LINKING CORPORATE SOCIAL RESPONSIBILITY AND FINANCIAL PERFORMANCE: THE IMPORTANCE OF CEO ATTENTION AND CORPORATE SOCIAL PERFORMANCE CONGRUENCE

WINFRED M. GACHIGI
Master of Business Administration in Financial Management, Girne American University, 2017

A thesis submitted
in partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE (MANAGEMENT)

in

POLICY AND STRATEGY

Dhillon School of Business
University of Lethbridge
LETHBRIDGE, ALBERTA, CANADA

© Winfred Muthoni Gachigi, 2021

LINKING CORPORATE SOCIAL RESPONSIBILITY AND FINANCIAL PERFORMANCE: THE IMPORTANCE OF CEO ATTENTION AND CORPORATE SOCIAL PERFORMANCE CONGRUENCE

WINFRED M. GACHIGI

Date of Defence: December 09, 2021

Dr. L. Escobar Dr. N. Lupton Thesis Co-Supervisors	Assistant Professor Assistant Professor	Ph.D. Ph.D.
Dr. V. Baulkaran Thesis Examination Committee Member	Associate Professor	Ph.D.
Dr. C. Van der Byl External Examiner Mount Royal University Calgary, Alberta	Associate Professor	Ph.D.
Dr. G. Tian Chair, Thesis Examination Committee	Associate Professor	Ph.D.

ABSTRACT

This thesis examines the extent to which congruence between CEO attention to social responsibility (CEO attention) and corporate social performance (CSP) impacts firm financial performance. This paper argues that the joint effect of CEO attention and its efficacy as assessed through CSP on financial performance is a positive but diminishing relationship. Using polynomial regression and response surface methodology on a sample of 449 unique firms from 2009 to 2018, I find that CEO attention and CSP congruence has a mixed linear relationship with financial performance. Financial performance is highest when CEO attention and CSP are both equally low/high depending on the financial performance measure. The findings also showed that disproportionate levels of CEO attention and CSP were not significantly related to financial performance. This study contributes to the broader field of CSR research by introducing CEO attention and CSP congruence.

ACKNOWLEDGEMENTS

I want to express my utmost gratitude to my thesis co-supervisors, Dr. Luis Escobar and Dr. Nathaniel Lupton, for their full support, guidance, and commitment during the entirety of my thesis journey. I am also grateful to members of my committee, Dr. Vishaal Baulkaran, and Dr. Connie Van der Byl for their time and support.

Finally, I want to express immense gratitude to my family for their unconditional support. Remaining errors in this thesis are my own.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Corporate social responsibility (CSR) encompasses the ethical and discretionary expectations that society has of organizations at a particular time (Carroll, 1979; Carroll & Shabana, 2010), comprising environmental, social and governance (ESG) performance. Despite arguments for and against simultaneously pursuing financial performance and social responsibility (Freeman, Wicks, & Parmar, 2004; Friedman, 1970; Porter & Kramer, 2006): heightened policy response towards ESG strategies and accelerating change in investor behavior initiating capital reallocation towards sustainable investments have made social responsibility a priority for corporate managers, particularly CEOs (BlackRock, 2021; El Ghoul, Guedhami, Kwok, & Mishra, 2011). Yet, while corporate leaders have to enhance both non-financial and financial performance, their embedded role in this complex decision-making process is not well explored empirically in the literature (Orlitzky, Siegel, & Waldman, 2011; Waldman & Siegel, 2008; Waldman, Siegel, & Javidan, 2006).

While some scholars within the field of business and society argue that social responsibility enhances financial performance (Margolis & Walsh, 2003; Orlitzky, Schmidt, & Rynes, 2003), other researchers have recommended further empirical examination due to discrepancies in the results of studies on this relationship (Carroll & Shabana, 2010). Scholars have put forward the influence of stakeholder relationships (Barnett, 2007; Barnett & Salomon, 2012; Hillman & Keim, 2001), alignment of CSR activities with core value chain activities (Apaydin, Jiang, Demirbag, & Jamali, 2020; Porter & Kramer, 2006), and corporate reputation (Orlitzky et al., 2003) among other factors as explaining the inconsistent findings. However, despite evidence in the literature that managerial perspectives, values, commitment, discretion, attention breadth, among others, impact CSR decisions and social performance (Aguinis &

Glavas, 2012; Ahn, 2020; O'Toole & Vogel, 2011), the role of corporate leaders in the social responsibility and financial performance relationship remains understudied (Waldman et al., 2006; Waldman, Siegel, & Stahl, 2020). Specifically, there is a dearth of literature on corporate leaders' attention allocation as they address multiple demands associated wtih social responsibility and how this impacts the relationship between CSR and financial performance.

The present study aims to contribute to this gap by focusing on CEO attention to social responsibility (CEO attention). Specifically, I examined whether the degree of congruence between CEO attention and corporate social performance (CSP) impacted financial performance. I expected that similar levels of CEO attention and CSP (i.e., congruence), rather than unequal levels of CEO attention and CSP (i.e., incongruence), would enhance firm financial performance. To examine the effect of both predictor variables on financial performance, that is, CEO attention and CSP, I applied polynomial regression with firm and year fixed effects and response surface methodology. This methodology was appropriate as it captured the impact and direction of the two predictor variables at equal and disproportionate levels on financial performance (Jeffrey R Edwards, 2001, 2002; Shanock, Baran, Gentry, Pattison, & Heggestad, 2010). I tested the hypotheses on an unbalanced panel of 449 unique firms over the period of 2009 – 2018.

Overall, I did find partial support for the hypothesized positive, but diminishing relationship between increasing CEO attention and CSP congruence, and financial performance. The results showed that CEO attention and CSP congruence had a mixed linear relationship with financial performance: with financial performance being highest when CEO attention and CSP are both equally low/high depending on the financial performance measure. Additionally, the results showed that disproportionate levels of CEO attention and CSP were not significantly

related to financial performance. These findings were not consistent with the predicted negative relationship between CEO attention and CSP incongruence and financial performance.

This study contributes to the broader field of CSR research and specifically to empirical investigations on the role of senior management from a congruence-based approach: by examining both CEO attention and CSP as significant predictors in understanding the impact of social responsibility on firm financial performance. Although the findings show evidence of congruence levels that maximize certain financial performance dimensions, this thesis supports calls for further investigations into the role of senior management in the CSP and financial performance relationship (Orlitzky et al., 2011; Waldman et al., 2006; Waldman et al., 2020), and the general call to examine conditions under which this relationship is beneficial (Barnett & Salomon, 2012; Grewatsch & Kleindienst, 2017; Orlitzky et al., 2011; Rowley & Berman, 2000). The sections that follow will review relevant literature to provide the basis for the hypotheses development, followed by the methodology, results, discussion, and conclusion chapters.

CHAPTER 2: LITERATURE REVIEW

2.1. Background of CSR: Why is it important?

CSR, as defined earlier, encompasses the ethical and discretionary expectations that society has of organizations at a particular point in time (Carroll, 1979; Carroll & Shabana, 2010). Socially responsible behavior entails at minimum that firms do not cause intentional harm to their stakeholders, in particular, investors, employees, customers, suppliers, or the local community within which they operate, and: that they take appropriate actions to rectify any harm caused either voluntarily or in response to prompting such as from, legal threats, court orders, regulatory rulings, moral persuasion, normative pressure among others (Campbell, 2007).

Frequently discussed by scholars, CSR challenges the contractarian view of the firm of maximizing profit and shareholder value (Carroll & Shabana, 2010; Freeman et al., 2004; Waldman et al., 2020). This traditional perspective asserts that corporate managers and businesses as fiduciaries execute their only social responsibility by acting and competing fairly (Friedman, 1970). While others argue that some problems are beyond the scope, scale, and competencies of firms to address (O'Toole & Vogel, 2011), as some societal issues are only adequately solved by governmental institutions, non-governmental organizations (NGOs), or collaboratively across all sectors (Porter & Kramer, 2006). Nevertheless, despite arguments that the market imposes a cap on the economic rewards of CSR beyond which CSR activities cease to be remunerative (Mintzberg, 1983), research has demonstrated that market forces do not penalize firms that engage in high levels of social responsibility (Orlitzky et al., 2003). Moreover, having a stakeholder orientation is essential to enhancing firms' value-creating resources that are socially complex and time-path dependent thus, generating opportunities for competitive advantage (Hillman & Keim, 2001; Peteraf, 1993).

2.2. The impact of CSR on firm financial performance

While there are mixed findings in the literature, a growing consensus finds that the impact of CSR on financial performance is typically positive (Margolis & Walsh, 2003; Orlitzky et al., 2003; Wang, Dou, & Jia, 2016). APPENDIX 1 illustrates the frequency of findings for a positive relationship from well-cited meta-analyses spanning empirical studies published over four decades, 1972 – 2011. However, further examinations have revealed that in some instances, the positive relationship between corporate social performance (CSP) and financial performance varies from slightly positive to highly positive: depending on factors such as corporate reputation which, promotes building a positive image with key stakeholders, including suppliers, customers, banks and investors thereby enhancing financial performance through, enhanced stakeholder support (Orlitzky et al., 2003). Following Wood (1991), CSP describes "a business organization's configuration of principles of social responsibility, process of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationship " (p. 693). Put differently, CSP represents an adequate evaluation of a firm's posture at a given time of the aggregate CSR initiatives firms undertake over time (Barnett, 2007).

Likewise, Barnett (2007) offered that CSR is related to financial performance through stakeholder influence capacity (SIC) whereby, increase or decrease in SIC had varied impact on financial performance for different firms. The SIC construct describes the ability of firms to identify, use and thus further improve stakeholder relations through CSR by depending on prior stakeholder relationships – "a firm's SIC is an aggregate representation of how stakeholders perceive the character or "soul" of that firm and acts of CSR shape these perceptions over time" (Barnett, 2007, p. 805). Hence, SIC delineates when the effect of CSR is either positive or

negative (Barnett, 2007). Barnett and Salomon (2012) empirically tested the latter proposition finding a curvilinear U-shaped relationship between CSP and financial performance. Firms that increased SIC via significant investments in social performance had higher financial returns, which offset the initial costs (Barnett & Salomon, 2012). On the other hand, firms with inadequate investments in social performance had inadequate SIC, insufficient to breakeven (Barnett & Salomon, 2012). Hillman and Keim (2001) further observed that relational stakeholder relationships rather than transactional stakeholder relationships constituted socially complex intangible resources that are difficult to replicate hence more likely to extend their advantages (Peteraf, 1993) which in the long-term enhance superior financial performance through these stakeholder relationships.

Additionally, preceding research has argued that the CSR—financial performance relationship is contingent on firms selecting CSR activities related to their economic and social objectives (Carroll & Shabana, 2010). According to Apaydin et al. (2020), financial performance either increased or was maintained even during an economic downturn when CSR activities were related to the core value chain activities as this enhanced stakeholder support. Likewise, Porter and Kramer (2006) put forward that firms stood to gain an advantage by leveraging CSR choices in which firms had a stake and were well equipped to resolve, providing the exemplar of WHOLE FOODS MARKET, that has capitalized on its commitments to social, natural, and environmental responsibility in both its products and services and in their operating practices. When linked to operational and resource efficiency, these findings show that in certain circumstances, CSR positively impacts firms financial performance by creating and enhancing the former efficiencies (Barnett & Salomon, 2012; Porter & Kramer, 2006; Whelan & Fink, 2016).

While there is a general agreement for a positive relationship between social responsibility and financial performance, literature has shown that the degree or direction of causality in the latter relationship is not universally applicable for all firms (Moore, 2001; O'Toole & Vogel, 2011; Zhao & Murrell, 2016). These inconsistencies have been linked to mis-specified modeling techniques and differences in operationalization across studies (Margolis & Walsh, 2003; McWilliams & Siegel, 2000; Orlitzky et al., 2003; Wang et al., 2016). Recent studies also point to the prevalence of endogeneity problems, including self-selection resulting from the endogeneity of strategic decisions, reverse causality between CSP and financial performance, and unobserved heterogeneity (Garcia-Castro, Ariño, & Canela, 2010; Lahouel, Gaies, Zaied, & Jahmane, 2019; Liu, Shao, De Sisto, & Li, 2021). Calls for future empirical studies to resolve these discrepancies have gained momentum, with scholars pointing towards the need for future research to accurately explain why and when CSR has an impact on financial performance (Barnett & Salomon, 2012; Grewatsch & Kleindienst, 2017; Orlitzky et al., 2011; Rowley & Berman, 2000).

Prior studies have proposed examining corporate leaders as internal determinants of the social responsibility and financial performance relationship (Campbell, 2007; Garcia-Castro et al., 2010). However, there is still a dearth of literature linking top-level management to CSR and related outcomes, with Orlitzky et al. (2011) stating that this is often ignored or not examined explicitly. Waldman et al. (2020) reiterated this omission, pointing out that corporate leaders formulate and implement CSR initiatives and are, therefore, significant drivers of the relationship (Waldman & Siegel, 2008). Moreover, findings show that at the managerial level, normative intent such as alignment with personal values influenced CSR engagement and that the level of commitment to aspects of CSR impacted the strength of the CSR—firm-level outcomes

relationship (Aguinis & Glavas, 2012). Accordingly, senior management use their discretion to: determine the ethical and profitable implications of CSR decisions based on their priorities, values and, perspectives (O'Toole & Vogel, 2011). Therefore, the role of senior corporate managers in the CSR and financial performance relationship deserves keen and explicit empirical examination. The objective of this study was to contribute this gap by offering an empirical analysis focusing specifically on the joint effect of CEO attention and CSP on financial performance. Discussions to explicate the latter follow in subsequent sections.

2.3. CEO attention to social responsibility

Understanding how and in what conditions firms respond appropriately and successfully to their environments is an extant premise of strategy and organizational theory in explaining the behavior of firms (Basu & Palazzo, 2008; Nadkarni & Barr, 2008; Ocasio, 1997). Research augmenting this stream of inquiry emphasized the role of managerial human capital resources and managerial cognitive capabilities in explaining differences in information acquisition, organization, and processing resulting in different organizational outcomes (Barney, 1991; Hambrick & Mason, 1984; Helfat & Peteraf, 2015). Ocasio (1997), subsequently deriving from managerial cognition literature on the limited cognitive and attentional capacity of corporate managers, defined attention as:

> "encompassing the noticing, encoding, interpreting, and focusing of time and effort by organizational decision-makers on both a) issues; the available repertoire of categories for making sense of the environment: problems, opportunities, and threats; and b) answers: the available repertoire of action alternatives: proposals, routines, projects, programs, and procedures." (p. 189).

I focused on CEOs as the decision-makers and environmental, social, and governance (ESG) issues. Extant research has shown that entrepreneurs rely on cognitive processes of structural alignments[1] and prior knowledge to recognize opportunities (Grégoire et al., 2010). Nadkarni and Barr (2008) showed that top managers subjective interpretations of their firms' operating environments acted as filters through attention focus and mediated the relationship between industry velocity and speed of strategic response in both the task and general environments. Likewise, attention partially mediated the relationship between top management teams' characteristics (as the locus of attention) and strategic choice following an environmental and industry-specific shift (Cho & Hambrick, 2006). More specifically, CEO temporal attention (i.e., future focus) and CEO spatial attention (i.e., focus on internal/external objects and events) positively impacted strategic choice and direction (Yadav, Prabhu, & Chandy, 2007). Thus, managerial attention is an integral component of strategy conception and implementation and significantly determines an organization's recognition and creation of opportunities, strategic choice and direction, and strategic response (Helfat & Peteraf, 2015).

In the context of social responsibility, scholars have recommended examining the mental frames in which CSR decision making is embedded since the impact of managerial cognitive schemes become more apparent when decision-makers have to simultaneously address multiple desirable outcomes such as those presented by CSR (Ahn, 2020; Basu & Palazzo, 2008; Hahn, Preuss, Pinkse, & Figge, 2014; Orlitzky et al., 2011). Senior managers must make strategic decisions that enhance stakeholder relationships and engagement while paying attention to financially material ESG issues. Hahn et al. (2014) proposed that in attending to social,

[1] Structural alignment essentially refers to comparing things and information and inferring from the comparison (Grégoire, Barr, & Shepherd, 2010)

environmental, and economic outcomes simultaneously, decision-makers rely on two main cognitive frames that determine their attention focus. Hahn et al. (2014) suggested that managers were either guided by a business case frame, i.e., managers aim to enhance economic performance at the organizational level (self and shareholder orientation), or by a paradoxical frame whereby managers enhance economic, environmental, and social concerns at both the organizational and societal levels (stakeholder orientation).

Evidence from Godos-Díez, Fernández-Gago, and Martínez-Campillo (2011) showed that CEO profiles akin to a stewardship model as opposed to agency model[2], characterized by different psychological and situational characteristics, placed more importance on the development of CSR practices, a relationship that was mediated by the CEO's perception of the role of ethics and social responsibility, supporting Hahn et al. (2014) distinctions. In another study, managerial interpretations of environmental issues as opportunities rather than threats positively impacted firms' uptake of voluntary environmental strategies (those beyond legal and regulatory requirements) (Sharma, 2000). Additionally, CEO attention breadth (i.e., the number and diversity of issues and categories attended to) mediated the influence of CEOs' functional experience and social ties from engaging in outside directorship on sustainability performance (i.e., ESG issues) (Ahn, 2020). Hence, CEO attention improves social performance by increasing firms' engagement in socially responsible activities that are strategically beneficial for multiple stakeholders. Moreover, CEO attention may create path dependencies for noticing and interpreting [socially responsible] opportunities, shifts, and risks as it is a cognitive capability honed over time (Helfat & Peteraf, 2015).

[2] Stewards recognize ethics and social responsibility as essential to the long-term value of their organizations and their stakeholders (a paradoxical frame) while agents pay attention to the short-term costs of ethical and social commitments and short-term value of their organizations (a business case frame) (Godos-Díez et al., 2011)

Extant literature has focused on examining the impact of CEO attention on CSR strategy and social performance (Ahn, 2020; Godos-Díez et al., 2011; Jiang, Zalan, Herman, & Shen, 2018), and the relationship between social performance and financial performance (Apaydin et al., 2020; Orlitzky et al., 2003). Research has overlooked the potential impact of the interaction between CEO attention and CSP (Garcia-Castro et al., 2010). CEOs, are guided by different cognitive frames and therefore interpret issues differently and make strategic decisions differently. I expect the interaction between CEO attention to social responsibility and its efficacy as represented by a firm's CSP should positively impact financial performance when congruent. The study, therefore, contributes empirically to calls for examining the varying conditions under which social responsibility promotes financial performance (Barnett & Salomon, 2012; Carroll & Shabana, 2010; Van Beurden & Gössling, 2008) by arguing that the degree of congruence between CEO attention and a firm's CSP impacts a firm's financial performance. The section that follows details the hypotheses' development.

2.4. The impact of CEO attention to social responsibility and corporate social performance congruence on financial performance

Prior studies have explored the antecedent factors that influence social performance and the relationship between social performance and financial performance. Consequently, CEO attention has emerged as an antecedent that positively influences social performance (Ahn, 2020). Social performance should increase as the degree of CEO recognition and selectivity to social responsibility issues increases. Accordingly, CEOs will adopt policies, programs, and principles to drive their firms' responsiveness towards attaining observable outcomes. Recall, social performance evaluates the configuration of these policies, programs, and observable outcomes. Therefore, although some firms lack the preference or ability to participate and benefit

from social responsibility (Barnett & Salomon, 2012) and therefore exhibit low CEO attention and low CSP (see quadrant C in APPENDIX 4), in the long-term high levels of the interaction between CEO attention and CSP (see quadrant B in APPENDIX 4), may allow firms to enhance their competitive position by accruing valuable socially complex resources through effective stakeholder management reinforcing stakeholder engagement and support (Barnett & Salomon, 2012; Barney, 1991; Hillman & Keim, 2001).

Likewise, the interaction between CEO attention and CSP can enhance risk mitigation and implementation of unique opportunities arising from material ESG issues. These may for instance, stimulate innovation through R&D, creating operational and resource efficiencies (such as energy efficiency), or improve leveraging from larger more diverse talent pools, thereby potentially increasing firm engagement in strategically beneficial social responsibility. Therefore, the degree of agreement between CEO attention and CSP may influence financial performance by strengthening the impact of CSR. Hence, financial performance may increase as firms attain increasing congruent levels of CEO attention and CSP, that is from low (quadrant C in APPENDIX 4) to high (quadrant B in APPENDIX 4). However, attaining the latter may result in a decline in financial performance due to greater costs, trade-offs, and opportunity costs. Therefore, firms are likely to seek an optimal level of congruence that leads to the greatest value for the firm and its stakeholders while still enhancing the firm's competitive position to avoid these diminishing returns. Conversely, firms with equally low CEO attention and CSP (quadrant C in APPENDIX 4) benefit from avoiding these costs and trade-offs. From these arguments, I predicted a positive but diminishing relationship between congruence and financial performance. Financial performance increases as congruence increases to a certain level past which, increasing congruence leads to decreasing financial performance. Formally hypothesized:

Hypothesis 1: There is a positive but diminishing relationship between CEO attention and corporate social performance congruence and financial performance, due to the diminishing return of the combined effect of CEO attention and corporate social performance

Additionally, research indicates that skeptical stakeholder appraisals of firms' social responsibility information, impacts firms negatively (Connors, Anderson-MacDonald, & Thomson, 2017). Skepticism with regards to social responsibility is prompted by instances of organizational hypocrisy where firms present inconsistent CSR information that does not match observable outcomes (Yang, Manika, & Athanasopoulou, 2020) or by occurrences of CSR window-dressing defined by uptake of CSR activities for self-serving enhancements as a diversion from underlying problems (Connors et al., 2017). I argue that CEO attention can be high, and the CEO recognizes ethical and social responsibility opportunities and risks. However, when CEO attention is employed to advance window-dressing or organizational hypocrisy, firms risk attracting stakeholder skepticism and in so doing, weaken the firm's stakeholder relationships and support (Price & Sun, 2017). In these cases, CEOs engage in symbolic CSR actions which are ceremonial and do not lead to actual changes at the operational level such as improving policies, programs, and principles to drive their firm's CSR responsiveness towards attaining tangible and beneficial outcomes (Schons & Steinmeier, 2016). Therefore despite high CEO attention, CSP is low (quadrant A in APPENDIX 4), and firm financial performance is negatively impacted (Schons & Steinmeier, 2016). Hence, I expected that financial performance would decrease as incongruence increases that is, as the agreement between CEO attention and CSP diverges. Therefore, I hypothesized:

Hypothesis 2: There is a negative relationship between high CEO attention and low corporate social performance incongruence and financial performance

In addition, social responsibility critics have long asserted that engaging in CSR is not in the best interest of firms or their shareholders (Friedman, 1970). Managers who follow this perspective, act as agents and view social responsibility as an inefficient allocation of corporate resources (Barnett, 2007). These managers consider ethical and social responsibility as low priority (Godos-Díez et al., 2011) and therefore dispensable. Hence, these CEOs will possess lower levels of attention to social responsibility and risk failure to identify opportunities emerging from ESG issues and to enhance key stakeholder relationships and support (Martin & Phillips, 2021). Likewise, while these CEOs possibly engage in socially responsible activities, they do so to be responsive to the demands of powerful stakeholders (Agle, Mitchell, & Sonnenfeld, 1999; Tang & Tang, 2012), consequently, lacking in focus, these actions will often not be strategic. Hence, financial performance is negatively impacted, despite higher social performance (Barnett, 2007). Suggesting that financial performance declines as this incongruence increases, that is, as the agreement between CEO attention and CSP diverges (represented by quadrant D in APPENDIX 4). Therefore:

Hypothesis 3: There is a negative relationship between low CEO attention and high corporate social performance incongruence and financial performance

CHAPTER 3. METHODOLOGY

3.1. Sample and data sources

The initial sample was composed of approximately 1252 listed firms in Canada and the United States of America found in the SUSTAINALYTICS database for the ten-year period between 2009 and 2018. I retrieved data on CSP from SUSTAINALYTICS. I dropped firms with missing data across financial performance, CSP, and CEO attention, providing the final sample of a panel of 449 unique firms.

The CSP data from SUSTAINALYTICS included environmental, social, and governance (ESG) performance ratings of companies comprising total ESG raw scores and discrete ESG dimension raw scores. I obtained financial performance data for the same period from COMPUSTAT and CRSP. I collected data on CEO attention from CEO letters[3] found in companies' annual CSR reports[4]. Lastly, data on CEO characteristics was hand-collected from publicly available sources, including LinkedIn, Bloomberg, and company websites. Like letters to shareholders contained in annual company reports, CEO letters contained in annual CSR reports are addressed to shareholders. Prior studies acknowledge that it is difficult to measure managerial cognition directly hence, written statements particularly, letters to shareholders, have been accepted as reasonable representations of the different subjective interpretations, sensemaking processes, cognitive schemes, and attention foci of top management and specifically CEOs (Cho & Hambrick, 2006; Yadav et al., 2007).Researchers have verified that cognitions reflected in letters to shareholders are consistent with firm action (Ahn, 2020; Basu & Palazzo, 2008; Cho & Hambrick, 2006; Nadkarni & Barr, 2008; Yadav et al., 2007). As Basu

[3] These letters are also referred to as, message from CEO, letter from CEO, statement from CEO, or leadership message.
[4] These reports are also referred to as: sustainability, corporate citizenship, social performance, or environmental, social, and governance (ESG) reports

and Palazzo (2008) point out, the linguistic dimension of the CSR sensemaking process is a critical representation of the justification for why firms behave the way they do. Key reasons for this include the targeted audience of these letters being investors and shareholders among other stakeholders, increased scrutiny of these documents, heightened reporting standards, and enhancing reputation and legitimacy (Carroll & Shabana, 2010).

3.2. Measures

Dependent variable

Financial Performance

Prior research examining the relationship between CSP and financial performance often proxy for financial performance with either annual return on assets (ROA) – a profitability measure or market performance measures such as Tobin's Q (Ahn, 2020; Apaydin et al., 2020; Barnett & Salomon, 2012; Cavaco & Crifo, 2014; Zajac, Kraatz, & Bresser, 2000). However, as stated in the preceding sections, social responsibility improves advantages such as reduced costs, enhanced reputation, and product innovation. The effects of social responsibility on financial performance might be confounded or missed when examined by a single measure of financial performance. Therefore, I measured financial performance across four dimensions: profitability, liquidity, growth, and stock market performance, as suggested by Hamann, Schiemann, Bellora, and Guenther (2013).

To measure profitability, I used return on assets and return on sales. I measured liquidity as cash flow return on sales and cash flow return on assets. For growth, sales growth and assets growth were used as proxies, while stock market performance and risk-adjusted stock market performance were measured using total shareholder return, Sharpe ratio, and Treynor ratio (Hamann et al., 2013). See APPENDIX 2 for a detailed description of the variables.

Independent variable

CEO attention to social responsibility (CEO attention)

I measured CEO attention as the frequency of words associated with the three dimensions of ESG performance in the CEO letters. Drawing from previous attention research, a higher frequency of words related to the ESG dimensions signals the priority level and focus of attention in the cognitive core of the CEO to ESG issues (Ahn, 2020; Cho & Hambrick, 2006; Short & Palmer, 2008; Yadav et al., 2007). Specifically, I measured CEO attention as the sum of the scores of all three individual E, S, G dimension scores: see APPENDIX 2 for a detailed description. The word list used in the present study was created by matching words derived from the SUSTAINALYTICS ESG indicators database and including relevant synonyms. Doing so ensured that results between CEO attention and CSP would be meaningful. For instance, I matched the 'Tax Disclosure indicator' to tax, reporting, and disclosure keywords. I matched the 'Indigenous Rights Policy indicator' to Indigenous and rights keywords. Likewise, I matched the 'Renewable Energy Programs indicator' to renewable and energy keywords. APPENDIX 3 shows the complete word list per individual ESG dimension. The CEO letters were analyzed using DICTION software. DICTION has been used in management research and is particularly robust in analyzing large sets of corporate mission statements and letters from CEOs in corporate annual reports such as letters to shareholders (Ahn, 2020; Short & Palmer, 2008).

Corporate Social Performance

Corporate social performance was measured using the ESG scores. The SUSTAINALYTICS database provides total ESG scores and discrete ESG dimension scores between 0 to 100 per company based on proprietary ESG indicators, weighting, and research where 100 represents the best ESG performance. Prior studies prefer the database because of its

consistent, award-winning, and thorough methodology (Husted & de Sousa-Filho, 2017; Orlitzky, Louche, Gond, & Chapple, 2017).

Control variable

I controlled for firm-level characteristics that could otherwise influence financial performance. Since larger firms are generally more profitable than smaller firms as they benefit from larger market shares and economies of scale, among other related factors (Gaio & Henriques, 2018), I controlled for firm size, proxied by net income. I included prior financial performance measured as lagged financial performance to account for temporal dependency and persistence of previous profitability(loss) affecting other variables in the model, including the regressors and financial performance (Garcia-Castro et al., 2010; Lahouel et al., 2019). Likewise, extant research shows that investment in research and development (R&D) influences profitability through enhancing innovation (McWilliams & Siegel, 2000). I control and measure R&D intensity, as R&D plus capital expenditure over sales. Moreover, prior research notes that leverage impacts profitability, managerial behavior, and investment project decisions (Barnett & Salomon, 2012). I control for leverage, measured as a ratio of long-term debt over total assets.

Lastly, several managerial human capital characteristics, herein CEO characteristics affect performance and CEO attention (Ahn, 2020; Helfat & Martin, 2015). To control for these CEO characteristics, I included CEO age, CEO tenure measured as the number of years a CEO has been CEO, and CEO level of education measured as having an undergraduate degree, graduate degree, or doctorate. Detailed descriptions of these variables are in APPENDIX 2.

3.3. Analysis

To test the effects of the proposed congruence, I applied polynomial regression with firm and fixed year effects with response surface methodology. I included fixed-effects estimation to

control for unobserved heterogeneity[5]. The combination of response surface methodology and polynomial regression enables accurate analysis and interpretation of the relationship between the two predictor variables and the outcome variable (Jeffrey R Edwards & Parry, 1993). This methodology is increasingly being preferred for congruence studies in organizational research over conventional difference scores for its ability to avoid reliability problems of difference scores. Furthermore, polynomial regression with response surface methodology permits examination of the extent to which agreement, degree of discrepancy, and direction of discrepancy between two predictor variables relate to the outcome variable (Jeffrey R Edwards, 2001, 2002; Shanock et al., 2010). The general equation for polynomial regression analysis is:

$$Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2 + e$$

In the equation, Z represents financial performance, X represents the first predictor i.e., CEO attention focus to social responsibility, and Y represents the second predictor i.e., corporate social performance. X^2, XY, Y^2 represent the higher-order terms of X and Y. I followed the procedure of conducting the polynomial regressions and interpreting subsequent results using response surface methodology outlined by Faia, Negreiros, and Vieira (2019); Shanock et al. (2010). The full polynomial form of the equation is needed to examine the relationship between the curvature and the degree of congruence between CEO attention and CSP and financial performance. Response surface plots were generated using Excel resources from (Jeffery R Edwards, n.d.) for the plots and Shanock et al. (2010) for the surface test significances.

To facilitate interpretation of the higher-order terms coefficients (Jeffrey R Edwards, 2001), I normalized the scales of both predictors (CEO attention and CSP) using z score

[5] Like Barnett and Salomon (2012), since industry was time invariant for firms over the sample period industry effects was not included in the models

standardization prior to calculating the higher-order terms (X^2, XY, Y^2) and prior to entry into the regression. I then assessed the rate of discrepancies within the sample between CEO attention and CSP. I first subtracted CSP from CEO attention to get the difference. Incongruence was defined as any score half a standard deviation above or below (Shanock et al., 2010). Therefore, from the calculated difference, observations between -.49 and .49 formed the agreement group while observations equal to or less than -.05 and equal to or more than .05 formed the disagreement groups, creating three (dis)agreement groups (Table 1 shows the results). Approximately 29% of the sample were in agreement while 35% had higher CEO attention than CSP and 35% had higher CSP than CEO attention. These base discrepancy results validated the validity of examining the effect of CEO attention and CSP (in)congruence on financial performance.

Table 1

Frequencies of CEO attention Over, Under, or In-agreement with CSP

Agreement Groups	No. of Observations	Percentages
CEO attention more than CSP	701	35.0%
In agreement	578	28.9%
CEO attention less than CSP	708	35.4%

Note: N = 1987; missing = 15
CSP: corporate social performance

Next, I approached the polynomial regression analysis through hierarchical multiple regressions of financial performance on the control variables (Model 1: Controls), the linear effects of CEO attention and CSP (Model 2: Effect of CEO attention and CSP), and the non-linear effects of CEO attention squared, CSP squared, and the product of CEO attention and CSP

(Model 3: Congruence model)[6]. If R^2 in the congruence model was significant, I proceeded to conduct the response surface methodology (Shanock et al., 2010).

To test support for hypothesis 1 that there is a positive but diminishing relationship between CEO attention and CSP congruence and financial performance, two criteria must be met. I expect a positive and significant slope along the congruence line X = Y. This is given by a positive and significant a_1 (b1+b2). Likewise, I expect a positive and significant curvature along the congruence line X = Y. This is given by a positive and significant a_2 (b3+b4+b5). However, the curvature along X = Y should exhibit a downward curvature towards the back of the response surface plots as congruence becomes higher. These combined results will indicate a positive non-linear increase in financial performance as congruence between CEO attention and CSP increases to a point.

To find support for hypothesis 2, that there is a negative relationship between high CEO attention and low CSP incongruence and financial performance, I expect a negative and significant curvature along the incongruence line X = -Y. This is given by a negative and significant *a4* (b3 - b4 + b5). Likewise, to find support for hypothesis 3 that there is a negative relationship between low CEO attention and high CSP incongruence and financial performance, I expect a negative and significant curvature along the incongruence line X = -Y. This is given by a negative and significant *a4* (b3 - b4 + b5). The following chapter discusses the results.

[6] All Variance Inflation Factors (VIF) tested below 2 for all models across all tables. Hence, I concluded multicollinearity between the predictors did not undermine the results.

CHAPTER 4. RESULTS

4.1. Descriptive Statistics

Table 2 presents the descriptive statistics. The averages for the financial performance measures are: 4.8%, 15.9%, 19.9%, and 9.7% for return on assets, return on sales, cash flow return on sales, and cash flow return on assets respectively and 16.6%, 25.6%, -1.9%, 16%, -0.52% for sales growth, assets growth, Sharpe ratio, total shareholder return, and Treynor ratio respectively. The highest and lowest CEO attention scores are 145 and 2.62 respectively with an average of 29.29. A lower score indicates low CEO attention as analyzed by DICTION against the ESG keyword list (see APPENDIX 3). For CSP, the lowest and highest scores are 34.17 and 86.50 respectively on an actual score range of 0 to 100 with higher scores reflecting better CSP as assessed by SUSTAINALYTICS ESG database. The average CSP score is 62.09.

The means, maximum, and minimum values for the control variables size, leverage, R&D, and the CEO characteristics are closely similar to extant studies (Ahn, 2020; Apaydin et al., 2020; Barnett & Salomon, 2012). Specifically, the means and range of leverage are: 0.025 and 2.36, and 0.13 and 2.11 for R &D respectively. The range for size measured as net income (loss) is $59,560 million. The average size is $2,138million. The lowest level of education is undergraduate represented by 1 while the highest level of education is the doctorate level represented by 3. The average level of education is 1.62 indicating a larger percent of masters level education among the CEOs in the sample. The mean CEO age is approximately 56 with a range of 46 years while the range for CEO tenure is 48 years with an average of approximately 7 years.

Table 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Size	2002	-14685	44880	2138	4333
Leverage	1997	0.000	2.361	0.248	0.163
R&D	2001	0.000	2.110	0.128	0.161
CEO age	1895	33	79	55.81	6.105
CEO tenure	1991	1	49	6.992	6.424
CEO level of education	1823	1	3	1.62	0.549
ROA_{t-1}	2001	-1.227	0.332	0.047	0.082
ROS_{t-1}	1998	-4.060	0.760	0.154	0.198
$CFSALES_{t-1}$	1998	-1.041	1.271	0.199	0.165
$CFASSETS_{t-1}$	2001	-0.106	0.393	0.097	0.061
$SALESGROWTH_{t-1}$	1982	-0.852	21.91	0.189	0.702
$ASSETSGROWTH_{t-1}$	1990	-0.725	20.63	0.311	0.992
$SHARPE_{t-1}$	1944	-13.63	9.081	-0.60	2.444
TSR_{t-1}	1944	-0.796	3.707	0.197	0.405
$TREYNOR_{t-1}$	1756	-1.571	0.760	-0.10	0.533
CEO Attention	2000	2.62	145.0	29.29	11.53
Corporate Social Performance	2002	34.17	86.50	62.09	8.023
ROA	2002	-0.846	0.373	0.048	0.077
ROS	2001	-1.728	0.760	0.159	0.177
CFSALES	2001	-1.570	1.146	0.199	0.169
CFASSETS	2002	-0.117	0.420	0.097	0.062
SALESGROWTH	1989	-0.852	7.805	0.166	0.453
ASSETSGROWTH	1996	-0.725	11.02	0.256	0.636
SHARPE	1962	-19.28	9.081	-1.89	3.879
TSR	1962	-0.796	5.776	0.160	0.401
TREYNOR	1761	-3.569	0.615	-0.52	1.097
Valid N (listwise)	1401				

Note: Treynor and $Treynor_{t-1}$ winsorized at 90%

4.2. Results of CEO Attention and Corporate Social Performance Congruence on Financial Performance

CEO attention and CSP congruence

We assess the relationship between CEO attention and CSP congruence and financial performance by examining the slope along the congruence line, X = Y represented by the solid line on the surface floors, as shown in Figure 1, Figure 4, Figure 7, Figure 8, and Figure 9. The slope given by the coefficient of a_1 is significant for return on assets, cash flow return on assets, and all three proxies of stock market financial performance. Hence, we examine these response surface plots. From Figure 1: return on assets, Figure 4: cash flow return on assets, and Figure 8: total shareholder return, we see financial performance decreases as CEO attention and CSP congruence increases. This negative slope along X = Y provides evidence that there is a negative relationship between increasingly congruent levels of CEO attention and CSP, and these measures of financial performance. An exception is that market-based measures of performance increase as CEO attention and CSP congruence increases, as shown in Figure 7, where performance is indicated by Sharpe ratio and Figure 9, where performance is indicated by the Treynor ratio. This positive slope along X = Y provides evidence of a positive relationship between increasing similar levels of CEO attention and CSP and these measures of financial performance. These mixed results suggest that the relationship between congruence and financial performance has opposite effects on efficiency vs. market-based measure of financial performance.

To further shed light on these results, we examine the curvature along the congruence line of these dependent variables. The curvature is given by the coefficient of: a_2. We reject the null hypothesis that curvature is zero if a_2 is significantly different from zero indicating that the

examined relationship is nonlinear. Overall, a_2 was nonsignificant across all measures and the null hypothesis could not be rejected. As seen in Figure 1:return on assets, Figure 4:cash flow return on assets, and Figure 8:total shareholder return, the relationship between CEO attention and CSP congruence and financial performance is negative and linear. Financial performance is highest where the degree of congruence between CEO attention and CSP is lowest, as seen at the front corner of the graph, decreasing as CEO attention and CSP increase equally towards the back corner of the graph. On the other hand, Figure 7:Sharpe ratio and Figure 9:Treynor ratio show a positive linear relationship. However, there was no evidence of a diminishing effect of congruence in either Figure 7:Sharpe ratio and Figure 9:Treynor ratio. Financial performance is lowest where CEO attention and CSP congruence is low, at the front of the graph, increasing as CEO attention and CSP increase equally towards the back corner of the graph.

These combined mixed findings for the hypothesis of a negative and positive linear relationship offer partial support for the predicted relationship. I expected that CEO attention and CSP congruence and financial performance would have a positive but diminishing relationship, increasing as CEO attention and CSP congruence increases to a certain point. Specifically, the results associated with the congruence models showed the slope and curvature values of the congruence line as: return on assets (-.009, $p < .01$; -.002, ns), return on sales (-.007, ns; -.005, ns), cash flow return on sales (.004, ns; -.003, ns), cash flow return on assets (-.004, $p < .05$; -.001, ns), sales growth (-.006, ns; -.004, ns), assets growth (-.021, ns; .003, ns), Sharpe ratio (-.903, $p < .001$; .267, ns), total shareholder return (-.054, $p < .05$; .-.009, ns), and Treynor ratio (-.194, $p < .01$; .078, ns) respectively. Therefore, hypothesis 1 was partially supported.

Table 3

Results of CEO Attention and CSP congruence on Return on Assets

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.058 (.027)*	.048 (.027)	.048 (.027)
Size	.000 (.000)***	.000 (.000)***	.000 (.000)***
Leverage	-.098 (.019)***	-.092 (.019)***	-.092 (.019)***
R&D Intensity	-.031 (.019) ɬ	-.035 (.019) ɬ	-.034 (.019) ɬ
ROA_{t-1}	-.012 (.020)	-.017 (.020)	-.017 (.021)
CEO age	-.000 (.001)	-.000 (.001)	-.000 (.001)
CEO tenure	.001 (.001) ɬ	.001 (.001)*	.001 (.001) ɬ
CEO level of education- Masters	.004 (.006)	.005 (.006)	.004 (.006)
CEO level of education- Doctorate	.006 (.014)	.006 (.014)	.006 (.014)
Independent			
CEO attention (b1)		-.000 (.002) ɬ	-.000 (.002)
Corporate Social Performance (b2)		-.008 (.002)**	-.008 (.003)**
CEO attention squared (b3)			-.000 (.001)
CEO attention x Corporate Social Performance (b4)			-.000 (.002)
Corporate Social Performance squared (b5)			-.001 (.002)
R^2	.086***	.084***	.084***
F	60.36	49.48	38.04
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.009 (.003)**
Curvature on x = y, b3+b4+b5 (a_2)			-.002 (.002)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.008 (.003)*
Curvature on x = -y, b3-b4+b5 (a_4)			-.001 (.003)
N	1749	1749	1749

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.

ɬ $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

Table 4

Results of CEO Attention and CSP congruence on Return on Sales

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.163 (.057)**	.158 (.057)**	.156 (.057)**
Size	.000 (.000)***	.000 (.000)***	.000 (.000)***
Leverage	-.125 (.039)**	-.122 (.040)**	-.122 (.040)**
R&D Intensity	-.128 (.046)**	-.130 (.046)**	-.127 (.046)**
ROS_{t-1}	.048 (.019)*	.047 (.019)*	.046 (.019)*
CEO age	-.000 (.001)	-.000 (.001)	-.000 (.001)
CEO tenure	.001 (.001)	.001 (.001)	.002 (.001)
CEO level of education- Masters	.017 (.013)	.017 (.013)	.017 (.013)
CEO level of education- Doctorate	-.025 (.029)	-.025 (.029)	-.022 (.029)
Independent			
CEO attention (b1)		-.002 (.004)	-.002 (.004)
Corporate Social Performance (b2)		-.004 (.006)	-.004 (.006)
CEO attention squared (b3)			.001 (.001)
CEO attention x Corporate Social Performance (b4)			-.006 (.004)
Corporate Social Performance squared (b5)			-.000 (.004)
R^2	.121***	.123***	.123***
F	31.64	25.37	19.73
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.007 (.007)
Curvature on x = y, b3+b4+b5 (a_2)			-.005 (.005)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.002 (.007)
Curvature on x = -y, b3-b4+b5 (a_4)			.007 (.005)
N	1748	1748	1748

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.

ɨ $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

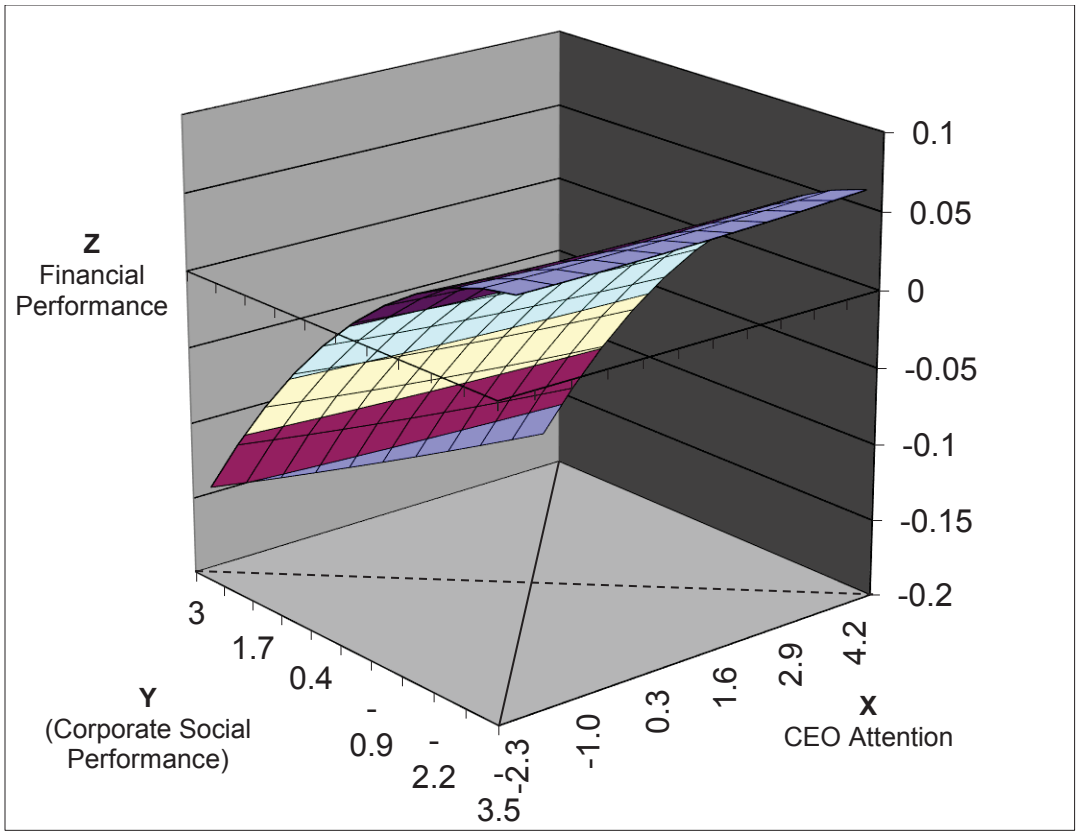

Figure 1 Financial Performance (Return on Assets) as predicted by CEO Attention and CSP Congruence

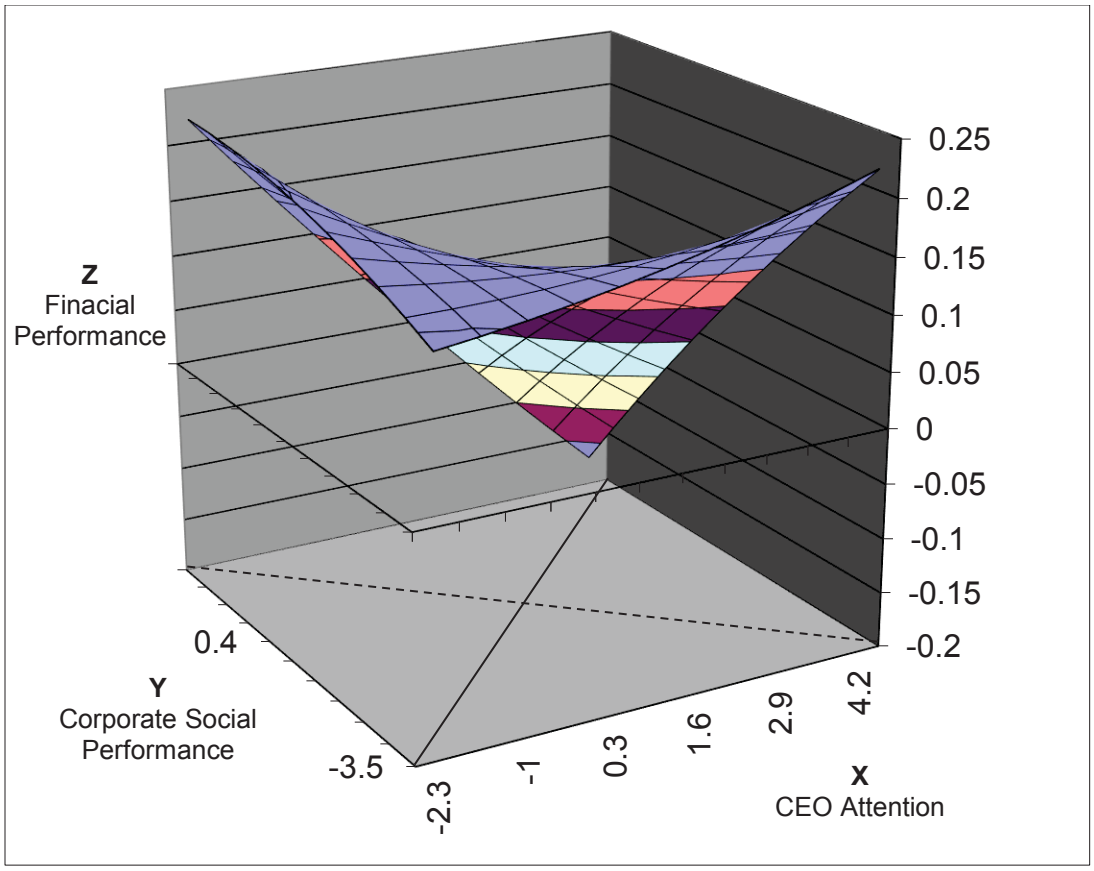

Figure 2 Financial Performance (Return on Sales) as predicted by CEO Attention and CSP Congruence

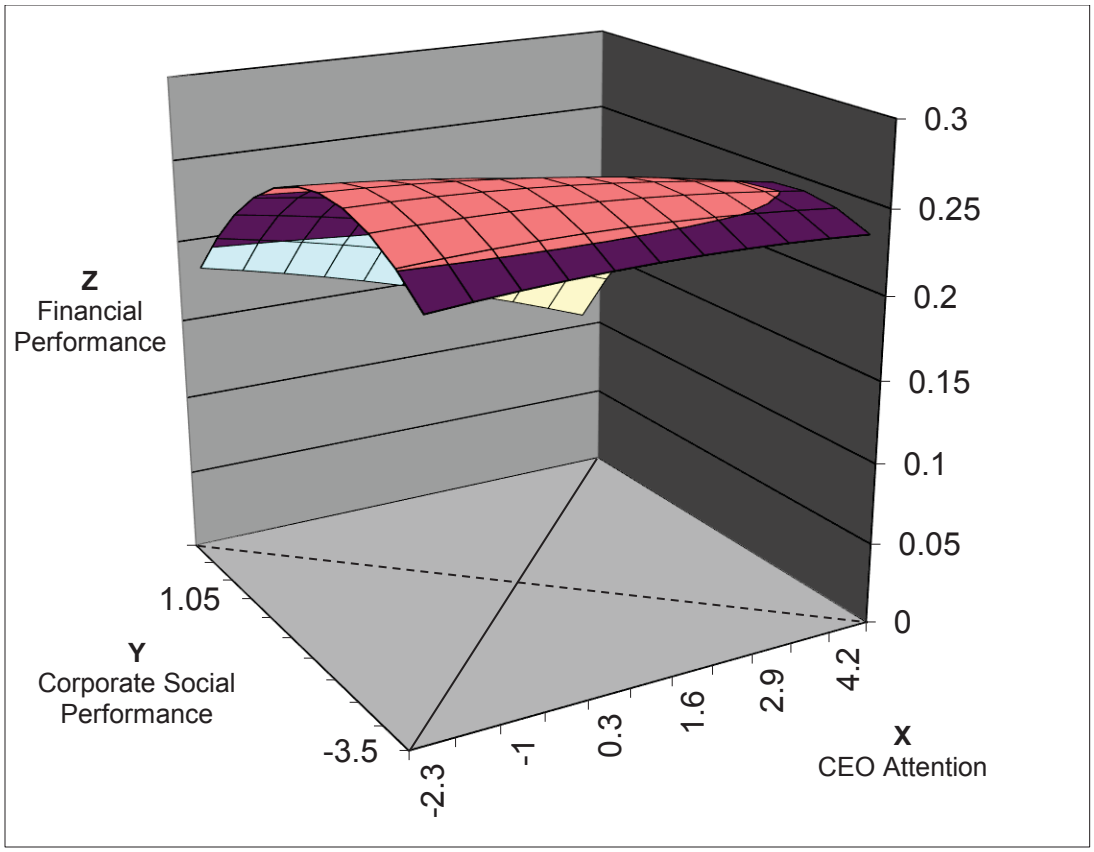

Figure 3 Financial Performance (Cash flow Return on Sales) as predicted by CEO Attention and CSP Congruence

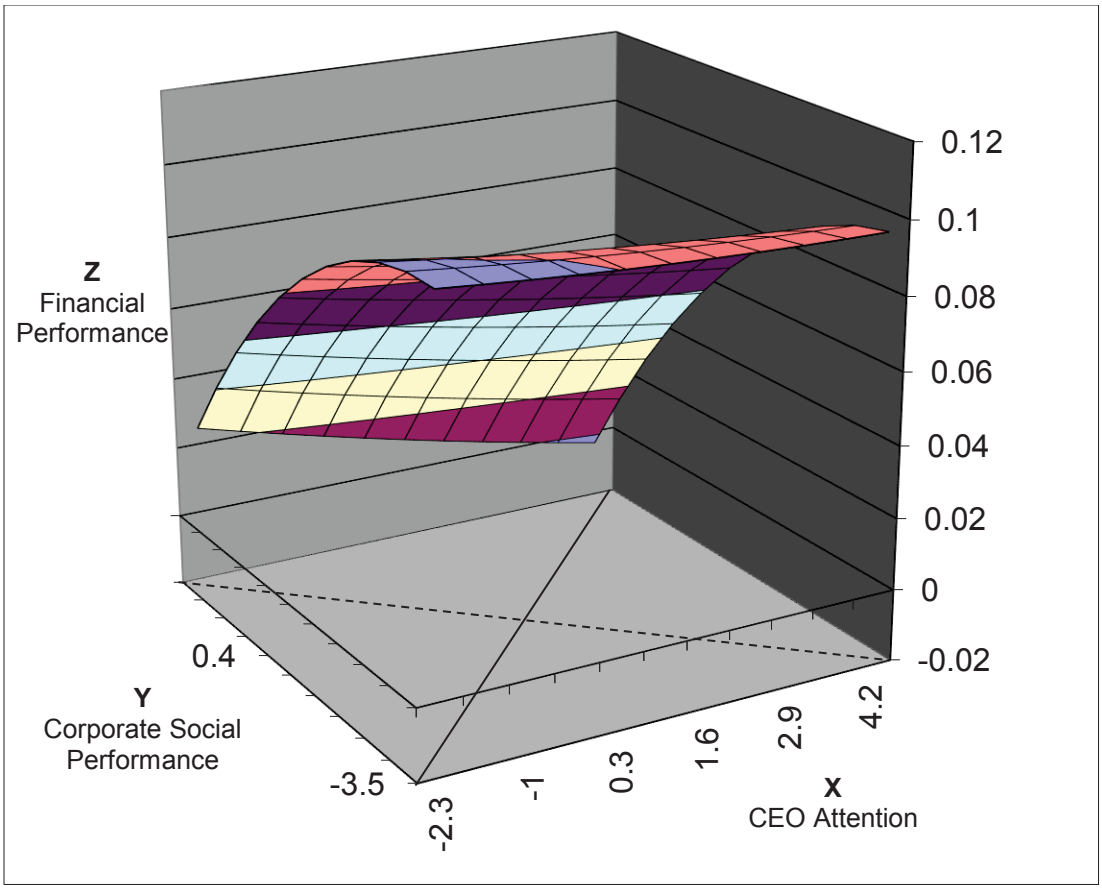

Figure 4 Financial Performance (Cash flow Return on Assets) as predicted by CEO Attention and CSP Congruence

Higher CEO attention and low CSP incongruence

We assess the relationship between high CEO attention and low CSP and financial performance, focusing on the curvature along the incongruence line X = -Y represented by the dotted line on the surface floors, as shown in Figure 1, Figure 2, Figure 3, Figure 4, Figure 5, Figure 6, Figure 7, Figure 8, Figure 9. We examine this curvature along X = -Y moving from the center of the floor to the right end of the graphs. As we can observe from the graphs, the curvatures are U-shaped, for Figure 1:return on assets[7], Figure 3:cash flow return on sales, Figure 4:cash flow return on assets, and Figure 5:sales growth indicating financial performance decreases as the degree of incongruence between higher CEO attention and low CSP increases. On the other hand, we observe inverted U-shaped curves for Figure 2:return on sales, Figure 6:assets growth, Figure 7:Sharpe ratio, Figure 8:total shareholder return, and Figure 9:Treynor ratio suggesting, that overall, financial performance increases as CEO attention is higher than CSP.

The curvature along the incongruence line X = -Y is given by the coefficient a_4. We reject the null hypothesis that curvature in the relationship between CEO attention and CSP incongruence and financial performance is zero if a_4 is significantly different from zero indicating that the degree of incongruence impacts the outcome. Overall, a_4 was nonsignificant across all measures and the null hypothesis could not be rejected. Specifically, the results associated with the congruence model show the curvature along the incongruence line as: return on assets (-.001, ns), return on sales (.007, ns), cash flow return on sales (-.001, ns), cash flow return on assets (.000, ns), sales growth (-.007, ns), assets growth (.011, ns), Sharpe ratio (.165, ns), total shareholder return (.012, ns), and Treynor ratio (.049, ns) respectively. Thus, the

[7] Since a_3 is positive and significant despite the U-shaped relationship, this indicates direction matters: financial performance increases when incongruence is such that CEO attention is higher than CSP, as can be seen in Figure 1.

nonsignificant mixed *a4* do not provide statistically significant evidence that financial performance decreases as the unequal degree of higher CEO attention and low CSP increases. Hence, hypothesis 2 is not supported.

Table 5

Results of CEO Attention and CSP congruence on Cash flow Return on Sales

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.253 (.062)***	.260 (.062)***	.261 (.062)***
Size	.000 (.000)***	.000 (.000)***	.000 (.000)***
Leverage	-.103 (.043)*	-.108 (.043)*	-.108 (.043)*
R&D Intensity	.083 (.050) ł	.086 (.050) ł	.086 (.050) ł
$CFSALES_{t-1}$	-.154 (.027)***	-.153 (.027)***	-.153 (.027)***
CEO age	-.000 (.001)	-.001 (.001)	-.001 (.001)
CEO tenure	.003 (.001) ł	.003 (.001) ł	.003 (.001) ł
CEO level of education- Masters	-.013 (.014)	-.014 (.014)	-.014 (.014)
CEO level of education- Doctorate	-.116 (.031)***	-.116 (.031)***	-.117 (.031)***
Independent			
CEO attention (b1)		-.002 (.004)	-.001 (.004)
Corporate Social Performance (b2)		.005 (.006)	.005 (.006)
CEO attention squared (b3)			-.000 (.001)
CEO attention x Corporate Social Performance (b4)			-.001 (.004)
Corporate Social Performance squared (b5)			-.002 (.004)
R^2	.013**	.012***	.012**
F	10.30	8.33	6.43
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			.004 (.008)
Curvature on x = y, b3+b4+b5 (a_2)			-.003 (.006)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			-.006 (.008)
Curvature on x = -y, b3-b4+b5 (a_4)			-.001 (.006)
N	1748	1748	1748

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.
*$p < .05$; **$p < .01$; ***$p < .001$

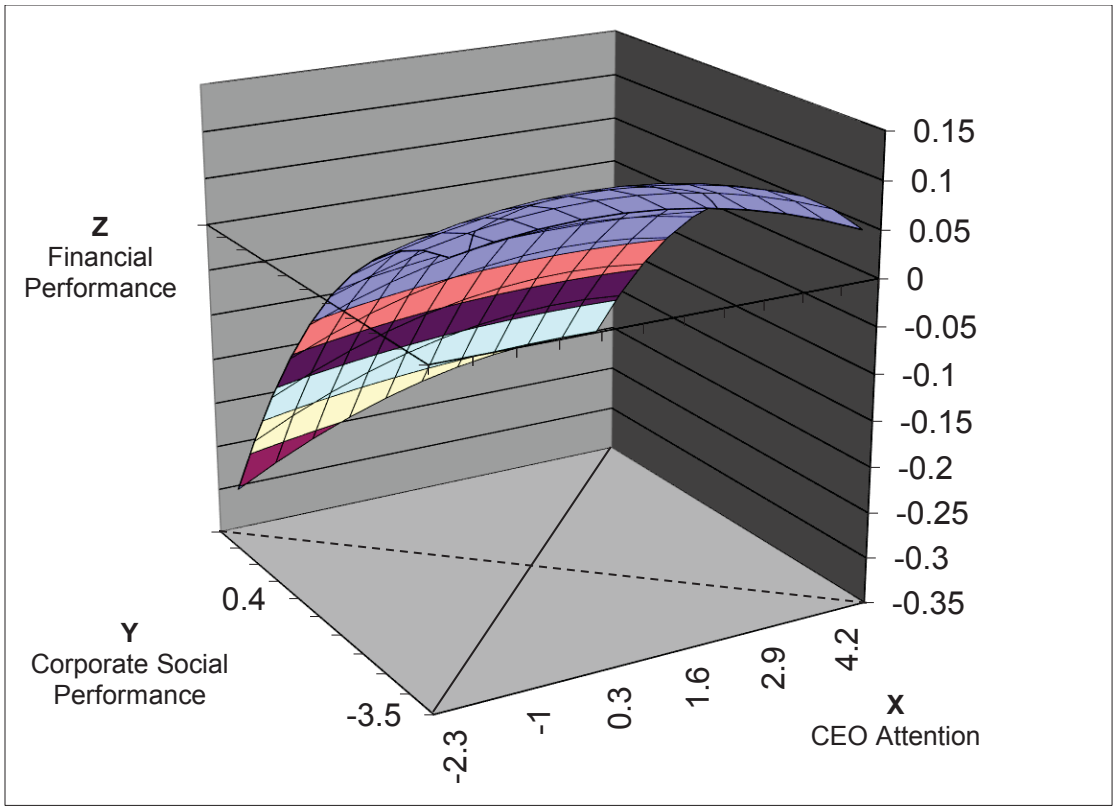

Figure 5 Financial Performance (Sales Growth) as predicted by CEO Attention and CSP Congruence

Higher CSP and low CEO attention

We examine the relationship between higher CSP and low CEO attention and financial performance by assessing the curvature along the incongruence line X = -Y represented by the dotted line on the surface floors , as shown in Figure 1, Figure 2, Figure 3, Figure 4, Figure 5, Figure 6, Figure 7, Figure 8, Figure 9. We examine this curvature along X = -Y moving from the center of the floor to the left end of the graphs. As we can observe from the graphs, the curvatures are U-shaped, for Figure 1:return on assets, Figure 3:cash flow return on sales, Figure 4: cash flow return on assets, and Figure 5:sales growth indicating a negative relationship between financial performance and disproportionate increase between higher CSP and low CEO attention. On the other hand, we observe inverted U-shape curves for Figure 2: return on sales, Figure 6: assets growth, Figure 7:Sharpe ratio, Figure 8:total shareholder return, and Figure 9:Treynor ratio suggesting, a positive relationship between financial performance and unequal increase between higher CSP and low CEO attention.

The curvature along the incongruence line X = -Y is given by the coefficient a_4. We reject the null hypothesis that curvature in the relationship between CEO attention and CSP incongruence and financial performance is zero if a_4 is significantly different from zero indicating that the degree of incongruence impacts the outcome. Overall, a_4 was nonsignificant across all measures and the null hypothesis could not be rejected. Specifically, the results associated with the congruence model show the curvature along the incongruence line as: return on assets (-.001, ns), return on sales (.007, ns), cash flow return on sales (-.001, ns), cash flow return on assets (.000, ns), sales growth (-.007, ns), assets growth (.011, ns), Sharpe ratio (.165, ns), total shareholder return (.012, ns), and Treynor ratio (.049, ns) respectively. The nonsignificant mixed *a4* do not provide statistically significant evidence that financial

performance decreases as the degree of incongruence between higher CSP and low CEO attention increases. Hence, hypothesis 3 is not supported.

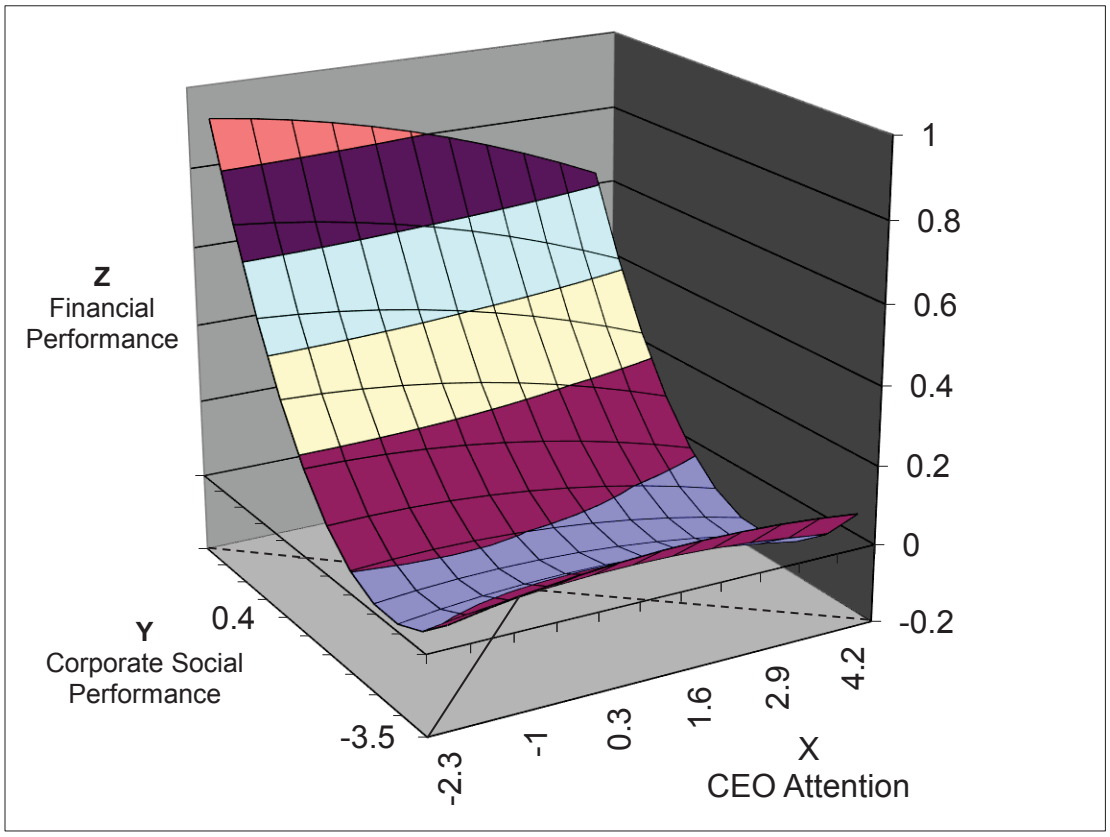

Figure 6 Financial Performance (Assets Growth) as predicted by CEO Attention and CSP Congruence

Table 6

Results of CEO Attention and CSP congruence on Cash flow Return on Assets

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.100 (.016)***	.098 (.016)***	.098 (.016)***
Size	.000 (.000)***	.000 (.000)***	.000 (.000)***
Leverage	-.072 (.011)***	-.071 (.011)***	-.071 (.011)***
R&D Intensity	-.051 (.010)***	-.052 (.011)***	-.052 (.011)***
$CFASSETS_{t-1}$	.135 (.026)***	.129 (.026)***	.129 (.026)***
CEO age	.000 (.000)	.000 (.000)	.000 (.000)
CEO tenure	.000 (.000)	.000 (.000)	.000 (.000)
CEO level of education- Masters	-.005 (.004)	-.005 (.004)	-.005 (.004)
CEO level of education- Doctorate	-.016 (.008)*	-.016 (.008)*	-.016 (.008)*
Independent			
CEO attention (b1)		-.002 (.001)	-.002 (.001)
Corporate Social Performance (b2)		-.002 (.002)	-.002 (.002)
CEO attention squared (b3)			.000 (.000)
CEO attention x Corporate Social Performance (b4)			-.000 (.001)
Corporate Social Performance squared (b5)			-.001 (.001)
R^2	.906***	.078***	.078**
F	24.35	19.98	15.38
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.004 (.002)*
Curvature on x = y, b3+b4+b5 (a_2)			-.001 (.001)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.001 (.002)
Curvature on x = -y, b3-b4+b5 (a_4)			.000 (.002)
N	1749	1749	1749

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.

ɬ $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

Table 7

Results of CEO Attention and CSP congruence on Sales Growth

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.108 (.132)	.097 (.133)	.102 (.133)
Size	.000 (.000)***	.000 (.000)***	.000 (.000)***
Leverage	-.162 (.091) ɨ	-.156 (.092) ɨ	-.156 (.092) ɨ
R&D Intensity	-.465 (.112)***	-.470 (.112)***	-.474 (.113)***
$SALESGROWTH_{t-1}$	.468 (.021)***	.467 (.021)***	.466 (.021)***
CEO age	-.001 (.003)	-.000 (.003)	-.000 (.003)
CEO tenure	.007 (.003)*	.007 (.003)*	.007 (.003)*
CEO level of education- Masters	.027 (.029)	.027 (.029)	.027 (.030)
CEO level of education- Doctorate	-.027 (.066)	-.028 (.066)	-.033 (.066)
Independent			
CEO attention (b1)		-.001 (.009)	.003 (.010)
Corporate Social Performance (b2)		-.009 (.013)	-.010 (.013)
CEO attention squared (b3)			-.003 (.003)
CEO attention x Corporate Social Performance (b4)			-.002 (.009)
Corporate Social Performance squared (b5)			-.002 (.008)
R^2	.434***	.431***	.432**
F	72.74	58.18	44.82
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.006 (.016)
Curvature on x = y, b3+b4+b5 (a_2)			-.004 (.012)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.013 (.016)
Curvature on x = -y, b3-b4+b5 (a_4)			-.007 (.013)
N	1735	1735	1735

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.

ɨ $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

Table 8

Results of CEO Attention and CSP congruence on Assets Growth

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.025 (.179)	-.007 (.180)	-.008 (.180)
Size	.000 (.000)**	.000 (.000)**	.000 (.000)**
Leverage	.195 (.123)	.214 (.124) ł	.213 (.124) ł
R&D Intensity	.323 (.127)*	.313 (.127)*	.309 (.127)*
ASSETSGROWTH$_{t-1}$	.494 (.017)***	.492 (.017)***	.490 (.017)***
CEO age	-.002 (.003) ł	-.001 (.003)	-.001 (.003)
CEO tenure	.007 (.004)	.007 (.004) ł	.008 (.004) ł
CEO level of education- Masters	.026 (.040)	.027 (.040)	.029 (.040)
CEO level of education- Doctorate	-.010 (.089)	-.011 (.089)	-.008 (.090)
Independent			
CEO attention (b1)		-.004 (.012)	.003 (.013)
Corporate Social Performance (b2)		-.025 (.018)	-.024 (.018)
CEO attention squared (b3)			-.004 (.003)
CEO attention x Corporate Social Performance (b4)			-.004 (.012)
Corporate Social Performance squared (b5)			-.011 (.011)
R^2	.569***	.567***	.567***
F	115.98	93.01	71.70
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.021 (.022)
Curvature on x = y, b3+b4+b5 (a_2)			.003 (.016)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.027 (.022)
Curvature on x = -y, b3-b4+b5 (a_4)			.011 (.017)
N	1738	1738	1738

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.

ł $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

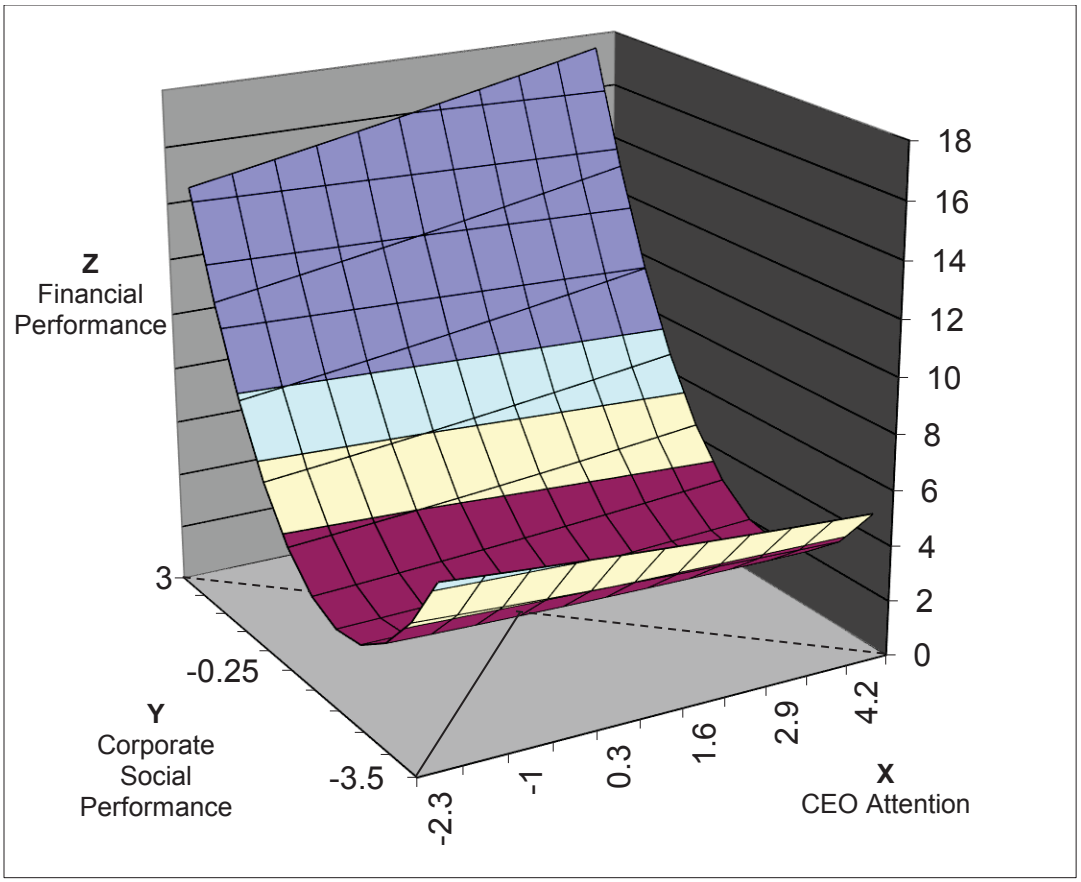

Figure 7 Financial Performance (Sharpe Ratio) as predicted by CEO Attention and CSP Congruence

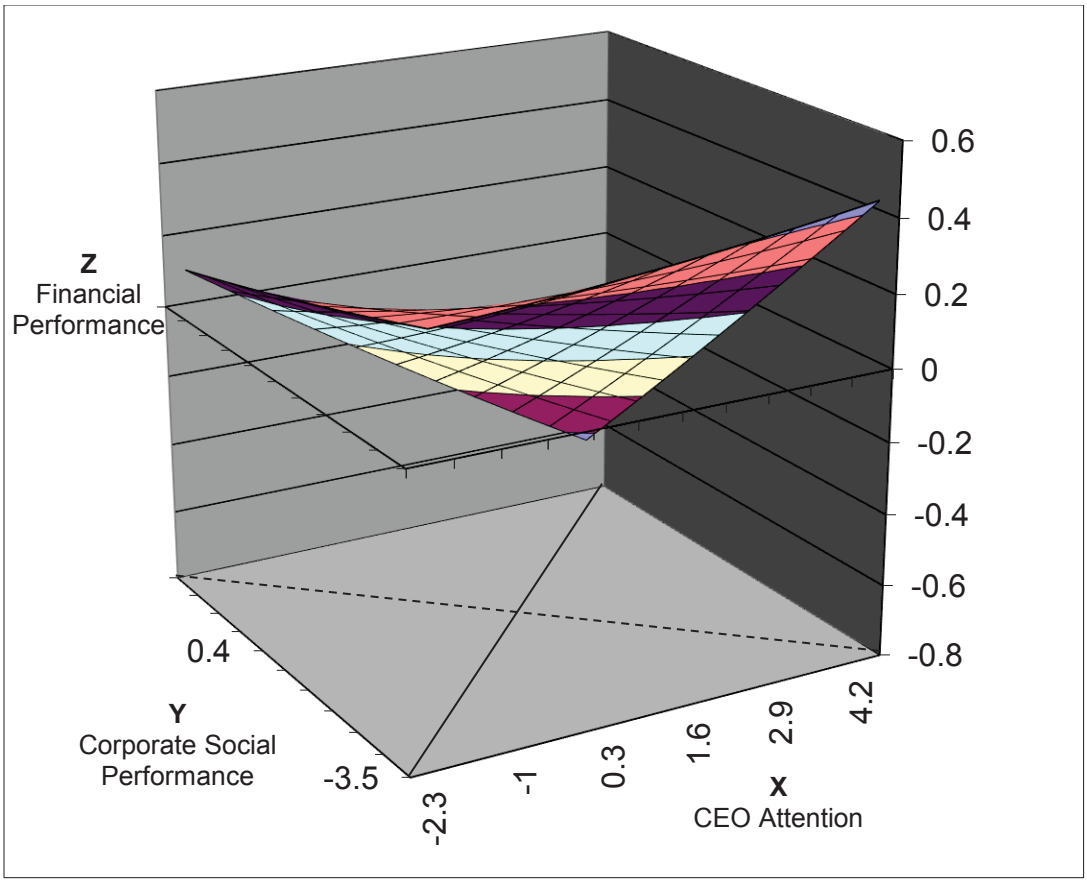

Figure 8 Financial Performance (Total Shareholder Return) as predicted by CEO Attention and CSP Congruence

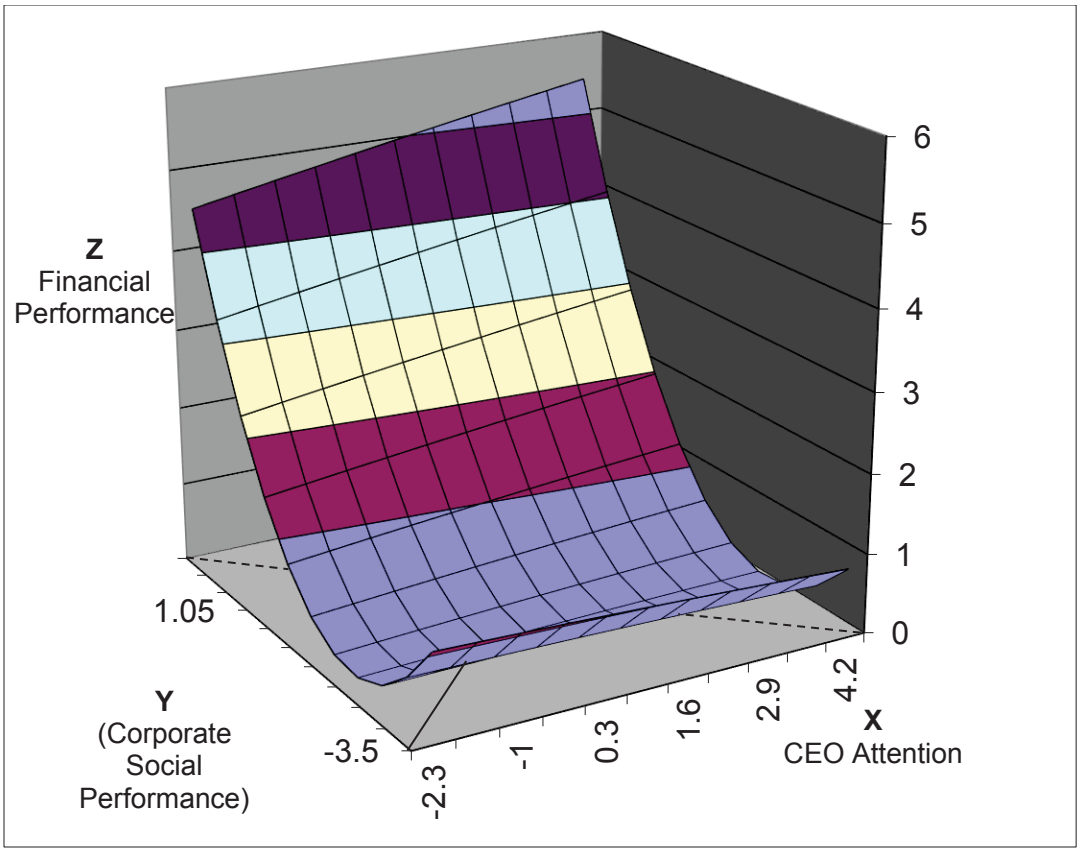

Figure 9 Financial Performance (Treynor Ratio) as predicted by CEO Attention and CSP Congruence

Table 9

Results of CEO Attention and CSP congruence on Sharpe Ratio

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	4.14 (1.62)*	3.00 (1.62) ɨ	2.93 (1.62) ɨ
Size	-.000 (.000)***	-.000 (.000)***	-.000 (.000)***
Leverage	-6.81 (1.13)***	-5.91 (1.13)***	-5.89 (1.13)***
R&D Intensity	-.153 (1.12)	-.491 (1.11)	-.511 (1.11)
$SHARPE_{t-1}$	.838 (.034)***	.858 (.034)***	.856 (.034)***
CEO age	-.044 (.031)	-.028 (.031)	-.032 (.031)
CEO tenure	-.095 (.038)*	-.085 (.038)*	-.081 (.038)*
CEO level of education- Masters	-.643 (.361) ɨ	-.582 (.358)	-.543 (.358)
CEO level of education- Doctorate	.871 (.798)	.828 (.790)	.901 (.793)
Independent			
CEO attention (b1)		-.044 (.104)	-.061 (.117)
Corporate Social Performance (b2)		-.864 (.163)***	-.843 (.163)***
CEO attention squared (b3)			.007 (.031)
CEO attention x Corporate Social Performance (b4)			.051 (.107)
Corporate Social Performance squared (b5)			.210 (.103)*
R^2	.032***	.303***	.304***
F	94.92	80.33	62.20
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.903 (.200)***
Curvature on x = y, b3+b4+b5 (a_2)			.267 (.150)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.782 (.201)***
Curvature on x = -y, b3-b4+b5 (a_4)			.165 (.154)
N	1696	1696	1696

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.

ɨ $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

Table 10

Results of CEO Attention and CSP congruence on Total Shareholder Return

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.315 (.211)	.257 (.213)	.255 (.214)
Size	.000 (.000)	.000 (.000)	.000 (.000)
Leverage	.026 (.145)	.067 (.147)	.067 (.147)
R&D Intensity	-.417 (.146)**	-.435 (.146)**	-.432 (.146)**
TSR_{t-1}	-.208 (.027)***	-.210 (.027)***	-.210 (.027)***
CEO age	-.001 (.004)	-.000 (.004)	-.000 (.004)
CEO tenure	-.001 (.005)	-.001 (.005)	-.000 (.005)
CEO level of education - Masters	-.016 (.047)	-.013 (.047)	-.013 (.047)
CEO level of education - Doctorate	.104 (.104)	.103 (.104)	.110 (.104)
Independent			
CEO attention (b1)		-.008 (.014)	-.008 (.015)
Corporate Social Performance (b2)		-.046 (.021) *	-.046 (.021)*
CEO attention squared (b3)			.001 (.004)
CEO attention x Corporate Social Performance (b4)			-.011 (.014)
Corporate Social Performance squared (b5)			.000 (.013)
R^2	.010***	.007***	.007**
F	8.69	7.47	5.78
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.054 (.026)*
Curvature on x = y, b3+b4+b5 (a_2)			-.009 (.020)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.037 (.026)
Curvature on x = -y, b3-b4+b5 (a_4)			.012 (.020)
N	1696	1696	1696

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects.

ł $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

Table 11

Results of CEO Attention and CSP congruence on Treynor Ratio

Variables	Controls model *b* (se)	Effect of CEO attention and CSP model *b* (se)	Congruence model *b* (se)
Control			
Constant	.631 (.557)	.282 (.562)	.247 (.562)
Size	-.000 (.000)**	-.000 (.000)**	-.000 (.000)**
Leverage	-2.42 (.362)***	-2.17 (.366)***	-2.16 (.366)***
R&D Intensity	-.204 (.592)	-.234 (.590)	-.298(.590)
$TREYNOR_{t-1}$	.490 (.051)***	.515 (.052)***	.513 (.052)***
CEO age	-.002 (.011)	.003 (.011)	.002 (.011)
CEO tenure	-.018 (.013)	-.017 (.013)	-.016 (.013)
CEO level of education - Masters	-.125(.122)	-.117 (.122)	-.101 (.122)
CEO level of education - Doctorate	.268 (.263)	.249 (.261)	.271 (.262)
Independent			
CEO attention (b1)		-.000 (.034)	-.001 (.039)
Corporate Social Performance (b2)		-.203 (.053)***	-.195 (.053)***
CEO attention squared (b3)			-.002 (.010)
CEO attention x Corporate Social Performance (b4)			-.014 (.034)
Corporate Social Performance squared (b5)			.065(.033)*
R^2	.101***	.095***	.096**
F	21.19	18.61	14.64
Surface Tests			
Congruence (x = y)			
Slope along x = y, b1+b2 (a_1)			-.194 (.067)**
Curvature on x = y, b3+b4+b5 (a_2)			.078 (.048)
Incongruence (x = -y)			
Slope along x = -y, b1-b2 (a_3)			.196 (.066)**
Curvature on x = -y, b3-b4+b5 (a_4)			.049 (.050)
N	1406	1406	1406

Note: *b* = unstandardized coefficients, se = standard error. Panel regression with year and firm fixed effects. $Treynor_t$ and $Treynor_{t-1}$ winsorized at 90%

ł $p < 0.1$; *$p < .05$; **$p < .01$; ***$p<.001$

CHAPTER 4. DISCUSSION

This study sought to contribute to the literature on the conditions under which social responsibility that is, pursuing non-financial outcomes comprising environmental, social, and governance performance, benefits firm financial performance (Apaydin et al., 2020; Barnett & Salomon, 2012; Rowley & Berman, 2000). I hypothesized that the joint effect of CEO attention and its efficacy as represented by a firm's CSP would have a positive and diminishing yet heterogeneous impact on firms' financial performance when congruent. Additionally, I posited that the disproportionate interaction between CEO attention and CSP would have a negative heterogeneous impact across firms' financial performance when either CEO attention or CSP was greater.

The results showed partial support of a positive but diminishing relationship between congruent levels of CEO attention and CSP and financial performance. The results provide evidence that this relationship may be linear and mixed. The findings show that financial performance is negatively related to increased congruence between CEO attention and CSP for return on assets, total shareholder return, and cash flow return on assets while having a positive relationship as congruence increases for the risk-adjusted stock market performance measures Sharpe ratio and Treynor ratio. However CEO attention and CSP congruence did not show evidence of a diminishing effect on the positive relationship to financial performance. The study did not find evidence for a relationship between congruence, and either of the growth dimension measures of financial performance.

These findings suggest that higher levels of congruence where CEO attention is high implying higher levels of noticing and interpreting of material ESG issues is positively appraised by investors keen on risk-adjusted return measures (Sharpe and Treynor ratio), particularly when

this is matched, with high execution of CSP programs, policies, and outcomes as would be the case for institutional investors (BlackRock, 2021). However, total shareholder return was negatively related to increasing congruence. On the other hand, the findings suggest that the efficiency of generating profits from assets (return on assets and cash flow return on assets) is negatively impacted as CEO attention and CSP are equally high. Given the attention to global climate change in the media and reflected in government policies, older technologies are being discontinued as newer cleaner technologies are required. Therefore, these asset compositions may impact the efficiency of generating profits in the short term. This supports the fact that attending to material ESG issues is costly and firms may choose optimal levels to avoid the diminishing returns (Barnett & Salomon, 2012). This also suggests a reason why market value and efficiency move in opposite directions driven by long versus short term views on investments in sustainability (Garcia-Castro, Ariño, & Canela, 2011). Alternatively, Apaydin et al. (2020) propose that less endowed firms should concentrate their limited resources on social activities related to their core strength in their value chain (p. 13) to maximize financial benefits. Our findings of low CEO attention and low CSP resulting in higher financial performance in some cases possibly complements this approach.

Additionally, I find that the impact of CSP, particularly on financial performance, can be confounded or misinterpreted when examined against a single dimension of financial performance. As detailed above, this study's congruence-based approach shows that similar levels of CEO attention and CSP impact stock market performance and the asset-based measures of both profitability and liquidity financial performance dimensions. Therefore, the relationship to financial performance varies from positive to negative, depending on operationalization of performance (Apaydin et al., 2020; Garcia-Castro et al., 2010; Orlitzky et al., 2003). This finding

contributes to the broader debate in the field of CSR and is somewhat consistent with neither entirely positive nor negative CSP-CFP relationship (Barnett & Salomon, 2012).

The second hypothesis examined the relationship between high CEO attention with low CSP and financial performance. The findings showed no statistical support for the hypothesis. However, the nonsignificant results were mixed. The results suggest that when CEO attention is higher than CSP, this may be assessed positively as forward-looking insight or assessed with considerations of the realities of some ESG material issues requiring gradual transitions such as inclusion and diversity (as part of 'Social'). Likewise, it may be the case that firms already have strongly established socially complex resources where higher CEO attention without corresponding outcomes is continually assessed based on prior experiences. For instance, a reputable large car manufacturing company with the capacity to transition to manufacturing electric vehicles may consistently indicate awareness of the future being electric but take incremental action. It is unlikely that financial performance will dip in the short run if the firm has a positive reputation and strong stakeholder relationships. All three stock performance measures and asset growth, and return on sales showed positive nonsignificant support for the former arguments.

However, both liquidity measures, return on assets, and sales growth resulted in decreased financial performance. We can argue, as earlier hypothesized, that higher CEO attention than CSP risks evaluation as being ceremonial and symbolic or indicative of window-dressing and organizational hypocrisy (Connors et al., 2017; Schons & Steinmeier, 2016; Yang et al., 2020). This possibly weakens firms' stakeholder relationships and support (Price & Sun, 2017) negatively impacting financial performance.

The third hypothesis examined the relationship between high CSP with low CEO attention and financial performance. The evidence did not provide statistical support for the hypothesis. However, the nonsignificant results were mixed. These findings suggest that when CSP is higher than CEO attention, this compliance with stakeholder demands is assessed positively. Return on sales, assets growth and all three stock performance measures showed positive nonsignificant support for this argument. These findings provide evidence of the importance of compliance with stakeholder demands across different stakeholder groups, particularly customers and shareholders: who often assess ethical and environmental concerns and the long-term growth and financial viability of firms, respectively (Wang et al., 2016). This finding is consistent with literature that has found CSP improves financial performance. Indeed, Barnett and Salomon (2012) found that firms with the highest CSP had the highest financial performance. However, lower CEO attention potentially means opportunities, shifts and, risks associated with broader material ESG issues will be obscured, as path dependencies for noticing and interpreting ESG issues are absent. In this case, as suggested by both liquidity measures, return on assets, and sales growth, financial performance decreases.

The study responds to calls to empirically examine the role of corporate leaders in the social responsibility and financial performance relationship (Orlitzky et al., 2011; Waldman et al., 2006; Waldman et al., 2020). This study adds nuance to the CSP and financial performance relationship by introducing CEO attention and CSP congruence which has yet to be explored. The findings present an examination of the role of CEO attention and CSP congruence drawing from managerial cognition and attention research. The study therefore sheds light on the complex and varying relationship between social responsibility and financial performance. Overall, the results imply that corporate managers should select congruence levels that will maximize their

desired financial performance objectives at that point in time. For instance, for firms seeking capital, it may be best to attain the highest levels of congruence, while firms seeking asset recomposition may seek to attain lower levels of congruence. For incongruence, while financial performance was negative in some cases, the results were nonsignificant. However, in the long term either higher CEO attention or CSP may be detrimental.

CHAPTER 5. CONCLUSION

This thesis examined the extent to which congruence between CEO attention and CSP impacted firm financial performance. The findings showed that CEO attention and CSP congruence had a linear mixed relationship with financial performance. Financial performance was highest when CEO attention and CSP were both equally low/high depending on the financial performance measure. The findings also showed that disproportionate levels of CEO attention and CSP were not significantly related to financial performance.

The results offer meaningful contributions to the broader debate in the field of CSR research beyond whether a positive or negative relationship exists by introducing managerial attention. The implications of the findings are that corporate managers should select congruence levels that will maximize their desired financial performance at that point in time. For firms seeking capital, it may be best to attain the highest levels of congruence, while firms seeking asset recomposition may seek to attain lower levels of congruence. For incongruence, while financial performance was positive in some cases, the results were insignificant. However, in the long term either higher CEO attention or CSP may be detrimental.

5.2. Limitations and Future Research

The study is not without limitations. Firstly, as (Jeffrey R Edwards, 2001) notes, use of polynomial regression requires large samples to provide statistical power because the equation contains several terms (p. 282). Despite a 10-year panel data, the sample was unbalanced and relatively small. Likewise, the study acknowledges that curvilinearity may still be present. However, this requires a larger power to test. Future research could increase sample sizes to see whether the results hold.

Additionally, while prior attention research has relied on word count of written corporate communication including letters to shareholders as reasonable representations of the different subjective interpretations and attention foci of top management (Ahn, 2020; Cho & Hambrick, 2006; Yadav et al., 2007), future research can select more reliable alternative measures to capture the complexities of managerial attention. Likewise, future research should explore whether results would be comparable with alternative CSP indexes for instance the KLD database or the more recent SUSTAINALYTICS ESG risk rating database.

Lastly, the findings reflect U.S and Canadian firms. Due to differences in policies, ESG standards and, reporting disclosures, results may not be generalizable across different regions.

REFERENCES

Agle, B. R., Mitchell, R. K., & Sonnenfeld, J. A. (1999). Who matters to Ceos? An investigation of stakeholder attributes and salience, corpate performance, and Ceo values. *Academy of Management journal, 42*(5), 507-525.

Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management, 38*(4), 932-968.

Ahn, Y. (2020). A Socio-cognitive Model of Sustainability Performance: Linking CEO Career Experience, Social Ties, and Attention Breadth. *Journal of Business Ethics*, 1-19.

Apaydin, M., Jiang, G. F., Demirbag, M., & Jamali, D. (2020). The Importance of Corporate Social Responsibility Strategic Fit and Times of Economic Hardship. *British Journal of Management*.

Banerjee, S. B. (2001). Managerial perceptions of corporate environmentalism: Interpretations from industry and strategic implications for organizations. *Journal of Management Studies, 38*(4), 489-513.

Barnett, M. L. (2007). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Academy of Management Review, 32*(3), 794-816.

Barnett, M. L., & Salomon, R. M. (2012). Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strategic Management Journal, 33*(11), 1304-1320.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99-120.

Basu, K., & Palazzo, G. (2008). Corporate social responsibility: A process model of sensemaking. *Academy of Management Review, 33*(1), 122-136.

BlackRock. (2021). Larry Fink's 2021 letter to CEOs. Retrieved from https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review, 32*(3), 946-967.

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review, 4*(4), 497-505.

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International journal of management reviews, 12*(1), 85-105.

Cavaco, S., & Crifo, P. (2014). CSR and financial performance: Complementarity between environmental, social and business behaviours. *Applied Economics, 46*(27), 3323-3338.

Cho, T. S., & Hambrick, D. C. (2006). Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation. *Organization Science, 17*(4), 453-469.

Connors, S., Anderson-MacDonald, S., & Thomson, M. (2017). Overcoming the 'window dressing'effect: Mitigating the negative effects of inherent skepticism towards corporate social responsibility. *Journal of Business Ethics, 145*(3), 599-621.

Edwards, J. R. (2001). Ten difference score myths. *Organizational research methods, 4*(3), 265-287.

Edwards, J. R. (2002). Alternatives to difference scores: Polynomial regression and response surface methodology. *Advances in measurement and data analysis*, 350-400.

Edwards, J. R. (n.d.). Excel file for plotting response surfaces. Retrieved from http://public.kenan-flagler.unc.edu/faculty/edwardsj/downloads.htm

Edwards, J. R., & Parry, M. E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management journal, 36*(6), 1577-1613.

El Ghoul, S., Guedhami, O., Kwok, C. C., & Mishra, D. R. (2011). Does corporate social responsibility affect the cost of capital? *Journal of banking & finance, 35*(9), 2388-2406.

Faia, V., Negreiros, L., & Vieira, V. (2019). Polynomial Regression and Response surface methodology using SPSS. *Publisher: Autor*.

Freeman, R. E., Wicks, A. C., & Parmar, B. (2004). Stakeholder theory and "the corporate objective revisited". *Organization Science, 15*(3), 364-369.

Friedman, M. (1970, September 13). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*. Retrieved from https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html

Gaio, C., & Henriques, R. (2018). Are large firms more profitable than small and medium firms in the European Union? *The European Journal of Management Studies, 23*(1), 25-48.

Garcia-Castro, R., Ariño, M. A., & Canela, M. A. (2010). Does social performance really lead to financial performance? Accounting for endogeneity. *Journal of Business Ethics, 92*(1), 107-126.

Garcia-Castro, R., Ariño, M. A., & Canela, M. A. (2011). Over the long-run? Short-run impact and long-run consequences of stakeholder management. *Business & Society, 50*(3), 428-455.

Godos-Díez, J.-L., Fernández-Gago, R., & Martínez-Campillo, A. (2011). How important are CEOs to CSR practices? An analysis of the mediating effect of the perceived role of ethics and social responsibility. *Journal of Business Ethics, 98*(4), 531-548.

Grégoire, D. A., Barr, P. S., & Shepherd, D. A. (2010). Cognitive processes of opportunity recognition: The role of structural alignment. *Organization Science, 21*(2), 413-431.

Grewatsch, S., & Kleindienst, I. (2017). When Does It Pay to be Good? Moderators and Mediators in the Corporate Sustainability-Corporate Financial Performance Relationship: A Critical Review. *Journal of Business Ethics, 145*(2), 383-416. doi:10.1007/s10551-015-2852-5

Hahn, T., Preuss, L., Pinkse, J., & Figge, F. (2014). Cognitive frames in corporate sustainability: Managerial sensemaking with paradoxical and business case frames. *Academy of Management Review, 39*(4), 463-487.

Hamann, P. M., Schiemann, F., Bellora, L., & Guenther, T. W. (2013). Exploring the dimensions of organizational performance: A construct validity study. *Organizational research methods, 16*(1), 67-87.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2), 193-206.

Helfat, C. E., & Martin, J. A. (2015). Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *Journal of Management, 41*(5), 1281-1312.

Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal, 36*(6), 831-850.

Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal, 22*(2), 125-139.

Hoffman, A. J., & Ocasio, W. (2001). Not all events are attended equally: Toward a middle-range theory of industry attention to external events. *Organization Science, 12*(4), 414-434.

Husted, B. W., & de Sousa-Filho, J. M. (2017). The impact of sustainability governance, country stakeholder orientation, and country risk on environmental, social, and governance performance. *Journal of cleaner production, 155*, 93-102.

Jiang, F., Zalan, T., Herman, H., & Shen, J. (2018). Mapping the relationship among political ideology, CSR mindset, and CSR strategy: A contingency perspective applied to Chinese managers. *Journal of Business Ethics, 147*(2), 419-444.

Lahouel, B. B., Gaies, B., Zaied, Y. B., & Jahmane, A. (2019). Accounting for endogeneity and the dynamics of corporate social–corporate financial performance relationship. *Journal of cleaner production, 230*, 352-364.

Liu, W., Shao, X., De Sisto, M., & Li, W. H. (2021). A new approach for addressing endogeneity issues in the relationship between corporate social responsibility and corporate financial performance. *Finance Research Letters, 39*, 101623.

Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative science quarterly, 48*(2), 268-305.

Martin, K., & Phillips, R. (2021). Stakeholder Friction. *Journal of Business Ethics*, 1-13.

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal, 21*(5), 603-609.

Mintzberg, H. (1983). The case for corporate social responsibility. *The Journal of Business Strategy, 4*(2), 3.

Moore, G. (2001). Corporate social and financial performance: An investigation in the UK supermarket industry. *Journal of Business Ethics, 34*(3), 299-315.

Nadkarni, S., & Barr, P. S. (2008). Environmental context, managerial cognition, and strategic action: An integrated view. *Strategic Management Journal, 29*(13), 1395-1427.

O'Toole, J., & Vogel, D. (2011). Two and a half cheers for conscious capitalism. *California management review, 53*(3), 60-76.

Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal, 18*(S1), 187-206.

Orlitzky, M., Louche, C., Gond, J.-P., & Chapple, W. (2017). Unpacking the drivers of corporate social performance: A multilevel, multistakeholder, and multimethod analysis. *Journal of Business Ethics, 144*(1), 21-40.

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization studies, 24*(3), 403-441.

Orlitzky, M., Siegel, D. S., & Waldman, D. A. (2011). Strategic corporate social responsibility and environmental sustainability. *Business & Society, 50*(1), 6-27.

Peteraf, M. A. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal, 14*(3), 179-191.

Porter, M. E., & Kramer, M. R. (2006). The link between competitive advantage and corporate social responsibility. *Harvard Business Review, 84*(12), 78-92.

Price, J. M., & Sun, W. B. (2017). Doing good and doing bad: The impact of corporate social responsibility and irresponsibility on firm performance. *Journal of Business Research, 80*, 82-97. doi:10.1016/j.jbusres.2017.07.007

Rowley, T., & Berman, S. (2000). A brand new brand of corporate social performance. *Business & Society, 39*(4), 397-418.

Schons, L., & Steinmeier, M. (2016). Walk the Talk? How Symbolic and Substantive CSR Actions Affect Firm Performance Depending on Stakeholder Proximity. *Corporate Social Responsibility and Environmental Management, 23*(6), 358-372. doi:10.1002/csr.1381

Shanock, L. R., Baran, B. E., Gentry, W. A., Pattison, S. C., & Heggestad, E. D. (2010). Polynomial regression with response surface methodology: A powerful approach for examining moderation and overcoming limitations of difference scores. *Journal of Business and Psychology, 25*(4), 543-554.

Sharma, S. (2000). Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy. *Academy of Management journal, 43*(4), 681-697.

Short, J. C., & Palmer, T. B. (2008). The application of DICTION to content analysis research in strategic management. *Organizational research methods, 11*(4), 727-752.

Tang, Z., & Tang, J. (2012). Stakeholder–firm power difference, stakeholders' CSR orientation, and SMEs' environmental performance in China. *Journal of Business Venturing, 27*(4), 436-455.

Van Beurden, P., & Gössling, T. (2008). The worth of values–a literature review on the relation between corporate social and financial performance. *Journal of Business Ethics, 82*(2), 407.

Waldman, D. A., & Siegel, D. (2008). Defining the socially responsible leader. *The Leadership Quarterly, 19*(1), 117-131.

Waldman, D. A., Siegel, D. S., & Javidan, M. (2006). Components of CEO transformational leadership and corporate social responsibility. *Journal of Management Studies, 43*(8), 1703-1725.

Waldman, D. A., Siegel, D. S., & Stahl, G. K. (2020). Defining the socially responsible leader: Revisiting issues in responsible leadership. *Journal of Leadership & Organizational Studies, 27*(1), 5-20.

Wang, Q., Dou, J., & Jia, S. (2016). A meta-analytic review of corporate social responsibility and corporate financial performance: The moderating effect of contextual factors. *Business & Society, 55*(8), 1083-1121.

Whelan, T., & Fink, C. (2016). The comprehensive business case for sustainability. *Harvard Business Review, 21*, 2012.

Wood, D. J. (1991). Corporate social performance revisited. *Academy of Management Review, 16*(4), 691-718.

Yadav, M. S., Prabhu, J. C., & Chandy, R. K. (2007). Managing the future: CEO attention and innovation outcomes. *Journal of marketing, 71*(4), 84-101.

Yang, L., Manika, D., & Athanasopoulou, A. (2020). Are they sinners or saints? A multi-level investigation of hypocrisy in organisational and employee pro-environmental behaviours. *Journal of Business Research, 114*, 336-347. doi:10.1016/j.jbusres.2019.08.042

Zajac, E. J., Kraatz, M. S., & Bresser, R. K. (2000). Modeling the dynamics of strategic fit: A normative approach to strategic change. *Strategic Management Journal, 21*(4), 429-453.

Zhao, X., & Murrell, A. J. (2016). Revisiting the corporate social performance-financial performance link: A replication of W addock and G raves. *Strategic Management Journal, 37*(11), 2378-2388.

APPENDIX 1: Summary of leading meta-analyses

Study	Total sample details	Sample CSR > FP (X predicts Y)	Sample FP > CSR (X predicts Y)	Findings Implications	Recommendations
Orlitzky et al. (2003)	**1972** – 1997 52 empirical studies 33,878 observations	–	–	**A positive association**	Research efforts into the relationship between business and society must continue to reconcile the subject through improving reliability of CSP and CFP measures and informed operationalization of CSP
Margolis and Walsh (2003)	**1972** – 2002 127* empirical studies	109 studies 54 +ve 7 –ve 28 non-significant 20 mixed results	22 studies 16 +ve 3 non-significant 3 mixed results	**A positive association**	Investigating how a normative theory of the firm can be developed to reconcile competing roles of business in society. Starting with systematic descriptive research into how firms have been responding to multiple objectives of the firm
Van Beurden and Gössling (2008)	1991 – 2007 41 studies	23 +ve 6 non-significant 2 -ve	–	**A positive association**	Studying the CSP – CFP link with data relevant to the present society focusing on circumstances under which the relationship exists as opposed to only the direction and sign
Wang et al. (2016)	2004 – **2011** 42 studies 119** effect sizes	27 +ve	10 +ve	**A positive association**	Identification and inclusion of societal and macro-level factors that may moderate the CSR – CFP link

*4 studies were bidirectional
*94 studies concurrently tested CSR < > CFP

APPENDIX 2: Description of Variables

Variable	Definition
Dependent variables (DV)	
Return on assets	$\frac{\text{Net Income}}{\text{Total Assets}}$
Return on sales	$\frac{\text{Operating Profit (EBIT)}}{\text{Net Sales}}$
Cash flow return on assets	$\frac{\text{Operating cash flows}}{\text{Net Assets}}$
Cash flow return on sales	$\frac{\text{Operating cash flows}}{\text{Total Sales}}$
Assets growth	3-year Δ in Total Assets
Sales growth	3-year Δ in Sales
Total shareholder return	$\frac{\Delta \text{ in share price + dividends}}{\text{Previous year share price}}$
Sharpe ratio	$\frac{\text{Expected share return} - \text{*risk free rate of return } (R_f)}{\text{Standard deviation of share returns (monthly)}}$ *R_f = U.S. historical 90-day T-bill yields
Treynor ratio	$\frac{\text{Expected share return } (R_x) - \text{risk free rate}}{\text{*Beta}}$ *Beta = $Cov(R_x, *R_m)/Var(R_m)$

	*R_m = Return of S &P500 index fund
Independent variables (IV)	
CEO attention	Total ESG attention score = *E attention score + *S attention score + *G attention score *DICTION's 500-word textual norm was applied to analyze the CEO letters. Texts with less than 500 words were extrapolated, while texts with more than 500 words were processed as the average of 500-word units
Corporate social performance	SUSTAINALYTICS database proprietary total ESG score & individual dimension scores i.e., E-environments, S-social, G-governance
Control variables	
Size	Net income
Prior financial performance	DV_{t-1}
Research & development (R&D) intensity	$\frac{\text{R\&D expenditure + Capital Expenditure}}{\text{Sales}}$
Leverage	$\frac{\text{Long Term Leverage}}{\text{Total Assets}}$
CEO age	Age of the CEO
CEO Tenure	Number of years as CEO in the firm
CEO level of education	The CEO's highest level of education: undergraduate, or graduate, or doctorate

APPENDIX 3: ESG Key word list

Environmental (48)	Social (48)	Governance (40)
Agriculture	Certification	Accountability
Aquaculture	Community	Anti-corruption
Biodegradable	Conditions	Audit
Biodiversity	Conflict	Board
Carbon	Customer	Bribery
Clean	Data	CEO
Climate	Digital	Chairman
Conservation	Discrimination	Compensation
Contamination	Disease	Compliance
Development	Diversity	Conflict
Eco	Donation	Controls
Ecofriendly	Employees	Corruption
Ecological	Employer	Director
Ecosystem	Employment	Disclosure
Emissions	Equal	Ethics
Energy	Equity	Executive
Environment	Fair	Gender
Environmental	Foundation	Governance
Footprint	Freedom	Guidelines
Forest	Health	Independence
Fuel	Healthcare	Integrity
Gas	Human	Invest
GMO	Inclusion	Leadership
GHGs	Indigenous	Lobby
Green	Involvement	Management
Greenhouse	Labor	Membership
Habitat	Labour	Member
Hazard	Media	Policy
HCFC	Occupier	Political
Mineral	People	Principle
Natural	Philanthropy	Programmes
Ocean	Privacy	Programs
Organic	Responsibility	Remuneration
Ozone	Rights	Reporting
Pollution	Safety	Risk
R&D	Salary	Signatory
Recycle	Services	Standards
Rehabilitation	Social	Targets
Renewable	Society	Tax
Research	Supplier	Transparency
Sea	Supply-chain	
Spill	Trade	

Sustainability	Training
Sustainable	Union
Technology	Wages
Toxic	Welfare
Waste	Workers
Water	Workplace

APPENDIX 4: Congruence between CEO attention to social responsibility and corporate social performance