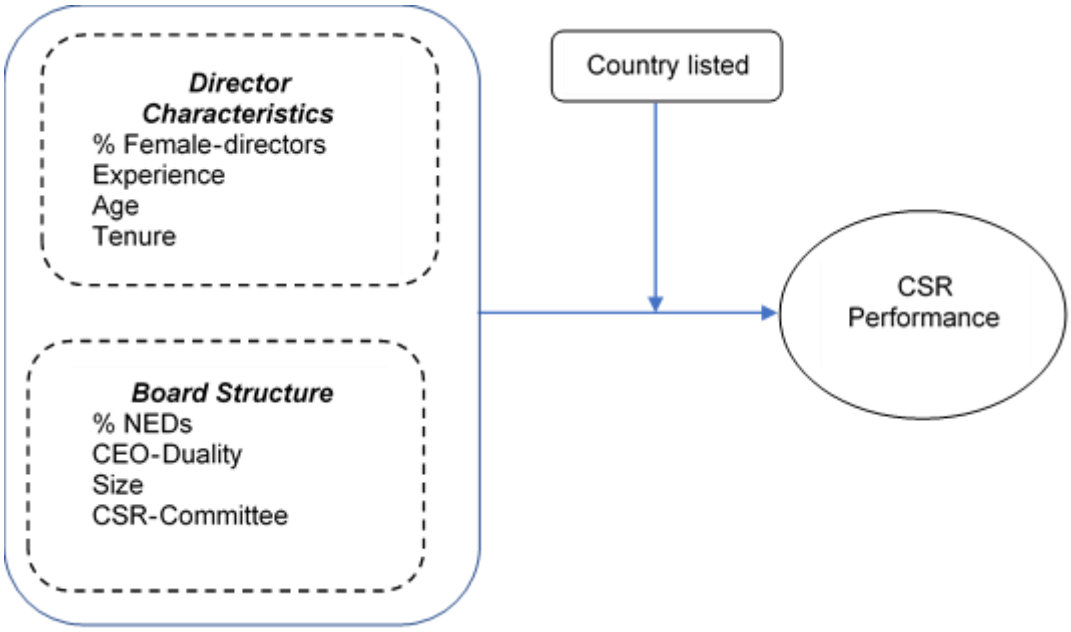


Figure. 4-1: Impact of Board Attributes Configuration on CSR Performance

4.3 - Data and Method

4.3.1 - Sample and Data

The sample used in this research includes all companies listed at the end of March 2018 in the FTSE350 (FTSE100 and FTSE250) and S&P500. This sample is multi-industry and enables exploration and comparison of companies operating in two countries with different governance systems, different rules, regulations and corporate governance guides.

The current sample covers the years 2013 to 2016. However, considering CSR reporting and scoring is an annual activity and to allow time for results of decisions made today to become evident in the future, (consistent with previous studies such as Chang et al., 2017; Cook and Glass, 2018; Walls and Berrone, 2017), the data collected on board attributes is lagged by one year. CSR-performance scores are taken from the Thomson Reuters ESG database, and the board of directors' attributes are collected from BoardEx. Table. 4-1 provides a summary of the data collected.

Table. 4-1: Overall View of Sample

Year	No. Companies on the FTSE350	No. Companies on the S&P 500
2013	222	452
2014	224	461
2015	287	474
2016	303	468
Total	1036	1855

4.3.2 - Method and Calibration

This study uses fuzzy-set Qualitative Comparative Analysis (QCA) (Ragin, 2008) to analyse the data. This method is consistent with the theorising mentioned in the previous section, where interconnected configurations of board attributes (conditions) are better able to explain the role of the board in driving CSR-performance (outcome) than an isolated or selected interaction of two board attributes. QCA uses Boolean logic and set-theory, treating each board (case) as a member of multiple sets, and considers both the conditions and the outcome

as sets (Ragin, 2008; Rihoux and Ragin, 2009). Table. 4-2 presents an explanation for all the sets used in the current study.

Table. 4-2: Set Explanation

Sets	Explanation
CSRP	Aggregated environmental and social performance score
FemD	Proportion of female-directors on the board
DExp	Average years directors on the board have served on other boards
DAge	Average age of directors on the board
DTen	Average board tenure of directors on the board
BNED	Proportion of NEDs on the board
BSize	The number of directors on the board
CEO-duality	CEO and chair are the same
CSRCom	Board has a committee dedicated to social and/or environmental issues[1]

In accordance with the QCA methodology, cases need to be assigned with membership scores for each set, indicating whether the case is fully in, out or somewhere in-between, this is referred to as calibration (Fiss, 2007; Greckhamer et al., 2018; Ragin, 2008). The calibration technique used in this study is suitable for quantitative large N-samples, following date structure for crisp sets (i.e. binary data) and distribution parameters for fuzzy sets (Cooper and Glaesser, 2016). Except for CEO-duality and the existence of a CSR-committee (CSRSom) conditions, where crisp sets were applied (1 fully in and 0 fully out), fuzzy sets were applied for all other conditions and the outcome. To calibrate the outcome (CSRP) and the following conditions: average director age (DAge), average director tenure (DTenure), average director experience (DExp) and board size (BSize), the 75th percentile for each measure was used as the threshold for obtaining full set membership. Cases in the 25th percentile were assumed to be fully out and the other remaining cases were considered somewhere in-between (Fiss, 2007; Misangyi et al., 2017; Razmdoost, Alinaghian and Linder, 2020).

[1] The name of the committee was self-explanatory; it was a committee dedicated to social and environmental issues (names such as CSR, sustainability, social performance, environmental performance, etc.). When the committee's name did not explicitly indicate a connection to social and environmental issues, and it was not one of the three main board committees (i.e. nomination, audit and remuneration/compensation), the committee charter was accessed through the company website. If the responsibilities of the committee involved any aspect of social and environmental issues, the committee was considered a CSR-committee and thus added to the sample.

Calibration is a critical step in the QCA method (Glaesser and Cooper, 2014). Therefore, calibrating conditions based on the sample instead of theory, as is norm in large N-samples (Cooper and Glaesser, 2016; Razmdoost, Alinaghian and Linder, 2020), can have limitations to the interpretation of final results (Cooper and Glaesser, 2016). To minimise such limitations and ensure the results' validity, several robustness checks were put in place. These are explained in detail in sections 4.4.3 and 4.4.4. It is considered best practice to use theory and substantive knowledge where possible (Greckhamer et al., 2018; Misangyi and Acharya, 2014). Therefore, the proportion of female-directors and NEDs were both calibrated using literature and corporate governance guidelines. To acquire the full benefit of women on boards, it has been suggested the 'magic number' is the presence of three or more (critical mass) female-directors (Bear, Rahman and Post, 2010; Konran, Kramer and Erkut, 2008). Considering the average board size in the full sample (FTSE350 and S&P500) is just over ten, 30% was considered as fully in and zero as fully out. Also, the presence of one or two female-directors known as "tokenism" can make a positive contribution (Bear, Rahman and Post, 2010; Konran, Kramer and Erkut, 2008), but is insufficient to fully effect CSR-performance (Périlleux and Szafarz, 2015). Boards with more women tend to act more socially responsible compared to boards with no or few women (Post, Rahman and McQuillen, 2015). Thus, the cross-over point for this condition was considered as 15%. Considering corporate governance guidelines and best practices indicate boards need to be made up of a suitable proportion of executive and non-executive directors, ensuring no individual or group can influence the decision making process (Financial Reporting Council, 2018; NYSE Governance Services, 2014), 50% is assigned as fully out for NEDs. Also, it is typical for the CEO to sit on the board, and considering the average board-size of the current sample is nearly ten, 90% has been considered as fully in and the other remaining cases for this set are considered somewhere in-between. Table. 4-3 provides an overview of the calibrations process as well as the thresholds used for set memberships.

Since only 15 cases in the FTSE350 sample had a joint CEO and board-chair, this condition was removed from the analysis for determining the configurations

leading to high CSR-performance in these companies. Also, among the S&P500 companies, all boards had at least 50% NEDs (only one exactly 50%) and around 97% had at least 70% NEDs (over 53% had at least 90% NEDs on the board). Therefore, this condition was omitted for the S&P500 cases. Although a longitude dataset has been used, it has been considered as pooled data. This is because the CSR-performance scores (outcome) do not appear to depend on previous year scores, each individual year for both S&P500 and FTSE350 was analysed separately and no particular trend (for instance increase or decrease) was observed over the years. Furthermore, in the study we are interested in the configuration(s) that lead to high CSR-performance, not in the change in each case.

Table. 4-3: Descriptive statistics and calibration rules for set-membership

Variable	FTSE350 Cases						S&P500 Cases					
	Mean	Min	Max	Thresholds for set membership			Mean	Min	Max	Thresholds for set membership		
				Fully in	Cross-over	Fully out				Fully in	Cross-over	Fully out
CSRP	42.83	10.32	67.39	52.23	43.44	34.42	43.06	7.79	66.99	53.2	44.92	34.25
FemD	17.48	0	57.17	30	15.1	0	18.16	0	55.55	30	15.1	0
DExp	3.18	0	10.63	3.88	3	2.17	4.78	0.2	15.31	5.79	4.62	3.69
DAge	56.99	46.22	68.33	59.17	56.99	54.79	62.59	46.88	75.57	64.61	62.7	60.63
DTenure	5.78	0.1	24.7	7	5.36	4.14	8.87	0.1	22.92	10.58	8.71	6.78
NED	71.89	37.5	100	90	70.1	50	87.23	50	100	90	70.1	50
BSize	9.07	3	26	10	9.1	7	10.8	2	30	12	10.1	9
CEO-Duality				1		0				1		0
CSRCom				1		0				1		0

4.4 - Data analysis and results

4.4.1 - Configurational analysis

QCA develops theory by determining necessary and/or sufficient conditions (board attributes) for an outcome of interest (high CSR-performance) to transpire. Results of a configurational analysis are configurations of several elements rather than the elements in isolation (Fiss, 2007; Greckhamer et al., 2018; Misangyi et al., 2017).

4.4.2 - Necessity analysis

A necessary condition is required for the outcome to occur, and without it the outcome will never happen. For necessity analysis, a consistency benchmark of a minimum >0.9 is suggested for all individual conditions (Greckhamer et al., 2018; Ragin, 2008; Schneider and Wagemann, 2012). This analysis was run separately for S&P500 and FTSE350 cases, all conditions had a consistency below 0.9.

4.4.3 - Sufficiency analysis

In cases where the condition or combination of conditions occurs alongside the outcome, that condition(s) is considered sufficient. This sufficiency conveys that the condition(s) is a subset of the outcome (Ragin, 2008). A sufficiency analysis consistency of minimum 0.8 has been considered for raw consistency (Greckhamer et al., 2018; Ragin, 2008). In order to avoid having simultaneous subset relations, where a condition has a high consistency in both the presence and absence of the outcome (i.e. a condition satisfies the formula $x \leq y$ and $x \leq \sim y$) (Ragin, 2008), proportional reduction in inconsistency scores (PRI) are also taken into consideration. It is recommended that PRI scores should be relatively high and not much lower than raw consistency scores, with a PRI score of below 0.5 being counted as significant inconsistency. In line with best practice, 0.7 has been considered in this study (Greckhamer et al., 2018). Furthermore, considering this is a large N-sample QCA study, a case frequency for occurrence of configurations is recommended in a way that at least 80% of cases are covered (Greckhamer

et al., 2018; Greckhamer, Misangyi and Fiss, 2013). Setting a frequency threshold will avoid including infrequent rare configurations, allowing for more robust explanatory configurations to be considered. The frequency threshold for the FTSE350 cases was considered as 6, covering 83% (frequency of 7 would be 79%). The frequency threshold for the S&P500 cases was considered as 12, again covering 83% (frequency of 13 would be 77%). The analysis was run in FsQCA 3.0, generating the truth table and using the Quine-McCluskey algorithm for the Boolean minimisation (Ragin, 2008). Depending on the way the counterfactual analysis has been applied, QCA provides three solutions: complex, parsimonious and intermediate (Appendix D.1). The counterfactual analysis considers logically possible configurations even when no case exists for it (Soda and Furnari, 2012). The complex solution does not consider any counterfactual cases. The parsimonious solution allows for remainders that result in simpler configurations. Finally, the intermediate solution only allows for the remainders that are based on theoretical and substantive knowledge (Ragin, 2008; Schneider and Rohlfing, 2016). As recommended by Ragin (2008), the intermediate solution has been used for interpretation in this study. Configurations resulting in high CSR-performance have been reported in Table. 4-4. The notations used in the table follow Fiss (2011). "●" represents conditions that are present, "⊗" is for absent conditions, and where the condition is not causal to the configuration it is left blank. Table. 4-4 shows two separate sets of configurations for the high CSR-performance outcome for FTSE350 and S&P500 cases. In total there are nine configurations leading to high CSR-performance. Five are related to the FTSE350 cases with an overall solution coverage of 0.311 and solution consistency of 0.837. The other four are related to S&P500 cases with an overall solution coverage of 0.206 and consistency of 0.857. The solution consistency for all sets in both tables are above 0.8, indicating sufficient consistency.

Table. 4-4: Distinct configuration of board attributes leading to high CSR-performance

		Solutions related to FTSE 350 Listed Companies					Solutions related to S&P500 Listed Companies			
		1	2	3	4	5	6	7	8	9
Director Characteristics	FemD	●	●	●	●		●	●	●	●
	DExp		⊗	●	●	●			●	●
	DAge	●	⊗	●	⊗	●		●	⊗	●
	DTen	⊗	●	⊗	●		⊗		●	●
Board Structure	NED	●	⊗	●	⊗	●				
	CEO-duality						●	●	●	
	BSize	●	●	●	●	●	●	●	●	●
	CSRCom	●	●		⊗	●	●	●		●
Board Archetype		Committee Board	Committee Board	Experience Board	Experience Board	Hybrid Board	Committee Board	Committee Board	Experience Board	Hybrid Board
Raw Coverage		0.0855521	0.0304166	0.195994	0.0772197	0.127257	0.0962326	0.0977328	0.0806099	0.0692412
Unique Coverage		0.0084824	0.0172003	0.0795117	0.0362855	0.0509585	0.027195	0.00786492	0.0563401	0.020348
Consistency		0.916265	0.920882	0.848793	0.845055	0.875608	0.875085	0.890722	0.856248	0.903523
N		1036					1855			
Frequency cut-off		6					12			
Consistency cut-off		0.808948					0.811931			
Solution coverage		0.311192					0.205934			
Solution consistency		0.837156					0.857952			

Notes: The notation applied by Fiss (2011) has been followed. Central conditions are represented by "●" (presence), "⊗" (absence), and blank (indifference).

4.4.4 - Supplement analysis

Goodness of the QCA procedure was tested by putting in place and performing several robustness checks (Cooper and Glaesser, 2016). In addition to considering PRI scores of 0.7, a case frequency threshold to cover at least 80% of the sample (Greckhamer et al., 2018; Greckhamer, Misangyi and Fiss, 2013), and checking for necessary conditions (Ragin, 2008), we altered the outcome from presence to absence (i.e. low CSR-performance), running the analysis separately for FTSE350 and S&P500 companies (Appendix D.2). Altogether there were seven configurations leading to low CSR-performance. Four related to the FTSE350 cases, with an overall solution coverage of 0.425 and consistency of 0.850. The other three related to S&P500 cases, with an overall solution coverage of 0.159 and consistency of 0.807. With this procedure, we were able to ensure no configuration is relevant for both the presence and absence of the outcome.

4.5 - Discussion

This study sought to explore the role of board composition in driving CSR-performance. Recently, limited studies have started exploring the interaction of some board attributes, showing they do not work in isolation (e.g. Endrikat et al., 2020; Galbreath, 2017). Furthermore, it has been argued that “one-size” doesn’t fit all boards (Dowell, Shackell and Stuart, 2011; Federo et al., 2020; Veltrop et al., 2018), and board composition does not have to be the same for all boards to reach their aims and goals. Using QCA in this study, the aim was to develop this area of research by identifying and exploring possible board configurations that may lead to high CSR-performance.

Five configurations in the UK and four in the USA were identified, suggesting country can play a role in determining the right board configuration for driving CSR-performance. The three main board archetypes identified are shared across both countries, with slight differences according to the country. This can be because the UK and USA based companies function according to an Anglo-American shareholder system, but their codes and practices of corporate

governance differ in places (Aguilera et al., 2006). For instance, in the current sample certain conditions are not the same across both countries. Due to a lack of variation in the sets created by these conditions, from the beginning the existence of CEO-duality was removed from the analysis for FTSE350, and the proportion of NEDs was omitted for the S&P500. Slight differences were again visible in the configurations of both groups (Table. 4-4). This is consistent with prior literature, suggesting board composition in the corporate governance realm depends on the country where the company operates (Aguilera, 2005).

At the same time, the results demonstrate that some commonalities exist across the companies in both groups (FTSE350 and S&P500). The one condition that is present in all configurations, regardless of the country where the company is active, and result in high CSR-performance is a large board size. This is aligned with previous literature, where building on stakeholder theory, it is believed a higher number of directors on the board generate better stakeholder representation. This in turn can lead to more attention towards different stakeholders' interests and involvement in social and environmental activities (Chams and García-Blandón, 2019; Ntim and Soobaroyen, 2013; Siciliano, 1996). Another condition that all board configuration with the exception of configuration 5 share, is the high proportion of female-directors. It has been argued that boards with a higher female presence are more likely to act more socially responsible compared to those with no or low female-presence (Post, Rahman and Rubow, 2011). Women tend to use their experience and influence to form sustainability-themed alliances (Post, Rahman and McQuillen, 2015), and are more likely to involve the organisation in CSR activities (Bear, Rahman and Post, 2010; Périlleux and Szafarz, 2015; Williams, 2003).

Based on the commonalties shared by configurations, three distinct board archetypes that are shared between the two groups have been identified. These archetypes have been named according to the main conditions that differed between them: *committee-boards*, *experience-boards* and *hybrid-boards* (Table. 4-4). Below these archetypes are discussed.

4.5.1 - Committee-boards

In the first archetype identified, in addition to large boards, high proportion of female-directors and CEO-duality (where it is common practice), the unique characteristic is the presence of CSR-committees, hence the naming of *committee-boards* (i.e. configurations 1, 2, 6 and 7). Increasingly, companies are responding to pressure from stakeholders by voluntarily setting up additional board-level committees focused on social and environmental issues (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017; Kolev et al., 2019). Establishing board-level committees further allows companies to demonstrate their social and environmental accountability to internal and external stakeholders (Burke, Hoitash and Hoitash, 2019; Mallin and Michelon, 2011; Walls, Berrone and Phan, 2012). In the current sample, between 2012 and 2015 the number of FTSE350 and S&P500 companies with a CSR-committee has increased by nearly 22%. Therefore, taking all of the above into consideration the following is proposed:

Proposition 1*: In the UK and USA, large boards with a CSR-committee and high presence of female-directors can result in high CSR-performance.*

CEO-duality is common among the S&P500 companies (over 53% of the current cases have joint CEO and board-chair). From an agency theory perspective, it is believed CEO-duality reduces the independence of the board from management, and has a negative impact on CSR-performance (e.g. Mallin and Michelon, 2011; Naciti, 2019). The CEO and board-chair are powerful roles that can influence the discussions and decisions made by the board. A joint role can increase agency cost and decrease firm performance (Naciti, 2019; van der Walt and Ingley, 2003). However, the results indicate that among the committee-boards in the S&P500 group, the presence of CEO-duality contributes to high CSR-performance (i.e. configurations 6 and 7). The inclusion of this condition in committee-boards could be because of the existence of the CSR-committee. Setting up voluntary CSR-committees where the duty and responsibility of the committee is transparent to stakeholders can be a mechanism for board members' accountability, including the CEO and chair (Burke, Hoitash and

Hoitash, 2019). Therefore, acknowledgement of responsibility towards social and environmental issues by an influential and powerful individual can be the reason this condition is present in the archetype.

High percentage of NEDs seems to have become a norm in the S&P500 companies (only one company under 50% and more than half with at least 90% NEDs on the board). It is a different story amongst committee-board configurations in the FTSE350 group. A high proportion of NEDs is seen to be absent in one configuration, meaning a low proportion of NEDs is included in such boards (i.e. configuration 2), while in the other this condition is present (i.e. configuration 1).

Concurrently, where a high proportion of NEDs are on the board, the average director tenure is either low (i.e. configurations 1 and 6) or indifferent (i.e. configuration 7). On the other hand, average director age on these boards is either high (i.e. configurations 1 and 7) or indifferent (i.e. configuration 6). The opposite is true when the proportion of NEDs is low on committee-boards, meaning average director tenure is high and age is low. The results seem to indicate a combination of high proportion of NEDs and high average age of directors can be replaced with high average director tenure in committee-boards. NEDs are suggested to be more knowledgeable about other organisations different strategies (Fama and Jensen, 1983; McDonald and Westphal, 2010). Consequently, they increase the access of the board to a variety of resources (Hillman and Dalziel, 2003; Mallin, Michelon and Raggi, 2013), which along with their sustainability-themed alliances is argued to increase CSR-performance (Hafsi and Turgut, 2013; Post, Rahman and Rubow, 2011). Also, it has been suggested moral reasoning increases with age, and older directors will exhibit higher moral reasoning and judgement (Forte, 2004; McCabe, Ingram and Dato-On, 2006). This in turn could indicate an increase in these directors' sensitivity towards social and environmental issues. On the other hand, directors with higher tenure gain knowledge and become familiar with the firm's processes, past commitments, capabilities and resources (Fischer and Pollock, 2004; Kor and Sundaramurthy, 2009; Pfeffer and Salancik, 1978). Director tenure is believed to

be one of the driving factors of CSR activity in organisations, and will impact CSR-performance positively by lowering the CSR concerns (Harjoto, Laksmana and Lee, 2015). The results indicate under certain circumstances these conditions can replace each other in the "causal recipe", leading to high CSR-performance. This is consistent with the argument that from a corporate governance perspective, board diversity is not just variety within the board. It is the manner in which this diversity in director characteristics can benefit the different board decision making processes and outcomes (van der Walt and Ingley, 2003).

The combination of NEDs, average director age and tenure of committee-boards in the UK (i.e. configurations 1 and 2) and USA (i.e. configurations 6 and 7) is different. As demonstrated to some extent in the current data, this difference could be due to corporate governance practices and geographical context differences that impact board composition (Aguilera, 2005). For instance, in addition to the difference in CEO-duality and NEDs among the FTSE350 and S&P500 companies, the average director age among the S&P500 companies is just over 3 years more than the FTSE350 companies (62.59 compared to 56.99 years). Average tenure is also over 3 years more in the S&P500 companies, 8.87 years compared to 5.78 years in the FTSE350 companies. Examples of companies in the current sample with such boards among the FTSE350 are Tate and Lyle, Standard Life Aberdeen, British American Tobacco (configuration 1), Sainsbury's and Tullow Oil (configuration 2). Among the S&P500, companies such as AT&T, MetLife Insurance (configuration 6), Lockheed Martin and Coca-Cola (configuration 7) have boards with such archetypes. Taking all of the above into consideration, the following more detailed propositions for each country in regard to committee-boards is proposed:

Proposition 1-1*: In the UK, large boards with a CSR-committee, high presence of female-directors, high presence of NEDs, high average director age and low average director tenure OR low presence of NEDs, low average director age and high average director tenure will result in high CSR-performance.*

Proposition 1-2*: In the USA, large boards with a CSR-committee, high presence of female-directors, high presence of NEDs and CEO-duality with low average director tenure or high average director age will result in high CSR-performance.*

It is interesting to note there are instances where a board, with the same membership score, can be categorised as either configuration 6 or 7 (such as PG&E and Mondelez International). This indicates a configuration very similar to configuration 1, a committee-board under the UK configurations. However, unlike the boards under configuration 1 where both a high director age and low tenure is a requirement for driving CSR-performance, in this situation although both are present, either a high director age or a low tenure is required in the board configuration to achieve high CSR-performance. This strengthens the argument that various companies, regardless of the country they operate in, can share common board attribute traits that help drive CSR-performance. The minor differences in the impact of such attributes could be related to the differences in director age and tenure seen among the boards of the two countries (Table. 4-3).

4.5.2 - Experience-boards

The next archetype identified is similar to the committee-boards, except instead of CSR-committees these boards have directors with high external experience gained through other board directorships (i.e. configurations 3, 4 and 8). The results suggest experience gained from sitting on other boards could become more profound when a committee dedicated to social and environmental issues has not been set up at board-level. It is believed when directors sit on other boards they are exposed to knowledge and practices of those boards, including social and environmental activities, ultimately transferring this information that otherwise may not be known in the company to the board (Hillman and Dalziel, 2003; Ortiz-de-Mandojana and Aragon-Correa, 2015; Pfeffer and Salancik, 1978). Stakeholders are increasingly holding companies responsible for their environmental and social conduct (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Kolev et al., 2019; White, 2012), pushing them to engage in CSR activities (Aguilera et al., 2007). Committee-boards are setting up CSR-committees, demonstrating their social and environmental responsibility to both

internal and external stakeholders (Burke, Hoitash and Hoitash, 2019; Mallin and Michelon, 2011; Walls, Berrone and Phan, 2012). Therefore, knowledge and information from these boards will be transferred to the experience-boards through interlocking directorships. Experience-boards have a high number of directors, generating better stakeholder representation and attention towards different stakeholders interests and involvement in social and environmental activities (Chams and García-Blandón, 2019; Ntim and Soobaroyen, 2013; Siciliano, 1996). Similar to committee-boards, the high proportion of female-directors – who are more likely to act socially responsible (Post, Rahman and Rubow, 2011) and involve the firm in CSR activities (Bear, Rahman and Post, 2010; Périlleux and Szafarz, 2015; Williams, 2003) – can also be seen as another factor helping experience-boards achieve high CSR-performance. Therefore, considering the above discussion the following is proposed:

Proposition 2*: In the UK and USA, large boards with high average director external experience and high presence of female-directors, can result in high CSR-performance.*

Having CEO-duality on experience-boards can be seen as beneficial too. The need for social legitimation and providing balance among stakeholders will be driving the board to engage in CSR activities (Aguilera et al., 2007; Aguilera and Jackson, 2003). A powerful and influential CEO and chair will help move this goal forward. Similar to committee-boards, the results for experience-boards indicate under certain circumstances the proportion of NEDs (for UK based companies), average director age and tenure can replace each other in the configurations, leading to high CSR-performance. This is again consistent with the argument that board diversity is not just heterogeneity within the board, but how the diversity in characteristics and expertise of board members can contribute to different board practices (van der Walt and Ingley, 2003). Additionally, we can argue the difference between UK and USA based companies could result from corporate governance practices and geographical context differences that impact board composition (Aguilera, 2005). Examples of companies with such boards in the current sample among the FTSE350 are International Consolidated Airlines

Group, Royal Dutch Shell (configuration 3) and WhitBread (configuration 4). Among the S&P500, Cisco Systems is a good example of a company with this board archetype. Taking all of the above into consideration, the following more detailed propositions for each country in regard to experience-boards is proposed:

*Proposition **2-1**: In the UK, large boards with high average director external experience, high presence of female-directors, high presence of NEDs, high average director age and low average director tenure OR low presence of NEDs, low average director age and high average director tenure will result in high CSR-performance.*

*Proposition **2-2**: In the USA, large boards with high average director external experience, high presence of female-directors, high presence of NEDs and CEO-duality with low average director age and high average director tenure will result in high CSR-performance.*

4.5.3 - Hybrid-boards

The third archetype identified are boards that have both high average director external experience and a CSR-committee (i.e. configurations 5 and 9), which has been called hybrid-boards. The main difference in this archetype is the simultaneous presence of a CSR-committee and high director experience. Therefore, CSR-performance in such boards benefits from accountability towards stakeholders and experience gained from other boards. The presence of female-directors for the FTSE350 companies is indifferent, whereas it is present in the other two archetypes. In the S&P500 the same pattern can be seen for CEO-duality. This condition is indifferent in hybrid-boards. Hence, the third main archetype proposed is as below:

***Proposition 3:** In the UK and USA, large boards with a CSR-committee, high average director external experience and large proportion of NEDs can result in high CSR-performance.*

There are slightly more differences between the conditions of these boards depending on the country. Similar to the previous two archetypes, the difference

in corporate governance practices and geographical context (Aguilera, 2005) could play a greater role than the conditions themselves. This is the only configuration among the FTSE350 companies where high presence of female-directors is indifferent (i.e. configuration 5). At the same time, high proportion of NEDs and high average director age is a sufficient condition. One reason for this could be how each of these conditions contribute to the "causal recipe", leading to CSR-performance. Similar to female-directors, NEDs tend to use their diverse experience and network ties to build sustainability-themed alliances and indirectly influence social performance (Post, Rahman and McQuillen, 2015). Moral reasoning increases with age. Older directors will exhibit higher moral reasoning and judgement (Forte, 2004; McCabe, Ingram and Dato-On, 2006), which similar to female-directors (Bear, Rahman and Post, 2010; Mallin and Michelon, 2011; Williams, 2003) could suggest an increase in these directors' sensitivity towards social and environmental issues. The results indicate that on a large board with CSR-committee and high average director experience, these conditions can replace each other in the "causal recipe", leading to high CSR-performance. This is also consistent with the argument that from a corporate governance perspective, board diversity is not just heterogeneity within the board (Van Marrewijk and Were, 2003).

Among the S&P500 companies, the hybrid-board (i.e. configuration 9) is the only configuration where the CEO-duality condition is indifferent and all other conditions are present. A powerful and influential individual – who either due to acknowledging responsibility for CSR-performance and accountability to stakeholders (committee-boards) or the need for legitimation and providing balance among stakeholders (experience-boards) positively impacts CSR-performance – seems to have been replaced with the combination of high female presence, high average tenure and age. This indicates that a combination of these three conditions can make the same contribution to different decision-making processes and outcomes as a powerful CEO and chair backed by either a CSR-committee or resources in the form of director experience. Taking all of the above into consideration, the following more detailed propositions for each country in regard to hybrid-boards is proposed:

Proposition 3-1*: In the UK, large boards with high average director external experience, CSR-committee, high presence of NEDs and high average director age will result in high CSR-performance.*

Proposition 3-2*: In the USA, large boards with high average director external experience, CSR-committee, high presence of female-directors, high presence of NEDs, high average director age and high average director tenure will result in high CSR-performance.*

Examples of companies in the current sample with a hybrid-boards listed among the FTSE350 are BHP Billiton, Unilever, Fresnillo and Coca-Cola Hellenic Bottling Company (HBC). On these boards, according to the configuration, the impact of female presence and director tenure is indifferent. As a result, regardless of the status of these two attributes on the board, such boards should expect high CSR-performance. This can clearly be seen in the current examples. Unilever, Fresnillo and Coca-Cola HBC have a relatively low average director tenure (below the sample average of 5.78) compared to BHP Billiton (over the sample average of 5.78). Fresnillo, BHP Billiton and Coca-Cola HBC have a low presence of female-directors on their boards (below the sample average of 17.48), while Unilever has gradually increased the number of female-directors from 2012 to 2015, reaching an equal proportion of male and female-directors in 2015. All three companies maintain a CSR-performance score that places them either in the upper quartile of the current sample or very close (above 52.23).

Among the S&P500, General Mills is an interesting example for this archetype, as this company is also one of the cases under configuration 7 (committee-boards). This can indicate that either CEO-duality is required in the board configurations to help drive CSR-performance, which is indifferent for configuration 9, or high experience and tenure are both required, which is indifferent for configuration 7. In other words, a company like General Mills that has high presence of female-directors, high director age and a large board with a CSR-committee does not need the presence of all three attributes (CEO-duality, high experience and tenure) to achieve high CSR-performance. This example further emphasises the point that the configuration of board attributes, and not

individual attributes, contribute towards high CSR-performance. Also, some attributes or a combination of attributes can replace each other's impact on the board configurations and "one-size" does not fit all.

4.6 - Conclusion and Directions for Future Research

The current study was conducted with the aim of shedding light on the role of board attributes in driving CSR-performance. We demonstrated that board attributes do not work in isolation, but interact with each other in shaping CSR-performance, and more than one configuration of board attributes can lead to the same outcome for CSR-performance. The results obtained from the current study indicate that more than one board attribute configuration will lead to high CSR-performance, and depending on the configuration attributes can be present, absent or insignificant (Table. 4-4). This result, to some extent, can explain some of the inconsistencies of previous literature in regard to the impact of various board attributes in driving CSR-performance.

Furthermore, by exploring FSTE350 and S&P500 companies separately, we were able to explore the differences and similarities between companies operating in two countries with slightly different rules and regulations. We were able to identify 9 configurations generating high CSR-performance, and categorise them into three archetypes shared by both countries. Geographical context and corporate governance guidance seems to impact board configuration. However, regardless of the country the company operates in, board attribute configurations driving CSR-performance share common traits. The same can be said for companies in different industries. As can be seen from the examples of various companies in different archetypes mentioned in the previous section, board attribute configurations impacting CSR-performance is shared across industries as well.

It must be kept in mind that in this study the aim was to find the most consistent board configurations that lead to high CSR-performance. Hence, the benchmarks for case frequency, consistency and PRI were implemented. It is understood the board configurations found may not be the only ones leading to high CSR-

performance in companies. However, they are the most frequently seen board configurations that lead to such an outcome.

The companies included in the sample for this study have the highest market capitalisation of the country they operate in. On the other hand, firm performance can influence CSR-performance (e.g. Waddock and Graves, 1997; Zhao and Murrell, 2016), indicating configurations and archetypes that might be suitable for companies similar to the current sample may not be suitable for others. It would be advisable to separately explore cases from other companies, for instance with smaller market capitalisation.

Furthermore, the board configurations in eastern countries can be different from western countries, for instance male-dominant boards from similar ethnicity backgrounds is a common occurrence in countries like South Korea (Chang et al., 2017; Oh, Chang and Jung, 2019). Another avenue for further research would lie in exploring the possible board configuration of eastern countries that can lead to CSR-performance, and the differences they might have compared to the configurations found in this study. In addition to exploring board configurations, it would seem sensible to do the same for the CSR-committee, as the more in-depth conversations regarding social and environmental issues takes place there (Dixon-Fowler, Ellstrand and Johnson, 2017; Kesner, 1988; Kolev et al., 2019; Paine, 2014).

This research has important practical implications as well. By identifying the various configurations of board attributes, the study helps businesses understand the interaction of these attributes and the board combinations that can lead to high CSR-performance. Also, depending on where they operate, exploring the geographical context of boards provide businesses with an additional level of guidance on what they should focus on. These insights can guide companies in deciding the best set-up of boards to achieve their social and environmental objectives.

By conducting this research, some answers were provided for the main research question: *What is the role of board attributes in driving CSR-performance?* The main answer being various combinations of board attributes can lead to the same

CSR-performance and “one-size” does not necessarily have to fit all. To the knowledge of the author this is the first study to take a configurational approach to the impact of boards in shaping CSR-performance. This is especially important, as this approach is able to provide a more comprehensive view of the influence of board attributes in driving CSR-performance. However, as already mentioned new questions have arisen, particularly around contextual factors that may impact the influence of board configurations on CSR-performance. Overall, this study can be seen as the first step in this direction, opening the door to other such studies.

5 . Conclusion

The current study was conducted with the aim of exploring the role of the board of directors in shaping CSR-performance. Several objectives were set to reach this aim, and ultimately provide answers to the overarching research question. The first objective was addressed in chapter 2. In this chapter by conducting a systematic literature review, the underpinning effects of director characteristics and board structures on CSR-performance were explored and critically assessed. By identifying and distinguishing between two existing board attributes, namely board characteristics and board structures, the literature review uncovered similarities and inconsistencies related to the impact of board attributes on CSR-performance. Additionally, the review identified significant variation in conceptualisations, theoretical frameworks, the use of measurements and contexts across studies providing a basis to explain the inconsistent results, determine research gaps and suggest directions for future research. While there has been a call for investigating CSR with relation to corporate governance mechanisms (Jain and Jamali, 2016; Walls, Berrone and Phan, 2012), only a few comparative studies have taken a corporate governance approach in explaining CSR-performance. The review contributes to this line of research by extending the understanding of the role of board attributes in CSR-performance through offering a synthesis of dominant scholarly discourses and an organising lens for future scholarship. The two avenues identified for further research in this area set the ground for the empirical section of the thesis.

Chapter 3 met the second objective of the thesis: exploring the role of the CSR-committee in shaping CSR-performance. By investigating the presence, composition and interaction of the CSR-committee and its attributes with other board attributes, this chapter was able to provide a more comprehensive view of this board attribute and its impact on CSR-performance compared to previous literature. Therefore, shedding further light on the role of board attributes and their role in driving CSR-performance. Also, this chapter reinforced the findings of the literature review, demonstrating how board attributes work together in driving CSR-performance and exploring the impact of attributes in isolation provides an

incomplete picture. It further strengthened the need to investigate combinations of multiple interrelated board attributes and their influence on CSR-performance to better understand the phenomenon.

By taking a configurational approach, chapter 4 of the thesis focused specifically on the third and final objective: investigating and identifying multiple board configurations that lead to high CSR-performance. The data analysis resulted in the identification of nine board configurations that lead to high CSR-performance (5 among the FTSE350 and 4 among the S&P500). From these configurations, three distinct board archetypes shared by both groups were identified and named based on the main board attribute that differed between the configurations: *committee-boards, experience-boards and hybrid-boards*. This chapter provides valuable insight into the role of board attributes in shaping CSR-performance, and contributes to the literature arguing against a "one-size" fits all board governance approach (Dowell, Shackell and Stuart, 2011; Federo et al., 2020; García-Castro, Aguilera and Ariño, 2013; Veltrop et al., 2018). Additionally, chapters 3 and 4 contribute to another growing line of literature that suggests corporate governance mechanisms should be explored in "bundles", and looking at each mechanism in isolation provides an insufficient picture (e.g Aguilera, Bell and Filatotchev, 2014; García-Castro, Aguilera and Ariño, 2013; Greckhamer et al., 2018).

5.1 - Linking the Papers

Chapters 2 to 4 of the current thesis consist of three standalone papers with the overall aim of exploring the board of directors' role in shaping CSR-performance. Chapter 3 and 4 empirically address the areas identified for further research in the systematic literature review (chapter 2). Although these two chapters take different approaches to answering the overarching research question of the thesis, their results are largely aligned.

In chapter 3 it was demonstrated that on average companies with a CSR-committee can expect high CSR-performance scores (Table. 3-3). However, considering the maximum CSR-performance score belonged to a company without a CSR-committee (Table. 3-3), setting up this committee does not

necessarily guarantee a higher score. This finding suggested other board attributes could also play a major role in shaping CSR-performance and may even replace the positive effect of CSR-committees in shaping CSR-performance. This argument was strengthened in chapter 4, where the CSR-committee in one of the identified archetypes (experience-boards) was replaced with directors with high external experience gained through other board directorships (i.e. configurations 3, 4 and 8). It is believed when directors sit on other boards they are exposed to knowledge and practices of those boards, including social and environmental activities, ultimately transferring this information that otherwise may not be known in the company to the board (Hillman and Dalziel, 2003; Ortiz-de-Mandojana and Aragon-Correa, 2015; Pfeffer and Salancik, 1978). Stakeholders are increasingly holding companies responsible for their environmental and social conduct (Burke, Hoitash and Hoitash, 2019; Faris and Gilbert, Brian, 2013; Kolev et al., 2019; White, 2012), pushing them to engage in CSR activities (Aguilera et al., 2007). Boards with configurations related to the committee-boards identified in chapter 4 (i.e. configurations 1, 2, 6 and 7) are setting up CSR-committees, demonstrating their social and environmental responsibility to both internal and external stakeholders (Burke, Hoitash and Hoitash, 2019; Mallin and Michelon, 2011; Walls, Berrone and Phan, 2012). Therefore, knowledge and information from these boards will be transferred to the experience-boards through interlocking directorships. In other words, it can be argued that through the external knowledge obtained by sitting on other boards, interlocking directors sitting on experience-boards can replace the benefits of the CSR-committee by having access to similar insights as that gained by the topic specific discussions of the board-level CSR-committee (Kesner, 1988; Kolev et al., 2019). This could also be the reason behind some results seen in chapter 2 (Table. 2-8), where the impact of CSR-committees on CSR-performance has been reported as statistically insignificant (Burke, Hoitash and Hoitash, 2019; Chams and García-Blandón, 2019; Walls and Berrone, 2017).

Echoing the findings from the literature review (Table 2-1), both chapters 3 and 4 empirically demonstrated the mostly positive impact of female-directors in shaping CSR-performance. In chapter 3, it was clearly seen that female-directors

positively effect CSR-performance (Table. 3-6). This positive impact was further reinforced in chapter 4 where the high proportion of female-directors was seen as a condition shared by all except one of the configurations leading to high CSR-performance (Table 4-4). It has been argued that boards with a higher female presence are more likely to act more socially responsible compared to those with no or low female-presence (Post, Rahman and Rubow, 2011). Women tend to use their experience and influence to form sustainability-themed alliances (Post, Rahman and McQuillen, 2015), and are more likely to involve the organisation in CSR activities (Bear, Rahman and Post, 2010; Périlleux and Szafarz, 2015; Williams, 2003). Despite the growing research indicating the positive impact of female-directors, it is interesting to note that boards are still mostly dominated by male directors. This is gradually changing, for instance in the current sample the mean proportion of female-directors on boards was 17.9% (Table. 3-3), this proportion has increased to 38% and 35% respectively for FTSE100 and FSTE250 companies in 2021 (Vinnicombe et al., 2021).

In chapter 3, in line with two of the configurations (i.e. 2 and 4) identified in chapter 4 and recent research (Naciti, 2019), the GEE analysis determined that a high proportion of NEDs on the board has a negative impact on CSR-performance. As mentioned in chapter 3, in the current sample the percentage of NEDs is spread mostly between 50-100% allowing for the GEE analysis to be conducted in determining the impact of NEDs on CSR-performance. Simultaneously the results from chapter 3 further demonstrated both external and internal director experience have a positive impact on CSR-performance, indicating knowledge of the company and other companies may both be needed to lead to high CSR-performance. Most NEDs bring external knowledge with them, but compared to executive directors they have limited knowledge of the company itself (Naciti, 2019). In line with this argument, it can be suggested that another factor that needs to be explored in conjunction with these attributes is director tenure, which can also indicate levels of knowledge and experience (Homroy and Slechten, 2019). The results for chapter 3 emphasise the need to look at more than two board attributes at a time to fully understand their impact in shaping CSR-performance. In other words, emphasising the need to use the configurational

perspective used in chapter 4, where it was seen that low and high proportion of NEDs, director tenure and age can replace each other in different board configurations. Considering the use of QCA in chapter 4, when refereeing to high and low for each board attribute the calibration used (Table 4-3) needs to be taken into account.

In chapter 4 it was seen that in accordance with other research (Burke, Hoitash and Hoitash, 2019; Galbreath, 2016), in some board configurations a large proportion of NEDs is needed (i.e. configurations 1, 3 and 5) to lead to high CSR-performance. At first it may seem to contradict the results obtained in the previous chapter. However, as mentioned, two configurations (2 and 4) also demonstrated under certain circumstances a low proportion of NEDs is required to lead to high CSR-performance. A closer look at all the configurations shows in configurations where a high proportion of NEDs are on the board, the average director tenure is either low (i.e. configurations 1 and 3) or does not play a role (i.e. configuration 5). On the other hand, average director age on these boards is high. The opposite is true when the proportion of NEDs is low, meaning average director tenure is high and age is low. The results seem to indicate a combination of high proportion of NEDs and high average age of directors can be replaced with high average director tenure on boards. The literature suggests NEDs are more knowledgeable about other organisations' different strategies (Fama and Jensen, 1983; McDonald and Westphal, 2010). Consequently, they increase the board's access to a variety of resources (Hillman and Dalziel, 2003; Mallin, Michelon and Raggi, 2013), which along with their sustainability-themed alliances is argued to increase CSR-performance (Hafsi and Turgut, 2013; Post, Rahman and Rubow, 2011). Also, it has been suggested moral reasoning increases with age, and older directors exhibit higher moral reasoning and judgement (Forte, 2004; McCabe, Ingram and Dato-On, 2006). This in turn could indicate an increase in these directors' sensitivity towards social and environmental issues. However, directors with higher tenure gain knowledge and become familiar with the firm's processes, past commitments, capabilities and resources (Fischer and Pollock, 2004; Kor and Sundaramurthy, 2009; Pfeffer and Salancik, 1978). Director tenure is believed to be one of the driving factors of CSR activity in organisations, and will

impact CSR-performance positively by lowering CSR concerns (Harjoto, Laksmana and Lee, 2015). Hence, the results indicate under certain circumstances these conditions can replace each other in the “causal recipe”, leading to high CSR-performance.

From a resource dependency perspective, one of the main responsibilities of the board is to increase access to a variety of resources (Hillman and Dalziel, 2003). Different board attributes provide different resources and benefits impacting the decision-making processes and outcomes of the board, which from a corporate governance view is the idea behind board diversity (van der Walt and Ingley, 2003). Therefore, in view of the current research findings, it can be claimed that considering the configuration of the board, resources brought to the board through different attributes can replace each other in the “causal recipe”, leading to high CSR-performance. So, it can be argued from the results obtained in chapter 4, resources brought to the board via director characteristics and structure “found to be causally related in one configuration may be unrelated or even inversely related in another” (Meyer, Tsui and Hinings, 1993, p.1178). Overall, the results in chapter 4 show a variety of board configurations will lead to high CSR-performance, suggesting depending on the configuration, attributes can impact CSR-performance positively, negatively or insignificantly. This in turn helps explains some of the inconsistencies seen in the literature review (chapter 2) and the seemingly contradictory results of chapters 3 and 4.

To conclude, the results from both empirical chapters demonstrate the findings from the literature review that board attributes do not work in isolation, but interact with each other in shaping CSR-performance. Hence, contributing to a growing line of literature that argues corporate governance mechanisms need to be investigated in “bundles” (e.g Aguilera, Bell and Filatotchev, 2014; García-Castro, Aguilera and Ariño, 2013; Greckhamer et al., 2018), and looking at each mechanism individually will not provide an accurate or full picture. Furthermore, the fragmented and contradictory results seen in the literature review can be explained through a resource dependency and configurational perspective, opening the door to a new approach on the role of board directors in shaping

CSR-performance. One where “one-size” does not fit all and different configurations of boards can lead to high CSR-performance, with board attributes (and the resources each attribute brings) replacing each other in different board configurations.

5.2 - Practical Implications

This thesis has several important practical implications as well. Exploring CSR-committees beyond their existence, helps organisations understand the role of CSR-committees, its interaction with other key board attributes and the committees’ composition in driving CSR-performance. The reason this is important lies in the increasing number of companies voluntarily setting up CSR-committees at board-level, and the lack of detail in the corporate governance realm regarding the board’s role in monitoring corporate social responsibility and sustainability (Burke, Hoitash and Hoitash, 2019; Dixon-Fowler, Ellstrand and Johnson, 2017; Paine, 2014). Also, this study reveals board attributes do not work in isolation, but interact with each other in shaping CSR-performance. For instance, in chapter 3, it was seen that CSR-committees strengthen the positive impact of female-CEOs on CSR-performance (Table. 3-6). Also, female-CEOs negatively moderate the negative impact of non-executive members of the CSR-committee on CSR-performance, rendering it positive. Therefore, when setting up CSR-committees, companies need to consider the composition of the board, the committee and the interactions between the board and committee attributes.

The importance of interactions between board attributes and their impact on CSR-performance is further developed and expanded through the results in chapter 4. By identifying the various configurations of board attributes that lead to high CSR-performance, this thesis calls for companies to consider the combinatory effect of these attributes in forming a board that can help promote CSR-performance. For instance, having a high proportion of female-directors will not always result in high CSR-performance. This high proportion of female-directors need to be accompanied by the other board attributes seen on either of the committee-board or experience-board archetypes. Having a CSR-committee does not necessarily yield high CSR-performance either. A CSR-committee

needs to be combined with other board attributes seen on committee-boards. Also, not setting up a CSR-committee does not lead to low CSR-performance. As was seen with the experience-boards, with the right board configuration it is possible to achieve high CSR-performance without setting up this board-level committee (Table. 4-4). Furthermore, exploring the geographical context of boards in chapter 4 provides organisations with an additional level of guidance on what to focus on subject to where they operate.

Finally, this thesis has implications for policy makers as well. Policy makers regularly issue reports and consultation documents of policy proposals on various topics, including corporate governance and CSR. They are then followed up for further action if required. The November 2016 green paper by the British government on “Corporate Governance Reform” (Corporate Governance Reform Team; Department for Business, 2016) is an example of such proposals.

Therefore, taking the nine board configurations and 3 archetypes identified in chapter 4 into consideration, policy makers can provide companies with policy proposals, guidelines and frameworks for driving CSR-performance at board-level. Additionally, the geographical context of boards explored in chapter 4, provides policy makers with an additional level of guidance on what to take into consideration depending on the country.

5.3 - Limitations and Directions for Future Research

While this thesis has been able to develop and expand the understanding of the board of director's role in driving CSR-performance, it is not without its limitations. As a consequence of the systematic literature review approach (and language barriers), only articles written in internationally published English accredited journals were reviewed in chapter 2. This limited a more detailed insight into other countries, particularly eastern ones. The limited number of English articles focusing on eastern countries (e.g. Chang et al., 2017; Jia and Zhang, 2011; Zhang, Zhu and Ding, 2013) included in the review, provided a brief glimpse into the differences in this field that exist between eastern and western countries. It has been suggested existing theories used by western countries in regard to the overlap of corporate governance and sustainability may not apply in a similar

manner to eastern countries (Chang et al., 2017). These differences can even influence the way board attributes and their impact on CSR-performance is investigated in these countries. For instance, because of male-dominant boards from similar ethnicity backgrounds, studies carried out in South Korea have used education instead of gender and ethnicity (e.g. Hafsi and Turgut, 2013; Mallin and Michelon, 2011) as a factor for examining the impact of diversity on CSR-performance (Chang et al., 2017; Oh, Chang and Jung, 2019). Therefore, emphasising the need to explore board configurations and their impact on CSR-performance in such countries..

Additionally, from a methodology point of view, a limitation that presented itself in this thesis is related to the data collection and cleaning phase, as it was an extremely time consuming and tedious process. The large data for this thesis had to be collected manually from three different databases, then collated and synchronised several times to minimise the possibility of errors. Therefore, limiting the ability to collect additional data related to other listed companies in other countries with different corporate governance and CSR rules and guidelines.

Hence, to further enhance and develop the understanding of the influence of geographical context on CSR-performance, future research needs to create a sample that includes more countries. This will allow for the identification of possible board archetypes in different countries and their comparison. The results can provide a more detailed explanation for inconsistencies found in previous literature. This will help better clarify the differences companies need to consider when thinking of their board compositions, and the impact of geographical context. Also, this understanding will be of use for multi-national companies with subsidiaries in countries with different corporate governance and CSR rules and guides (Aguilera and Jackson, 2003, 2010; Bondy and Starkey, 2014).

The configurational approach taken in chapter 4 resulted in the identification of 3 main propositions, and 6 sub-propositions, regarding the board configurations that lead to high CSR-performance. However, the need to further investigate these propositions in more depth through the identified archetypes still exists.

This can be achieved by supplementing the current study with a regression analysis. The analysis will allow for further testing of the robustness of the archetypes by controlling for alternative explanations of the results obtained through the QCA analysis. Additionally, the regression analysis will allow the quantification of the QCA results, ultimately leading to a deeper understanding of the empirical evidence and improving the predictive power of the hypothesised relationships (Meuer and Rupietta, 2017). To further substantiate the archetypes, a case study approach can be carried out for each one (Aversa, Furnari and Haefliger, 2015).

Finally, while the literature on the attributes of board and CSR-performance is well developed (for example director age, tenure, knowledge, skill, experience and expertise: Chang et al. 2017; Homroy and Slechten 2019; Olthuis and van den Oever 2020), this is not the case for CSR-committees. For instance, although explored as control variables in this study, the results on chapter 3 (Tables 3.6 and 3.7) demonstrated the impact of some board attributes on CSR-performance is different compared to the same attributes on the CSR-committee (for instance internal and external experience). Therefore, similar to boards, it would be advisable to explore other CSR-committee attributes and their impact on CSR-performance in more depth than those explored in this study. Also, the archetypes identified in chapter 4 demonstrate the importance of the CSR-committee as a board attribute leading to high CSR-performance (Table. 4-4), which again emphasises the importance of the need for better understanding of this board attribute.

5.4 **- Personal Reflection**

In this final section, I will try to bring my personal thoughts and reflections regarding the PhD journey and the overall results into perspective. Although the overall theme and dominant field of research is the same, the outcome and final results are different from what I imagined they would be when I started 4 years ago. My then somewhat simplistic view of what a “finished” research needs to look like is very different now. I have come to realise in the dynamic world of academia, no research is ever really finished. There will always be areas for more

development and understanding, and this is what I find so attractive. My motivation for doing this research is still the same: to align the mind and the heart in an organisation. The mind referring to Corporate Governance as that for me represents principle, order and logic. The heart being Corporate Sustainability, as I believe it consists of factors and indicators more emotionally based.

When I first started my PhD journey, I had just left the corporate world, where I worked in the banking industry for over 12 years in several roles and positions. My senior manager at the time thought I would be returning soon. First giving me 3 months paid leave and then 8 months unpaid leave, he thought I would regret my decision and return to being an organisation and methods analyst. I had my own doubts about whether I had done the right thing as well, leaving not only a career I knew well, but my country and most of my close family. However, within less than 6 months into the PhD I knew I had found what I always missed as an analyst, the opportunity to explore topics of interest from various angles. I knew then I would never return to the corporate world.

My department at the time was the “Organisation and Methods” department. In the Iranian banking system it is considered an important department (informally referred to as the “mastermind” of the organisation). All business processes, products, systems etc. that are implemented or changed will at one point or another pass through this department. This department is responsible for putting in place all necessary procedures to make sure business processes, products and systems are aligned and functioning as they should. As an analyst working in this department, I was able to see the bigger picture of how everything was linked throughout the organisation (from board of directors right down to the branches) and to external stakeholders (i.e. shareholders, customers, wider community etc.). Therefore, gaining first-hand knowledge of the importance of both corporate governance and CSR in the business area before I was even familiar with the terminologies.

The topic of the PhD originated from my MBA project and personal work experience. In my MBA project, by using a quantitative approach, I was able to design a self-assessing corporate governance scorecard for banks in Iran. That

project helped me realise social and environmental issues, although related to corporate governance, were not directly applied in the main conversations linked to corporate governance in organisations. Literature was suggesting possible relationships between these fields, which further intrigued me. Therefore, the idea of bridging the gap between these two topics became both fascinating and vital.

I believe one of the most distinct differences of the PhD programme at Cranfield is the integration of training weeks into the programme. They help you better understand and learn so many things that are practically impossible to learn on your own. I learned to take structural criticism for what it is, and put it to good use improving my research. One of the best feedbacks of this type I have personally received was in the first four months of my study, when I was asked “So what?” regarding the aim of my research. This seemingly simple question changed the entire way I looked at and presented my research. This simple question helped me in such a manner that in my initial review I was told what I had presented was “very clear”. I have also realised that sometimes the full understanding of a concept/theory/method will hit you when you least expect it, in training class, in a seminar, or even in a discussion with other researchers. The intellectual conversations with my supervisors and peers often resulted in a better understanding of my own research.

This past year has been exceptionally difficult with the pandemic and being away from close family, and at times finding motivation to work on my PhD was hard. However, I appreciated having the distraction of research and was able to add to my experience and hopefully skills during this period of time. One of the best learning experiences came about through the publication of my literature review (chapter 2). This paper went through two sets of revision and resubmission (R&R) before it was accepted for publication. Responding to reviewers and editor feedbacks/comments, and realising as long as I am able to argue with logical reasoning I can disagree with some of their views, was a valuable experience.

Before starting the PhD programme I was warned that at times it might be a rather lonely and solitary journey. After four years I am inclined to agree to some extent. However, I do not necessarily mind the times when I’m engaged in my own

research and alone, as I do not feel lonely. On the contrary, I actually enjoy such times. These are the times I spend satisfying my own thirst for knowledge. They are the ones I spend trying to find answers to the many questions floating in my mind.

In the last 4 years there have been many moments of self-doubt and questioning my research and ability to finish. Have I made the right choice? Am I intelligent enough to finish this research? Is my research topic even interesting to its intended audience? …. . These questions will probably always pop-up even after the PhD. But as a very wise person at the beginning of my journey said to me: “your path may seem long and dark now, but the light at the end is shining brightly”. I may have nearly reached the end of this journey, but am definitely moving towards the next turn with many more challenges ahead.

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APPENDICES

Appendix A . Chapter 1

Detail of Collected Data

The data related to the relevant board of director attributes have been collected from the “Role”, “Network / Biographical” and “Committee Analysis” tabs in BoardEx. The following variables have been calculated according to the data collected:

1- Board Size (total number of directors on the board)
2- CEO-Duality (the CEO and chair roles are separated)
3- Existence of CSR-Committee
4- CSR-committee size (total number of directors on the committee)
5- Female-CEO
6- Female-Chair

The following variables have been calculated for the board as a whole and again for the CSR-committee separately:

1- Percentage of non-executive directors
2- Percentage of female-directors
3- Average Director Tenure
4- Average Director Age
5- Average years directors on the board have served on other boards
6- Average years directors on the board have worked in the company excluding years on the board

The table below provides an overview of the number of directors and overall variables (director attributes, CSR-performance and financial performance) that were collected and calculated:

Number of directors and overall variables collected and calculated

Year	No. Companies	No. Directors	No. Variables
2013	674	6,959	81,941
2014	685	7,079	83,349
2015	761	7,688	90,656
2016	771	7,745	91,363
Total	**2891**	**29,471**	**347,309**

Appendix B . Chapter 2

Literature Review Search Strings:

Corporate Governance Search String	AND	Corporate Sustainability Search String	AND	Board Search String
corporate governance OR governance structure OR board committee* OR board level committee* OR board of director* OR board member* OR corporate director* OR board level OR sustainability committee* OR responsibility committee* OR environment* committee* OR social committee* OR Boardroom OR CSR Committee*		corporate sustainability OR social responsib* OR sustainability performance OR social performance OR environment* performance OR responsibility performance OR corporate citizen* OR CSR OR triple bottom line OR corporate philanthropy		board diversity OR committee diversity OR non-executive director* OR non-executive member* OR linking pin director* OR linking pin member* OR influential director* OR influential member* OR wom?n OR demographic* OR composition OR ethnic* OR gender OR board characteristic* OR boardroom diversity OR board propert* OR boardroom characteristic* OR boardroom propert* OR independent director* OR outside director* OR multiple director* OR board heterogeneity

Appendix C . Chapter 3

C.1 - CSR-committee Impact on CSR-performance: Literature Review

Impact on CSR-performance		CSR-performance Dimension*		CSR-performance Index	Author
Positive	Non-significant	Social	Environmental		
x		Meta-Analysis Review			(Endrikat et al., 2020)
	x	CSR Overall**		MSCI ESG STATS	(Burke, Hoitash and Hoitash, 2019)
x		CSR Strength			
x		CSR Concern			
x		No community strength focus versus community strength focus			
x		No employee strength focus versus employee strength focus			
	x	No consumer/supplier strength focus versus consumer/supplier strength focus			
x			No environment strength focus versus environment strength focus		
	x	No community concern focus versus community concern focus			
	x	No employee concern focus versus employee concern focus			
	x	No consumer/supplier concern focus versus consumer/supplier concern focus			
x			No environment concern focus versus environment concern focus		
	x	CSR		Dow-Jones Sustainability Index	(Chams and García-Blandón, 2019)

x			Greenhouse gas emissions	European Pollutant Release and Transfer Register	(Homroy and Slechten, 2019)
x			x	Company Sustainability Reports	(Hussain, Rigoni and Orij, 2018)
x			Strengths	KLD	(Dixon-Fowler, Ellstrand and Johnson, 2017)
	x		x	Trucost	(Walls and Berrone, 2017)
	x		Regulatory performance	KLD	(Rodrigue, Magnan and Cho, 2013)
	x		Pollution prevention		
x			Strengths	KLD	(Walls, Berrone and Phan, 2012)
x			Concerns		
	x	CSR		KLD	(Mallin and Michelon, 2011)
x		Community			
	x	Employee Relations			
x		Human Rights			
	x	Product Quality			
	x		x		

* If clearly mentioned in the study a sub-dimension of social and environmental performance has been used it has been recorded under the related CSR-dimension. If the environmental/social strengths, concerns or overall performance has been used this has been recorded as either “strength”, “concern”, “overall” under the related dimension. Where only social or environmental is mentioned, “x” has been placed in the corresponding cell

** A linear aggregation of the strength and concerns scores

C.2 - Robustness Tests

Random effect results related to Equation 3-1

Variable	CSRP
BSize	0.53***
	(-0.08)
BExExp	0.32**
	(-0.15)
BInExp	0.51***
	(-0.17)
BTenure	0.09
	(-0.08)
BAge	-0.02
	(-0.08)
BNED	-0.04
	(-0.02)
BFem	0.12***
	(-0.02)
CEODuality	0.23
	(-0.42)
FemCEO	1.02
	(-0.98)
ROA	0.04**
	(-0.02)
CSRCom	5.84
	(-3.61)
CSRComxBNED	-0.03
	(-0.04)
CSRComxBFem	-0.09**
	(-0.04)
CSRComxCEODuality	1.76**
	(-0.83)
CSRComxFemCEO	3.97**
	(-1.88)
Constant	37.83***
	(-4.33)
Year	controlled
R-Squ.	0.21
Observations	2,891

* p < 0.1, ** p < .05, *** p < .01
Standard errors in parentheses

Random effect results related to Equation 3-2

Variables	CSRP	
	Model 1	Model 2
CSize	0.253	0.334
	(-0.248)	(-0.266)
CExExp	-0.301	-0.319
	(-0.201)	(-0.198)
CInExp	-0.193	0.05
	(-0.686)	(-0.692)
CTenure	0.171	0.108
	(-0.139)	(-0.137)
CAge	0.0	0.061
	(-0.13)	(-0.13)
BSize	0.152	0.099
	(-0.184)	(-0.182)
CEODuality	1.993**	-5.07
	(-0.787)	(-9.778)
FemCEO	4.615**	-54.066***
	(-1.827)	(-13.267)
ROA	0.130***	0.123***
	(-0.038)	(-0.038)
CNED	-0.128***	-0.143***
	(-0.042)	(-0.043)
CFem	0.013*	0.025
	(-0.014)	(-0.016)
CFEMxCEODuality		-0.01
		(-0.017)
CNEDxCEODuality		0.08
		(-0.099)
CFEMxFEMCEO		-0.009
		(-0.034)
CNEDxFEMCEO		0.676***
		(-0.151)
Constant	57.844***	55.499***
	(-8.069)	(-7.974)
Year	Controlled	Controlled
R-Squ.	0.168	0.208
Observations	609	609

* p < 0.1, ** p < .05, *** p < .01
Standard errors in parentheses

C.3 - Alternative Results after Removing Outlier

GEE results for the impact of CSR-committee attributes on CSR-performance (without the outlier related to no NEDs)

Variables	CSRP				
	Model 1	Model 2	Model 3	Model 4	Model 5
CSize	-0.007	0.02	0.013	0.057	0.053
	(-0.242)	(-0.242)	(-0.245)	(-0.24)	(-0.243)
CExExp	-0.092	-0.085	-0.1	-0.104	-0.121
	(-0.178)	(-0.178)	(-0.178)	(-0.176)	(-0.177)
CInExp	0.28	0.125	0.167	-0.008	0.038
	(-0.461)	(-0.473)	(-0.479)	(-0.473)	(-0.479)
CTenure	0.174	0.132	0.129	0.124	0.12
	(-0.116)	(-0.116)	(-0.117)	(-0.115)	(-0.116)
CAge	-0.025	0.051	0.071	0.054	0.075
	(-0.106)	(-0.11)	(-0.111)	(-0.109)	(-0.111)
BSize	0.359**	0.410**	0.414**	0.374**	0.378**
	(-0.165)	(-0.166)	(-0.167)	(-0.164)	(-0.165)
CEODuality	1.686**	1.789**	-4.421	1.980***	-4.596
	(-0.699)	(-0.707)	(-9.169)	(-0.702)	(-9.072)
FemCEO	4.302***	4.037**	3.892**	-37.890***	-38.320***
	(-1.659)	(-1.663)	(-1.672)	(-12.348)	(-12.356)
ROA	0.133***	0.135***	0.133***	0.131***	0.129***
	(-0.037)	(-0.037)	(-0.037)	(-0.036)	(-0.036)
CNED		-0.058*	-0.065*	-0.065*	-0.072**
		(-0.034)	(-0.034)	(-0.033)	(-0.034)
CFem		0.027**	0.036**	0.030**	0.039**
		(-0.014)	(-0.016)	(-0.014)	(-0.016)
CFEMxCEODuality			-0.017		-0.017
			(-0.017)		(-0.017)
CNEDxCEODuality			0.067		0.071
			(-0.093)		(-0.092)
CFEMxFEMCEO				-0.009	-0.007
				(-0.035)	(-0.035)
CNEDxFEMCEO				0.474***	0.477***
				(-0.137)	(-0.137)
Constant	45.774***	45.173***	44.452***	45.789***	45.038***
	(-6.052)	(-6.381)	(-6.417)	(-6.344)	(-6.381)
Year	controlled	controlled	controlled	controlled	controlled
Wald-chi2	81.26	87.97	89.24	102.13	103.52
Δ Chi-square		6.71	7.98	20.87	22.26
Observations	609	609	609	609	609

* p < 0.1, ** p < .05, *** p < .01

Δ Chi-square statistics represents change in Chi-square value over Model 1

Standard errors in parentheses

Appendix D . Chapter 4

D.1 - Full QCA Solutions

D.1.1 - Truth Table Analysis for the FTSE350 companies

Model: CCSRP = f(BFem, BExExp, BAge, BTenure, BNED, Bsize, CSRCom)
Algorithm: Quine-McCluskey

--- COMPLEX SOLUTION ---
frequency cutoff: 6
consistency cutoff: 0.808948

	Raw Coverage	Unique Coverage	Consistency
BExExp*BAge*BNED*Bsize*SRCom	0.127257	0.0509585	0.875608
BFem*BExExp*BAge*~BTenure*BNED*Bsize	0.195994	0.0795117	0.848793
BFem*BAge*~BTenure*BNED*Bsize*CSRCom	0.0855521	0.0084824	0.916365
BFem*CBExExp*~CBAge*CBTenure*~CBNED*CBsize*~CSRCom	0.0772197	0.0362855	0.845055
BFem*~BExExp*~BAge*BTenure*~BNED*Bsize*CSRCom	0.0304166	0.0172003	0.920882

solution coverage: 0.311192
solution consistency: 0.837156

--- PARSIMONIOUS SOLUTION ---
frequency cutoff: 6
consistency cutoff: 0.808948

	Raw Coverage	Unique Coverage	Consistency
Bsize*CSRCom	0.22112	0.11252	0.757874
BExExp*~BAge*CBsize	0.193938	0.0531002	0.761736
BExExp*~BTenure*BNED*Bsize	0.263104	0.0664025	0.778884

solution coverage: 0.436628
solution consistency: 0.762189

--- INTERMEDIATE SOLUTION ---
frequency cutoff: 6
consistency cutoff: 0.808948
Assumptions:

	Raw Coverage	Unique Coverage	Consistency
BExExp*BAge*BNED*Bsize*CSRCom	0.127257	0.0509585	0.875608
BFem*BExExp*BAge*~BTenure*BNED*Bsize	0.195994	0.0795117	0.848793
BFem*BAge*~BTenure*BNED*Bsize*CSRCom	0.0855521	0.0084824	0.916365
BFem*BExExp*~BAge*BTenure*~BNED*Bsize*~CSRCom	0.0772197	0.0362855	0.845055
BFem*~BExExp*~BAge*BTenure*~BNED*Bsize*CSRCom	0.0304166	0.0172003	0.920882

solution coverage: 0.311192
solution consistency: 0.837156

D.1.2 - Truth Table Analysis for the S&P500 companies

Model: C.CSRP = f(BFem, BExExp, C.BAGE, BTenure, CEODuality, BSize, CSRCom)
Algorithm: Quine-McCluskey

--- COMPLEX SOLUTION ---
frequency cutoff: 12
consistency cutoff: 0.811931

	Raw Coverage	Unique Coverage	Consistency
BFem*~BTenure*CEODuality*BSize*CSRCom	0.0962326	0.027195	0.875085
BFem*BAGE*CEODuality*BSize*CSRCom	0.0977328	0.00786492	0.890722
BFem*BExExp*~C.BAGE*BTenure*CEODuality*BSize	000806099	0.0563401	0.856248
BFem*BExExp*C.BAGE*BTenure*BSize*CSRCom	0.0692412	0.020348	0.903523

solution coverage: 0.205934
solution consistency: 0.857952

--- PARSIMONIOUS SOLUTION ---
frequency cutoff: 12
consistency cutoff: 0.811931

	Raw Coverage	Unique Coverage	Consistency
CEODuality*CSRCom	0.228918	0.0352314	0.760285
BExExp*~BAGE*BTenure*BSize	0.11972	0.0800521	0.797673
BExExp*CSRCom	0.207284	0.00611821	0.785169
BAGE*CSRCom	0.188501	0.00870058	0.769958
BTenure*CSRCom	0.150076	0.00755405	0.791702

solution coverage: 0.38028
solution consistency: 0.742158

--- INTERMEDIATE SOLUTION ---
frequency cutoff: 12
consistency cutoff: 0.811931
Assumptions:

	Raw Coverage	Unique Coverage	Consistency
BFem*~BTenure*CEODuality*BSize*CSRCom	0.0962326	0.027195	0.875085
BFem*BAGE*CEODuality*BSize*CSRCom	0.0977328	0.00786492	0.890722
BFem*BExExp*~C.BAGE*BTenure*CEODuality*BSize	000806099	0.0563401	0.856248
BFem*BExExp*C.BAGE*BTenure*BSize*CSRCom	0.0692412	0.020348	0.903523

solution coverage: 0.205934
solution consistency: 0.857952

D.2 - QCA Robustness Test

Distinct configuration of board attributes leading to low CSR-performance

		Solutions related to FTSE 350 Listed Companies				Solutions related to S&P500 Listed Companies		
		1	2	3	4	5	6	7
Director Characteristics	FemD	⊗	⊗			⊗		⊗
	DExp		⊗	●	⊗	⊗	⊗	⊗
	DAge	⊗	⊗	●	●		●	●
	DTen				●	●	●	●
Board Structure	NED	⊗		●	⊗			
	CEO-duality					⊗	⊗	
	BSize	⊗	⊗	⊗	⊗	⊗	⊗	⊗
	CSRCom	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Raw Coverage		0.206712	0.180146	0.190301	0.093771	0.099366	0.075911	0.109608
Unique Coverage		0.031837	0.0169902	0.12972	0.0370553	0.03654	0.013084	0.0467811
Consistency		0.84616	0.843035	0.853103	0.880548	0.799284	0.835662	0.829746
N		1036				1855		
Frequency cut-off		6				12		
consistency cut-off		0.828474				0.802863		
solution coverage		0.425142				0.159231		
solution consistency		0.850749				0.807316		

Notes: The notation applied by Fiss (2011) has been followed. Central conditions are represented by "●" (presence), "⊗" (absence), and blank (indifference)