



FACULTY OF BUSINESS AND ECONOMICS

EXECUTIVE MOTIVES AND CORPORATE SOCIAL RESPONSIBILITY

Thesis submitted for the degree of doctor in Business and Economics at the
University of Antwerp to be defended by

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Antwerp, 2018

EXECUTIVE MOTIVES AND CORPORATE SOCIAL RESPONSIBILITY

This research was supported by the Research Foundation – Flanders (FWO-Vlaanderen),
research grant G031714N.

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ACKNOWLEDGEMENTS

The journey towards the completion of this dissertation has been a turbulent ride, if anything. There was manic laughter and immense joy, but there were also sleepless nights. If I had to single out one thing that stood out, however, it would have been the people. This work could not have been completed without others. Some provided a scholarly and professional input that was indispensable to my research efforts. Other quirky characters, in contrast, have regularly offered me their company in which daily struggles of a doctoral student simply faded away.

My gratitude goes to...

... my promotor Christophe Boone. First of all, I thank Christophe for giving me this great opportunity. Although I was a complete outsider to organizational studies, his trust in me and his enabling attitude have made any initial lack of confidence vanish. Christophe has had a profound influence not only on my development as a scientist, but also as a person. I cannot stress this enough. I have learned so much from him—from our brain-storming sessions that sometimes lasted for hours, to our chats about the world while ending a working day at Patrick's. His no-nonsense approach to research and his carefully crafted feedback have made my life enormously easier. I truly could not have hoped for a better promotor. I thank Christophe for being a great mentor, a role model and, above all, a friend. Oh, and I thank him for all the red folders I was gifted over the years :)

... my co-promotor Tine Buyl. Her keen eye for detail has benefited me a lot. Tine has always made time for me to provide me with advice and detailed feedback when I needed it. Her ability to simultaneously be a superb researcher and a dedicated mother has been a constant source of inspiration. Tine's efforts and support have especially made my final months of the PhD easier.

... Georg Wernicke. Early on during my research he supplied me with the database that I used for my empirical chapters which turned out to be pivotal for a favorable head start in the race towards graduation. Throughout our close collaboration on research projects, Georg played an important role in my work by frequently sharing his sharp insights, pushing me to improve my writing skills and offering invaluable guidance in the perilous waters of academia.

... the members of my doctoral jury: Miriam Flickinger, Ann Jorissen, Luc Van Liedekerke, and Victor Gisling. I am honored to have such respectable scholars improve the quality of my dissertation with critical but constructive comments. I am particularly grateful to Victor who served impeccably as the chair of my doctoral committee during my tenure as a PhD student.

... the folks of ACED. Over the years we have formed friendships that I believe will last a lifetime. I can only offer a glimpse into the many ways they have helped me. I thank Anne, for her warm personality; Jorge, for his deliveries of Spanish ham when it was most needed; Juan, for fascinating discussions about '*insert anything imaginable*'; Kim, for leading the way; Loren, for understanding the critical importance of cats for the balance of the universe; Nino, for his infinite problem-solving mindset; and Panos, for his amazing Greek character. I thank Amin, Bruno, Carolyn, Cathrin, Danica, Farid, Kim, Konrad, Mariano, Nele, Ozge, Tanya, and Tatiana. They have all brought color to the grayness of office life.

... my family and friends. Not only have their skepticisms of the sort "what the hell is research on top managers about, anyways?" helped me to dramatically improve my presentation skills to a wide variety of audiences, but their presence has always had a calming and supporting effect on my life. This makes any undertaking with uncertain outcomes bearable. I am especially grateful to Charlotte. She has always been there for me—nurturing and spoiling me when I was stressed, putting up with my irregular work schedules, and surprising

me with wonderful celebrations when I succeeded even in little things. Coming home to and spending time with her puts everything into perspective.

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CHAPTER 1:

Introduction

1.1 Setting the Hook: Corporate Social Responsibility and Corporate Leaders

Corporate social responsibility (CSR), defined as organizational actions “that appear to further some social good, beyond the interests of the firm and that which is required by law” (McWilliams & Siegel, 2001: 117), has fascinated organizational scholars for more than half a century at least (de Bakker, Groenewegen, & den Hond, 2005). In 1960s and 1970s the idea of for-profit enterprises resolving social problems was fiercely contested (Wang *et al.*, 2016b) and leading academic figures argued that only “few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as possible” (Friedman, 2002: 133). At present, however, an increasing majority of corporations proactively engage in addressing societal and environmental challenges (Wang *et al.*, 2016b). For example, General Electric spends roughly “\$2 billion annually on new environmental technologies” and “\$300 million on social programs” (Barnea & Rubin, 2010: 71). As of late, CSR is also gaining currency among institutional investors. In 2016, the growth of sustainable and responsible investing expanded to \$8.72 trillion in the U.S. alone (US SIF, 2016), whereas Larry Fink, CEO of the world's largest asset manager, BlackRock, recently urged executives in his annual letter to CEOs to increase their voluntary contributions to societal welfare (Fink, 2018).

These trends support the idea that CSR might provide firms with competitive advantage (McWilliams & Siegel, 2001). For example, not only do social initiatives enable firms to retain talented employees (Bode, Singh, & Rogan, 2015) and mitigate adverse behavior at the workplace (Flammer & Luo, 2017), but firms that invest in CSR also exhibit higher operating performance following economic meltdowns (Flammer & Ioannou, 2018) and are better able

to obtain lucrative government procurement contracts (Flammer, 2018). However, some scholars have also pointed out drawbacks of engaging in CSR. For instance, because implementing CSR accrues firms with ‘moral credits’, they are at the same time also more likely to engage in unethical behavior toward stakeholders (Ormiston & Wong, 2013). In another example, firms sometimes invest in CSR for nonstrategic reasons, only to satisfy CEOs’ personal needs or increase their reputation—a sign of agency costs (Petrenko *et al.*, 2016).

Despite increasing institutional pressures for corporations to play a key role in addressing social and environmental issues (Wang *et al.*, 2016b), firms nonetheless immensely vary in their CSR profiles (Gupta, Briscoe, & Hambrick, 2017). To explain this heterogeneity, CSR researchers have predominantly focused on external triggers, for example, social movements (King, 2008), institutional demands (Neubaum & Zahra, 2006), isomorphic pressures (Matten & Moon, 2008), stakeholder salience (Agle, Mitchell, & Sonnenfeld, 1999) or industry characteristics (Chiu & Sharfman, 2011) and organizational factors such as firm size (Wickert, Scherer, & Spence, 2016), executive pay arrangements (Deckop, Merriman, & Gupta, 2006), or the availability of slack resources and intangibles (Surroca, Tribó, & Waddock, 2010).

Comparatively, much less attention has been given to the idea that a firm’s stance on social issues stems from motives of its top decision-makers (Gupta *et al.*, 2017), even though countless anecdotal examples from the popular press are highly suggestive of a link between CSR and corporate leaders.^{1,2} As chief decision makers in a corporation, CEOs are often deeply involved in decisions related to stakeholder needs (Waldman, Siegel, & Javidan, 2006).

¹ In the remainder of this PhD dissertation we use the terms ‘CEO’, ‘(top) manager’, ‘(top) executive’, ‘organizational leader’, and ‘chief decision maker’ interchangeably, always in reference to the Chief Executive Officer.

² We define motives broadly as a desire to achieve certain goals (Wowak, Gomez-Mejia, & Steinbach, 2017). Motives can be both intrinsic (e.g., personal values) and extrinsic (e.g., incentives).

Because they are in a unique position to allocate firms' resources towards practices such as employee volunteering programs or diversity policies (Wowak *et al.*, 2016), CEOs have considerable discretion over CSR initiatives (Petrenko *et al.*, 2016). Managerial discretion over investment in CSR implies, on the one hand, that CEOs might contribute to variation in social initiatives by influencing the *propensity* of CSR engagement. On the other, it also suggests that heterogeneity in CSR might stem from the ability of CEOs to favor a particular *type* of CSR engagement, given the increasing variety of charities, causes and other CSR programs that organizations can adopt to make a positive impact on the society (Wang *et al.*, 2016b). Building on these insights, a small group of (upper echelons) scholars has only recently made first steps towards understanding how CEO characteristics related to motives, such as personality traits (Petrenko *et al.*, 2016), political ideology (Chin, Hambrick, & Treviño, 2013), or leadership styles (Wowak *et al.*, 2016) relate to firms' CSR engagement.

1.2 Background

The upper echelons perspective is a research stream on strategic leadership spurred by the seminal work of Hambrick and Mason (1984). Inspired by the premise of bounded rationality (Cyert & March, 1963)—“the idea that informationally complex, uncertain situations are not objectively knowable, but, rather, are merely interpretable” (Hambrick, 2007: 334), the authors proposed that organizational outcomes to some extent reflect the idiosyncrasies of their top executives. The crux of the argument consists of two interconnected parts. Firstly, the individuals at the apex of organizations act on environmental stimuli that they perceive through a set of personalized lenses. These filters affect how CEOs (1) scan the environment, (2) selectively perceive only a subset of observed phenomena, and (3) interpret the information to arrive at a construed reality (Finkelstein, Hambrick, & Cannella, 2009). Secondly, these personalized perceptions of strategic situations are a function of the executives' values, personality, and cognitive base (Hambrick, 2007). Hence, in order to understand why

organizations pursue certain strategies or experience ups and downs with respect to performance, it is paramount to examine biases and motives of their top decision-makers.

Since its inception, the upper echelons scholarship has amassed an impressive body of literature over the past three decades. As of April 2018, Hambrick and Mason's (1984) article alone has been cited 3,271 times in the Web of Science and 149 articles on the topic of social, behavioral, and cognitive influences on upper echelons during the strategy process have been published in major management journals during the 2005-2014 period (Bromiley & Rau, 2016). To a large extent, this field of research owes its vibrant expansion to a simple, but powerful insight: observable behavior (e.g., speech), experiences (e.g., functional background) and demographic characteristics (e.g., age) of a CEO can be used as proxies for actual managerial motives. Although these indicators may contain more noise compared to pure psychological measures and are therefore less likely to yield significant findings, this drawback at the same time operates as a stringent test of the upper echelons perspective (Hambrick & Mason, 1984).

Nonetheless, this rapid growth of studies on top managers has not come without pitfalls. Several recent reviews of research on executive behavior have concluded that the field suffers from severe fragmentation and inconclusive results (Bromiley & Rau, 2016; Busenbark *et al.*, 2016; Wowak *et al.*, 2017).³ This lack of a coherent set of findings predominantly stems from sporadic attempts to integrate disparate theoretical perspectives on executive behavior (Busenbark *et al.*, 2016; Wowak *et al.*, 2017) and a proliferation of diverse yet related explanatory constructs (Bromiley & Rau, 2016; Wowak *et al.*, 2017). Another, equally distinctive difficulty of this scholarship relates to the choice of the dependent variable. Namely, the holy grail of research on strategic leadership is to understand how top executives affect

³ Executive behavior broadly refers to “the decisions and actions of the individuals atop the organizational hierarchy” (Wowak *et al.*, 2017: 669).

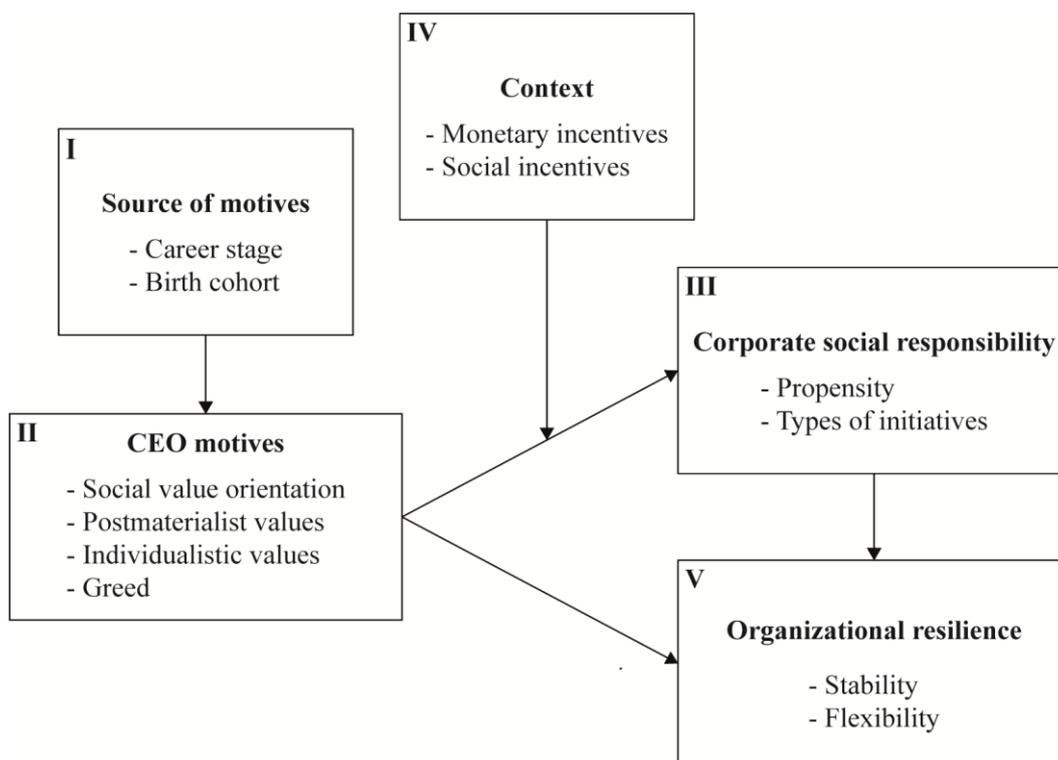
firm performance (Busenbark *et al.*, 2016; Wang *et al.*, 2016a). However, explaining this distal organizational outcome is plagued with issues, because there exists a substantial gap between a CEO's well-planned strategic choices and firm performance. Because firms regularly experience fluctuations in performance that are purely due to random chance events which are beyond executives' control, these random influences may coincide with managerial choices (Fitza, 2014, 2017).

The studies in this PhD dissertation should thus be read against the state of the art in research on executive behavior. Throughout the following chapters, we respond to the calls in the literature for a more holistic and integrated research on top managers. For example, by employing fundamental individual-level explanatory constructs (e.g., social value orientation) that have been used time and again in diverse literatures to theorize about executive motives, we are able to bridge the gap between disciplinary silos. We also build on rich scholarships in sociology and psychology to demonstrate how a rudimentary demographic characteristic (i.e., age) that is commonly featured in the upper echelons scholarship can be used to synthesize time-stable and time-variant perspectives on executive values. Finally, we exploit the advantage of adopting CSR as the outcome variable to explore how organizations reflect CEO characteristics: social and environmental outlays represent a strategic choice (McWilliams & Siegel, 2001). Hence, variance in CSR that is due to CEOs is more likely to result from different managerial decisions. For example, if a manager of a manufacturing plant decides to switch to a cleaner power source, the resulting decrease in pollution and CO² emissions becomes reflected in improved environmental performance. Combined with the view that top executives enjoy considerable discretion over social initiatives (Petrenko *et al.*, 2016), this makes CSR an ideal dependent variable to study the influence of CEOs on proximal organizational outcomes.

1.3 Chapter Overview

The aim of the present PhD dissertation is to provide a deeper and more comprehensive understanding of how motives of corporate leaders affect the well-being of organizational stakeholders. Throughout the following chapters (2-5), we explore the nature of executive motives, their origins, how they change across the career of a CEO, how they relate to CSR, and how they eventually impact the long-run fate of organizations. Figure 1.1 represent the overall framework of this dissertation. Below, we provide a brief summary of the four studies that comprise the body of this thesis. In doing so, we refer to Figure 1.1 in order to illustrate how each chapter relates to the overall framework.

Figure 1.1: Overall framework of this dissertation.



1.3.1 Chapter 2: How much do CEOs matter for corporate social responsibility?

Before we empirically explore *how* executives influence CSR in Chapters 3, 4 and 5, in Chapter 2 we first examine *whether* CEOs matter for explaining heterogeneity in CSR. Scholars have been studying variations in CSR based on a diverse set of theoretical perspectives for some

decades now (Aguinis & Glavas, 2012), yet little is known about how much of the total variance in CSR exists due to CEOs in general. In fact, the literature that uses variance partitioning methods (VPM) to assess the relative contribution of time-, industry-, or firm-related factors to variations in CSR has to date largely ignored CEOs. This is surprising, because the studies that explore the impact of specific CEO characteristics on CSR rest on an untested assumption that top executives do greatly matter.

To address this knowledge gap, we estimate the ‘CEO effect’—that is, the amount of the total variance in CSR explained by CEOs—by applying the ‘CEO in context’ (CiC) technique to a large panel dataset of U.S. firms. The CiC technique is a novel VPM developed by Hambrick and Quigley (2014) that specifically distinguishes the contribution of CEOs to firm-level outcomes from the contextual influences. We estimate the CEO effect for the most widely used dataset of CSR, the KLD social ratings database. We then also assess the sensitivity of our results to differences in how social rating agencies measure CSR and calculate the CEO effect using the Asset4 database. We find that firms and CEOs explain the majority of variation in CSR. The impact of CEOs estimated with the CiC technique is consistent between 32.7 percent and 34.6 percent and, when distinct dimensions of CSR are estimated individually, remarkably stable. For comparative purposes, we additionally provide a range of estimates of the CEO effect obtained with customary VPMs.

Chapter 2 represents one of the first studies to provide a comprehensive and a systematic understanding of the sources of the overall variation in CSR and its subcategories. With respect to Figure 1.1, in this chapter we treat CEOs (box II) as a ‘black box’ to examine the magnitude of the net effect of executive motives on CSR and specific types of CSR initiatives (box III).

1.3.2 Chapter 3: A neuroscientific microfoundation of CEO social value orientation, incentives, and prosociality in strategic decision-making

In Chapter 3, we combine *trait* (Bogaert, Boone, & Declerck, 2008) and *state* (Scott *et al.*, 2014) approaches to prosociality to theorize how intrinsic motivations and the incentivizing context jointly determine an executive's concern for organizational stakeholders in strategic decision-making. We develop a multi-level framework that links, on the one hand, the upper echelons perspective (Hambrick & Mason, 1984) on managerial decision-making at the individual level with, on the other, corporate governance (Jensen & Meckling, 1976) and institutional theory (DiMaggio & Powell, 1983) literatures that stress the incentivizing and constraining context in which managerial behavior occurs.

We introduce social value orientation (SVO) to the upper echelons scholarship because it represents a person's core intrinsic concern for the welfare of others and plays a defining role in the way people mentally frame collective decision problems and in how they react to contextual incentives (Declerck & Boone, 2016). By relying on this insight, we focus on two environmental cues that might affect the perceived utility of CSR: (1) monetary incentives—i.e., executive compensation arrangements that may induce CEOs to adopt differing time horizons, and (2) social incentives—i.e., pressure firms face from investors and stakeholders to comply with external expectations.

In relation to Figure 1.1, in Chapter 3 we map out the joint impact of CEO social value orientation (box II) and contextual incentives (box IV) on CSR (box III), thereby bridging upper echelons perspective with corporate governance and institutional theory literatures to explain why and when CEOs care about the well-being of organizational stakeholders. Chapter 3 is one of the first studies that builds upon the findings from neuroeconomics to explain how top executives make strategic decisions based simultaneously on their personal values and environmental cues.

1.3.3 Chapter 4: Just old, or from another era? The multifaceted effect of CEO age on corporate social responsibility

In Chapter 4, we explore how stable differences in values between executives and changes in values within executives over time affect CSR by building on the dual aspect of a fundamental demographic characteristic: CEO age. On the hand, research in lifespan psychology indicates that personal values change with aging (the so called ‘time-variant’ age effect) as a function of developmental priorities, opportunities, and obstacles that people face during different life stages (Heckhausen, Wrosch, & Schulz, 2010). On the other hand, age also reflects the fact that people belong to different birth cohorts (the so called ‘time-stable’ age effect). According to sociologists, successive birth cohorts differ because individuals are imprinted with differing societal values that are dominant during a historical period of the cohort’s youth and carry those imprints into adulthood (Ryder, 1965). In this study, we integrate time-stable and time-variant perspectives on executives’ values by theorizing about how age simultaneously determines *which* CSR initiatives CEOs prioritize more and the *extent* to which CEOs invest in CSR.

To make valid inferences about how individual values change over time, it is important to disentangle the influences of aging (A), the period (P) in which observations are measured, and birth cohort (C), because of the linear dependency between the three factors ($A = P - C$) (Mason & Fienberg, 1985). We apply the APC framework to unravel the influence of CEO birth cohort and aging on CSR. Using a large panel dataset of 1,055 CEOs of S&P 1500 companies, we find that CSR initiatives follow an inverse U-shaped trajectory across the executive career and that CEO birth cohorts represent an important source of heterogeneity in types of CSR engagement.

Chapter 4 provides important implications for research focused on the relationship between executives’ values and organizational outcomes and is one of the first management studies to apply the APC framework to the research on CEO age. With regards to the overall framework

(Figure 1.1), in this chapter we make an abstraction of executive motives (box II) to examine how different sources of heterogeneity in CEOs (box I) relate to propensity and type of CSR engagement (box III).

1.3.4 Chapter 5: CEO greed, corporate social responsibility, and organizational resilience: An empirical analysis of the 2008 global financial crisis

Why do firms differ so much in their ability to overcome adversity and what are the antecedents of this heterogeneity? We address this question in Chapter 5, where we explore, in the context of the 2008 Global Financial Crisis (GFC), how executives shape firm CSR profiles, and how this affects the long-run fate of their organizations. We theorize how CEO greed (Haynes, Campbell, & Hitt, 2017) combines with different types of pay instruments to impact firms' stance towards CSR prior to the onset of the GFC. We argue that (1) CEO greed will be negatively associated with CSR, because in their unbridled pursuit of personal wealth, greedy executives are more likely to exhibit myopic behaviors and neglect investment in CSR and (2) that this relationship will be more pronounced when a higher proportion of CEO pay consists of annual bonus, but less pronounced when a larger portion of executive compensation consists of restricted stock. Next, we build on recent findings from research on CSR that firms with strong stakeholder relations exhibit superior resilience (DesJardine, Bansal, & Yang, 2017; Ortiz-de-Mandojana & Bansal, 2016). We argue that, because greedy leaders build organizations with weak stakeholder support and individualistic climate, their firms will experience more severe losses in the short run and will be associated with lower recovery rates following the September 2008 collapse.

For a sample of 301 CEOs of public U.S. organizations, we analyzed CSR during the 2003-2008 period, and resilience during and after the 2008 GFC. We found support for our hypotheses. Chapter 5 is one of the first studies to examine the intersection between strategic leadership, long-term investments and organizational resilience. Apropos of Figure 1.1, we

demonstrate that a combination of CEO greed (box II) and monetary incentives (box IV) shapes an executive's inclination to build strong stakeholder relations (box III), thereby providing an integrative view on how motives of CEOs contribute to different features of organizational resilience—stability and flexibility (box V).

1.4 Measuring CSR

To operationalize CSR in the empirical studies of this PhD dissertation (Chapters 2, 4, and 5), we obtained data from Kinder, Lydenberg, and Domini (KLD) database. In this section, we provide a summary of the KLD database. KLD is an independent investment firm that provides an annual dataset of CSR ratings of publicly traded U.S. firms since 1991. Over time, the number of firms tracked by the KLD index has changed. Prior to 2001, KLD provided CSR ratings for approximately 650 firms that comprise the Domini 400 Social and S&P 500 indices. Beginning in 2001, KLD expanded its coverage to include the largest 1,000 U.S. firms by market capitalization, whereas in 2003 KLD added ratings for all firms tracked by the Russell 3000 index, thereby increasing its coverage to approximately 98% of the U.S. public equity market. All empirical studies in this PhD dissertation are thus conducted in the context of U.S. public corporations. Owing to its broad firm coverage and a time span of more than 20 years, KLD has been the most widely used source for empirical research on CSR (Mattingly, 2017; Perrault & Quinn, 2018).

KLD examines every year approximately 80 indicators along several stakeholder categories to create a snapshot of the firm's CSR profile. Stakeholder categories contained in the KLD database are: community, corporate governance, diversity, employee relations, environment, human rights, and product. For each category, KLD analysts track several CSR indicators that capture either CSR strengths or CSR concerns and assign these indicators a binary measure of '1' or '0' denoting the presence or absence of a particular outstanding quality

or, with regard to concerns, issue. For instance, the indicators of CSR strengths in the environment category include beneficial products and services; pollution prevention; recycling; clean energy; communications; property, plant, and equipment; and other. Indicators of CSR concerns under the environment category include hazardous waste; regulatory problems; ozone depleting chemicals; substantial emissions; agricultural chemicals; climate change; and other. This implies that a firm can earn up to seven strengths and seven concerns in the environment category. KLD ratings thus not only allow for a computation of a unidimensional measure of CSR by subtracting the sum of all concerns from the sum of all strengths across all stakeholder categories, but also for the exploration of distinct stakeholder categories, strengths, and concerns.

KLD ensures the integrity and accuracy of CSR ratings for each company by relying on a variety of sources (Waddock & Graves, 1997). For instance, KLD analysts annually communicate with each company to directly obtain information on CSR practices and also examine several corporate data sources such as annual reports, 10K forms, proxy statements, and quarterly reports. Additionally, external data sources include articles from the business press, trade magazines, the general media, periodicals, academic journals, surveys, and other ratings. Although KLD has been regarded as the most comprehensive dataset for gauging CSR (Choi & Wang, 2009; Kacperczyk, 2009), it is not without limitations. For example, some scholars have raised concerns about potential subjectivity of the KLD ratings (Entine, 2003). Moreover, increases in CSR pressures from diverse institutional environments over time (Wang *et al.*, 2016b) have been met with increased organizational efforts to communicate CSR (Elving *et al.*, 2015). Because KLD relies on voluntary company disclosures to capture the firm's CSR profile, it is therefore possible that in the later years of the period of analyses in this PhD dissertation KLD ratings might reflect disproportionately more CSR communication than actual CSR practices.

1.5 Views on CSR

In this PhD dissertation we follow the conventional approach in the strategic management research and define CSR broadly as organizational actions “that appear to further some social good, beyond the interests of the firm and that which is required by law” (McWilliams & Siegel, 2001: 117). We thus view CSR nonnormatively as an umbrella term for organizational practices that are intended to benefit a variety of stakeholders beyond the firm’s owners, including communities, the supply chain, customers, the natural environment, employees, and society at large. However, it is important to emphasize that several alternative perspectives on CSR, many of them normative, exist. The *shareholder approach* contends that the only social responsibility of business is to increase profits (Friedman, 2002). Actions that are beneficial to stakeholders are thus considered only to the extent that they create value for the owners of the business. The *stakeholder approach* instead argues that firms bear responsibility towards any individual or group that is affected by the firm or that helps the firm achieve its objectives (Freeman, 1984), whereas according to the *societal approach* “companies are responsible to society as a whole” and “operate by public consent” in order to serve the public good (Van Marrewijk, 2003: 97). Under the rubric of *shared value creation*, CSR and firm competitive advantage are seen as mutually dependent (Porter & Kramer, 2006). According to this view, firms should seek to create business value by identifying and addressing those social problems that intersect with business operations. Although we pointed out only a few views on CSR that are commonly referred to in the literature, there are many other others, because the concept of CSR is essentially contested and highly dynamic (Matten & Moon, 2008).⁴

⁴ For further reading, see Carroll (2008).

1.6 Reader Guide

The remainder of this PhD dissertation is organized as follows. Chapter 2 is an exploratory study where we provide a battery of estimates of the variability in the CSR that is due to CEOs and thus serves as a baseline for the subsequent chapters in this PhD dissertation.⁵ Chapter 3 embodies a conceptual essay where we take stock of the upper echelons literature on CSR and build a multi-level framework that combines different theoretical perspectives on CEO decision making. Chapters 4 and 5, in contrast, are classical empirical studies. For both of these chapters we provide motivation for the research question, present theoretical background and develop hypotheses, describe methodology and report the empirical findings, and discuss contributions to the literature and point out limitations. In the last chapter (Chapter 6), we conclude this PhD dissertation with an overarching discussion of all findings and outline future research opportunities.

⁵ As Chapter 2 is an exploratory study, we do not develop any hypotheses.

CHAPTER 2:

How Much Do CEOs Matter for Corporate Social Responsibility?

How much of the total variance in corporate social responsibility (CSR) is explained by the CEO effect? To answer this question, we apply the novel ‘CEO in context’ (CiC) variance partitioning technique to two of the most widely used CSR datasets, KLD and Asset4. The CiC technique makes it possible to distinguish the amount of variance in CSR explained by CEOs from that of contextual factors related to the industry or firm. We find that firms and CEOs explain the majority of variation in CSR. The impact of CEOs estimated with the CiC technique is consistent between 32.7 and 34.6 percent and, when different subcategories of CSR are estimated individually, remarkably stable. The CEO effect is smaller for corporate social irresponsibility than it is for corporate social responsibility. When assessing the impact of executives on CSR with a battery of customary variance partitioning techniques, we find that the CEO effect ranges from 7.8 percent to 22.3 percent.

2.1 Introduction

Understanding the sources of variance in corporate social responsibility (CSR) across and within firms over time has been a long standing interest of scholars across diverse theoretical perspectives (e.g., Aguinis & Glavas, 2012).⁶ Contingent on the theoretical lens, scholars differ in the degree of influence over CSR they attribute to firms’ chief executive officers (CEOs). Those building upon the upper echelons perspective view organizations as a reflection of their top managers (Hambrick & Mason, 1984) and consider CEOs to have an important bearing on CSR. Based on this assumption, researchers have studied the effect of specific CEO attributes

⁶ Throughout the paper, we follow McWilliams and Siegel (2001) and define CSR as organizational actions “that appear to further some social good, beyond the interests of the firm and that which is required by law” (117).

such as narcissism (Petrenko *et al.*, 2016), hubris (Tang *et al.*, 2015), charisma (Wowak *et al.*, 2016), political ideology (Chin *et al.*, 2013), and adherence to fair-market ideology (Hafenbrädl & Waeger, 2016) on CSR. This research has immensely increased our understanding of the impact of specific CEO attributes on CSR, and it provides evidence that CEOs have an effect on their firms' CSR, but it tells us little about the overall impact of CEOs on CSR.

Yet, having a grasp of how much CEOs matter for CSR is pivotal for future research on this important firm outcome. In contrast to the assumption of the upper echelons perspective, a number of well-established theoretical perspectives suggest that CEOs' influence over their firms is rather limited, for example, by institutional pressure to adhere to best (industry) practices, path-dependency, organizational inertia, and the availability of resources (DiMaggio & Powell, 1983; Hannan & Freeman, 1977; Haveman, 1993). This literature suggests that variability in CSR is best understood by studying industry-level or firm-level factors, or time. Supportive of this view, research that uses variance partitioning methodology (VPM), an accepted method to assess the relative contribution of time, industry-level, or firm-level factors to variation in organizational outcomes, has provided evidence that significant amounts of the total variance in CSR are attributable to time, industries and firms (e.g., Moura-Leite, Padgett, & Galan, 2012; O'Shaughnessy, Gedajlovic, & Reinmoeller, 2007; Orlitzky *et al.*, 2015; Short *et al.*, 2016). However, this line of research has so far largely ignored the influence of CEOs on CSR. Hence, despite that the existing body of research with a focus on CEOs strongly suggests that CEOs matter a great deal for CSR, little is known about the overall magnitude of the CEO effect.

In this research note, we estimate the CEO effect—the amount of the total variance in CSR attributable to CEOs—as well as the effect of other factors that influence CSR by applying the 'CEO in context' (CiC) technique to a large panel dataset of U.S. firms and CEOs for the years 1993 and 2015. The CiC technique is a form of VPM put forward by Hambrick and Quigley

(2014). The CiC technique differs from other forms of VPM in how it distinguishes the contribution of CEOs to firm-level outcomes from other factors (we explain the CiC technique in detail in the Background section). We estimate the CEO effect for the most widely used dataset of CSR, the Kinder, Lydenberg, and Domini (KLD) social ratings database (Mattingly, 2017; Perrault & Quinn, 2018). We then also assess the sensitivity of our results to differences in how social rating agencies measure CSR (Chatterji *et al.*, 2016) and calculate the CEO effect using the ASSET4 database, which has recently become popular (Cheng, Ioannou, & Serafeim, 2014; Hawn & Ioannou, 2016). We also test if estimates of the CEO effect from the CiC method are in line with insights from the literature on managerial discretion, and if our results are the outcome of an omitted endogenous matching process of CEOs to firms (Fee, Hadlock, & Pierce, 2013).

We contribute to the literature on CSR in several ways. To begin, we extend research that uses VPM to study the relative importance of industry and firm factors as well as of macro-influences on CSR. Our contribution to this literature is to provide an estimate of CEO effect, which we find to be substantial, oftentimes accounting for more than a third of the total variance in CSR (we find similar estimates of the CEO effect for both CSR databases). This finding also carries important implications for research on the antecedents of CSR with a focus on specific CEO attributes (charisma, political ideology, etc.) which has recently been thriving (Mattingly, 2017). The magnitude of the CEO effect we find strongly suggests that CEOs are an important source of the variation in CSR and therewith that research on specific CEO attributes is central for a better understanding of antecedents of CSR.

The literature on CSR also increasingly unpacks aggregate CSR measures to provide a deeper understanding of the antecedents and outcomes of specific CSR activities (Aguinis & Glavas, 2012; Wang *et al.*, 2016b) such as firms' environmental performance (Flammer, 2013) or employee relations (Burbano, 2016), or it distinguishes between socially *responsible* and

irresponsible activities (Mattingly & Berman, 2006; Tang *et al.*, 2015). In additional analyses, we therefore disaggregate the CSR measure from KLD into six categories that relate to different stakeholders (community, environment, employees, product, and human rights). Results indicate the CEO effect is remarkably stable across different CSR dimensions, whereas firm, industry, and temporal influences vary considerably. When we divide the CSR measure from KLD into the socially *responsible* and *irresponsible* dimensions, we find that the CEO effect captures more of the variance in the socially responsible activities than it does in the irresponsible ones. Our findings complement research that has studied CEO influence on social (ir)responsibility and social vs. strategically motivated CSR (Mazzei, Gangloff, & Shook, 2015). Moreover, we extend this research by providing estimates of the CEO effect for the whole range of possible subcategories of CSR.

Because forms of VPM differ in on how the relative contribution to the variance in an organizational outcome is attributed to different categories (industries, firms, macro-influences, and CEOs), we compare estimates from the CiC technique to estimates from other forms of VPM previously used by researchers allowing the reader to make her own informed choice of the amount of variance in CSR explained by CEOs and by other factors.⁷ We strongly believe that a comprehensive and more accurate understanding of the sources of the overall variation in CSR and its subcategories—which we provide in this paper—is imperative for future empirical and theoretical work on this important organizational outcome.

2.2 Background

In this section, we explain the CiC technique in detail (Hambrick & Quigley, 2014). The CiC technique is a refined VPM that specifically accounts for the proximal context in which

⁷ These forms are Analysis of Variance (ANOVA), Multilevel Modelling (MLM), and the Mover Dummy Variable (MDV) approach.

executives operate to estimate the total amount of variation in organizational outcome variables explained by CEOs. Scholars using traditional VPMs typically worked with large panel datasets that covered long time periods and included nominal indicators—e.g., dummy variables when employing analysis of variance (ANOVA)—to measure the relative contribution of years, industries, firms, and CEOs (Crossland & Hambrick, 2007; Crossland & Hambrick, 2011; Mackey, 2008). However, as Hambrick and Quigley (2014) pointed out, there are several drawbacks in using such analytic set-ups to gauge how much variation in the organizational outcome is due to CEOs.

In traditional VPM analyses CEOs make a difference only to the extent that they deviate from what can be predicted by year, industry, and firm central tendencies *across the entire panel*. Hence, a CEO's contribution is assessed not only against her predecessors, but successors as well. In contrast, Hambrick and Quigley (2014) proposed that a CEO's impact should reflect only the extent to which she alters the trajectory of the firm relative to what was there before she assumed the post. Related to this, by using nominal indicators to account for industry and firm influences, a part of the distinctive contribution of a CEO to an organizational outcome is treated as being part of the industry and firm effect. This is because industry and firm mean outcomes (as captured by dummy variables) by virtue of their construction include each CEO's own contribution.

To illustrate both points, let us assume a hypothetical firm in which we observe three successive CEOs, each for the same number of years. The first CEO was associated with a CSR score of 5 each year; the second CEO recorded a score of 10 throughout his entire tenure; the third CEO further increased social and environmental outlays and obtained a CSR score of 15 each year. In the analytic set-up with nominal indicators, the second CEO would not deviate from the firm average ($[5 + 10 + 15] / 3 = 10$) at all, thereby resulting in a null CEO effect. In

the CiC technique, in contrast, the same CEO's contribution would be assessed only relative to what he inherited—an increase by 5 points.

Additionally, the company vitality that CEOs encounter at the beginning of their tenure oftentimes varies greatly, which might not necessarily be reflected in organizational outcomes. For instance, a CEO may increase investment in CSR, but only does so because the firm has abundant slack resources due to superior financial performance. Failing to precisely account for the proximal context in which CEOs operate “causes substantial blurring of contextual effects and CEO effects” and results in “systematically underestimating overall CEO influence” (Hambrick & Quigley, 2014: 474).

The CiC technique is designed to remedy this blurring by replacing nominal indicators for industries with an average annual industry measure of the firm outcome that is based on all firms in a focal firm's industry, exclusive of the focal firm itself. By excluding the focal firm, a CEO's distinctive impact does not erroneously contribute to the industry average, which is the case when using nominal industry indicators. Firm nominal indicators are replaced in the CiC method with two sets of covariates that reflect firm characteristics in the years prior to the beginning of a CEO's tenure: pre-succession firm outcome and pre-succession firm health. These ‘inherited’ firm-level variables are included as constants unique to each CEO.⁸ Hence, by adding unique CEO dummy variables to assess the influence of executives, the CiC technique captures only the extent to which CEOs alter the trajectory of the firm and does not assess their contribution against the successive executives.

Using the CiC method, Hambrick and Quigley (2014) estimated the CEO effect on firm financial performance with 38.5 percent of the total variation, which is substantially larger than

⁸ It is important to note that in the CiC method the measure of pre-succession firm outcome essentially captures the mean firm outcome minus the executives' contribution, thereby approximating the usage of firm nominal indicators.

the 10 to 20 percent found by research that uses VPM with nominal indicators (Bertrand & Schoar, 2003; Crossland & Hambrick, 2007; Crossland & Hambrick, 2011; Hambrick & Quigley, 2014; Mackey, 2008). In summary, by utilizing a more refined measure of industry and firm predictors, the CiC technique enables researchers to differentiate the influence of contextual factors from the impact of CEOs more effectively than VPMs with nominal indicators can. In the remainder of the paper, we build on this methodological advance to examine the overall CEO effect on CSR.

2.3 Methods

2.3.1 Sample

In this study, we used two CSR indexes, KLD and Asset4, and we therefore have two samples. KLD is an independent investment firm that provides an annual dataset of environmental, social, and governance ratings of publicly traded U.S. companies since 1991. Although some researchers have discussed the limitations of KLD ratings (e.g., Entine, 2003) several others have regarded KLD ratings as the most comprehensive dataset for gauging CSR (Choi & Wang, 2009; Kacperczyk, 2009) and also as having greater objectivity and generalizability in comparison to alternative CSR measures (Hillman & Keim, 2001; Hull & Rothenberg, 2008). Most importantly, because the purpose of our study is to provide implications for a broad audience, KLD is an appropriate choice on the basis that to date it has been the most widely used source for empirical research on CSR (Mattingly, 2017).

The second CSR database that we used to test how robust our findings are to variations in how different data providers measure CSR (Chatterji *et al.*, 2016) was Thomson Reuters's Asset4, which since 2002 has provided systematic environmental, social, and governance information to professional investors who manage 'more than 2.5 trillion in assets' (Cheng *et al.*, 2014: 6). We used Asset4 because it covers a large number of firms, thereby ensuring that

we have enough information to conduct a meaningful analysis, and also because the dataset is increasingly used in the empirical CSR literature (e.g., Cheng *et al.*, 2014; Eccles, Ioannou, & Serafeim, 2014; Hawn & Ioannou, 2016; Ioannou & Serafeim, 2012).⁹

We used Execucomp for information on CEOs, while the firm-level accounting measures and industry classifications necessary to compute industry average performance variables came from Compustat. Consistent with prior research on CSR, industry classifications were based on two-digit SIC codes (Chin *et al.*, 2013; Gupta *et al.*, 2017; Surroca *et al.*, 2010). We excluded highly regulated industries (the financial, government, and public sectors) as these are subject to different regulatory environments (McNamara, Aime, & Vaaler, 2005) and accounting rules (McGahan & Porter, 1997).

We followed the procedure of Hambrick and Quigley (2014) to construct the samples and measures crucial for the CiC method. There were four conditions for a CEO to be included in the final samples. First, the CEO had to have been newly appointed during our observation period. This condition is necessary to control appropriately for the contextual conditions at the time when the person became CEO. Second, the CEO needed to have held the top managerial position for at least two years. The two-year period was necessary as it is empirically hard to distinguish a CEO's impact from that of the predecessor if a change in the top managerial position occurred within such a short time. A minimum tenure of two years is also standard in research on CEOs (e.g., Chin *et al.*, 2013; Wowak *et al.*, 2016). Third, as the CiC method requires a robust indicator of the industry context, we only retained firms in industries that in a given year consisted of at least four firms. Fourth, in order to measure the extent to which a CEO altered the CSR trajectory of an organization and to control for contextual conditions, we excluded firms with missing information for the two years prior to the CEO's start.

⁹ Although Asset4 provides CSR ratings for multiple countries, for comparability with KLD ratings we restricted the Asset4 sample only to firms operating in the United States.

The final sample using KLD to measure CSR was an unbalanced panel consisting of 1,199 CEOs at 819 firms in 49 industries (6,909 firm-year observations) from 1993 to 2015 (measurement of the pre-succession variables, which we further explain below, started in 1991). When using Asset4, the final sample consisted of 245 CEOs at 215 firms in 31 industries (1,047 firm-year observations) for the years 2004 to 2012 (measurement of pre-succession variables began in 2002).

2.3.2 Measures

We used KLD for the first sample, which rates firms along the following stakeholder categories: community, diversity, employee relations, environment, human rights, and product. Each category is an index composed of several strength and concern items, which are binary indicators denoting the presence (1) or absence (0) of a particular outstanding quality or, with regard to concerns, issue. We constructed several dependent variables from this dataset. First, as one of our two main dependent variables, we used the annual net KLD score (*CSR*), which is the difference between the aggregated annual strengths and the aggregated annual concerns.¹⁰ The use of a net score is a common approach in the recent CSR literature (e.g., Chin *et al.*, 2013; Gupta *et al.*, 2017; Kang, 2016; Petrenko *et al.*, 2016; Wowak *et al.*, 2016) and consistent with the idea that CSR is achieved through doing societal good and minimizing negative externalities (Chin *et al.*, 2013; Wong, Ormiston, & Tetlock, 2011). However, because there is an increasing awareness among scholars that the use of an aggregate CSR score blurs the unique features of distinct stakeholder categories (Aguinis & Glavas, 2012; Wang *et al.*, 2016b), in supplementary analyses we used the net score of each stakeholder category individually as dependent variable (*community, environment, employees, product, and human rights*). To address concerns in the literature that composite indexes mask important nuances

¹⁰ For example, a firm with seven strengths and five concerns across all categories in a given year has a score of 2.

between socially responsible activities and socially irresponsible ones (e.g., Mattingly & Berman, 2006), we also assessed the CEO effect on the sum of the aggregate annual *strengths* and aggregate annual *concerns* separately.

The second main dependent variable was from Asset4, which offers firm-level data on over 250 indicators to calculate overall scores in environmental, social, and governance performance. For instance, environmental performance captures factors such as emission reduction and product innovation, whereas social performance covers issues such as human rights and employment quality. Every year, Asset4 assigns a z-score to each firm by benchmarking its performance against the performance of all other firms in the Asset4 universe. In line with previous studies, we used the environmental and social pillars to construct a composite CSR measure by assigning equal importance to both pillars (Eccles, Serafeim, & Krzus, 2011; Ioannou & Serafeim, 2012).¹¹

In all of our analyses, we captured macro influences with calendar year dummies. To account for influences at the level of the industry, we included the *mean industry CSR*, which is the annual average CSR score of all firms (excluding the focal firm) that are in the same two-digit SIC industry as the focal firm.¹² We included three covariates to assess firm differences: *pre-succession firm CSR*, *pre-succession firm performance*, and *pre-succession slack resources*. We calculated pre-succession firm CSR as the mean CSR level at the focal firm for

¹¹ For both datasets of CSR, we excluded the governance category as it is less concerned with the social performance of the firm than it is with the mechanisms that allow shareholders to exert control on managers and to generate appropriate returns on their investments (Shleifer & Vishny, 1997). Excluding measures of corporate governance is also quite common in the literature on CSR (e.g., Flammer, 2015; Ioannou & Serafeim, 2012; Servaes & Tamayo, 2013).

¹² The industry measure is based on all firms contained in a respective CSR database, and not only on those in the final sample. The variance attributed to industries, firms, and CEOs is very similar when we use three-digit or four-digit SIC codes instead of the two-digit SIC code.

the two years prior to a CEO's start. That second two covariates are commonly used in research on the antecedents of CSR (e.g., Petrenko *et al.*, 2016; Wowak *et al.*, 2016) and reflect a firm's preexisting vitality that a new CEO inherited from the predecessor. Firm performance was the return on assets (ROA) (Tang *et al.*, 2015; Wowak *et al.*, 2016), and slack resources were the ratio of current assets to current liabilities (Neubaum & Zahra, 2006; Petrenko *et al.*, 2016). Both variables were measured with their mean value in the two years prior to a CEO's start.¹³ Finally, to assess the CEO effect, we included a dummy for each CEO.

2.3.3 Model and estimation

We obtained effect sizes—the amount of total variance explained—by estimating four ordinary least squares (OLS) models, to which we stepwise added calendar-year dummies; industry indicator; firm-level covariates; and, finally, the CEO dummies. The increase in the amount of variance explained (R-squared) from one model to the next is due to the inclusion of the additional predictor and corresponds to its effect size.

2.4 Results

Table 2.1 reports the results for the two composite CSR measures (results for Asset4 ratings are shown in parentheses in the text hereafter). Calendar year dummies accounted for 4.2 (6.6%) percent of the total variance in CSR. The inclusion of industry controls explains an additional 4.1 (11.4%) percent of the variance. Controls for inherited firm conditions increased the variance explained in CSR by an extra 33.8 (37.7%) percent. Finally, we added CEO dummies to measure the amount of variance explained by CEOs. The results indicate that the CEO effect can explain an additional 34.6 (32.7%) percent of the variance, which is a sizable effect. Notably, while firm and CEO effects in KLD and Asset4 are relatively similar, the

¹³ In the analyses of individual stakeholder categories and of social (ir)responsibility, the mean industry CSR and pre-succession firm CSR were calculated with the respective individual measures (e.g., the industry mean level of community and the pre-succession mean firm community scores).

impacts of calendar-year and industry controls in Asset4 are considerably larger than they are in KLD.

Table 2.1: Partitioning of variance in CSR by category with the CiC technique (measured with the R²).

Dataset	Year	Industry	Firm	CEO	Unexplained
KLD	4.2	4.1	33.8	34.6	23.3
Asset4	6.6	11.4	37.7	32.7	11.6

$n_{(KLD)}$ = 6,909 firm-years, 49 two-digit SIC industries, 819 firms, and 1,199 distinct CEOs

$n_{(Asset4)}$ = 1,047 firm-years, 31 two-digit SIC industries, 215 firms, and 245 distinct CEOs

We further estimated the effect sizes of the strength and concerns measures, and the effects sizes of year, industry, firm, and CEO predictors for specific subcategories of CSR. The results are shown in Table 2.2. Overall, effect sizes reiterate our main finding that CEO dummies consistently capture a sizable amount of variance, ranging from the lowest values of 24.6 percent in the composite KLD concerns measure to the highest values of 35.6 percent in the human rights category. Interestingly, the CEO effect is predominantly the largest of all predictors with the exception of the composite score of the KLD strengths and concerns, and diversity category, where firm-related factors explain most of the variance. In addition, relative to other predictors, the CEO effect is remarkably stable across different CSR dimensions. With respect to macro influences, calendar-year effects are highest in the employee (14.0%) and environment (10.6%) dimensions, whereas industry predictors are more salient in the composite measure of KLD concerns (13.5%) and the human rights dimension (17.5%). Firm factors especially matter for explaining the composite score of the KLD strengths (49.4%) and concerns (35.6%).

Table 2.2: Partitioning of variance in CSR dimensions by category with the CiC technique (measured with the R²).

CSR dimension	Year	Industry	Firm	CEO	Unexplained
Strengths	1.8	2.4	49.4	29.9	16.5
Concerns	9.6	13.5	35.6	24.6	16.7
Community	3.3	2.5	26.8	35.0	32.4
Diversity	7.5	4.4	33.0	31.7	23.4
Employees	14.0	2.4	13.9	33.9	35.8
Environment	10.6	7.4	20.9	33.4	27.7
Human rights	5.5	17.5	6.1	35.6	35.3
Product	3.0	9.0	28.6	32.0	27.4

2.4.1 Sensitivity analyses

We performed a number of robustness checks to test the sensitivity of our results to changes in the KLD data over time (Table 2.3). First, KLD substantially increased its coverage from firms listed in the S&P 500 index to all firms included in the Russell 3000 index in 2003. Our results could potentially be biased if firms included in KLD from the beginning systematically differ with respect to the impact of the CEO on firm-level outcomes from firms that were added later. We tested the robustness of our results to this change in KLD's coverage by excluding all pre-2003 observations. The exclusion led to a small decrease in the CEO effect (34.5% vs. 34.6% with the full sample) and a 4.1 percentage point decrease in the firm effect (29.7% vs. 33.8% with the full sample). Furthermore, industry and year effects increased to 4.4 and 6.4 percent respectively (versus 4.1% and 4.2% with the full sample). Second, because KLD ratings underwent methodological changes in 2010 (Chin *et al.*, 2013), we also performed a robustness check by excluding post-2009 observations. We documented a 3.7 percentage point decrease in the CEO effect (30.9% vs. 34.6% with the full sample), whereas firm and industry effects increased to 49.8 and 5.7 percent respectively (versus 33.8% and 4.1% with the full sample). The year effect decreased to 1.5 percent (versus 4.2% with the full sample). Third, the total number of possible strengths and concerns within each stakeholder category changed over

time. Because these differences make time-series analysis tenuous, some scholars recommend dividing the sum of firm strengths (concerns) by the total number of possible strengths (concerns) within each stakeholder category for a given year (Servaes & Tamayo, 2013; Short *et al.*, 2016). We reconstructed our KLD measure of CSR accordingly and investigated whether differences in operationalization might affect our findings. The results indicated that the CEO effect and the effects of other predictors are robust to the difference in scaling. The CEO effect and the firm effect decreased to 34.0 and 32.5 percent respectively (versus 34.6% and 37.7% with the full sample), whereas we find an increase in industry (4.9% versus 4.1% with the full sample) and year (4.5% versus 4.2% with the full sample) effects. Overall, the CEO effect seems to be robust to the change in KLD’s coverage and methodology.

Table 2.3: Partitioning of variance in CSR by category with the CiC technique on alternative samples (measured with the R²).

Sample	Year	Industry	Firm	CEO	Unexplained
Post-2003 sample	6.4	4.4	29.7	34.5	25.0
Pre-2010 sample	1.5	5.7	49.8	30.9	12.1
Scaled CSR score	4.5	4.9	32.5	34.0	24.1

Although it is a common approach in the research on CSR to exclude the corporate governance dimension from the computation of the composite measure of CSR (e.g., Flammer, 2015; Ioannou & Serafeim, 2012; Servaes & Tamayo, 2013), we investigated whether our estimate of the CEO effect is sensitive to this omission. We thus reconstructed our KLD measure of CSR by including strengths and concerns under the corporate governance dimension. The results of this analysis are shown in Table 2.4. The inclusion of the corporate governance dimension in the net CSR score led to an increase in the CEO effect (35.3% vs. 34.6% with the full sample) and the year effect (6.7% vs. 4.2% with the full sample), whereas industry and firm effects decreased to 3.6 and 29.6 percent respectively (versus 4.1% and 33.8% with the full sample). We additionally estimated effect sizes on the corporate

governance dimension separately and found that CEOs (31.6%) and year influences (13.2%) explain the most variance, whereas industry (1.3%) and firm (8.2%) effects are comparably smaller (Table 2.4).¹⁴

Table 2.4: Partitioning of variance in CSR (including the corporate governance dimension) by category with the CiC technique (measured with the R²).

Sample	Year	Industry	Firm	CEO	Unexplained
KLD(including CG)	6.7	3.6	29.6	35.3	24.8
Corporate governance	13.2	1.3	8.2	31.6	45.7

We also addressed concerns that some of the variation in CSR in our data that stems from differences between firms is attributed to CEOs. This is because “firms/boards [often] decide to make a simultaneous set of major changes, including changing the firm’s leadership, along with major investment or financing decisions” (Fee *et al.*, 2013: 569). Hence, if a board simultaneously decides to change the CEO and to modify activities related to social responsibility, we would erroneously attribute a change in CSR to the CEO and not to the firm. Fee *et al.* (2013) argue that this is unlikely to be the case in instances of exogenous CEO transitions that involve departures caused by a death, a health problem, or a natural retirement. We built on this idea and estimated the CEO effect for the subsample of firms in the KLD dataset with exogenous CEO transitions. Fee *et al.* (2013) kindly provided us with their data on CEO transitions occurring until 2006, and we followed their procedure to classify turnovers for all other years.¹⁵ Overall, our sample includes 359 exogenous CEO transitions. The CEO effect in Table 2.5 for the sample exogenous transitions is 31.8 percent, which suggests that

¹⁴ While these results might seem surprising, a closer inspection of the KLD ratings revealed that communication and transparency are key indicators of the corporate governance dimension. Organizational efforts to communicate CSR practices in a transparent manner is likely to be under the CEO’s discretion, thereby contributing to the rather large CEO effect on corporate governance dimension (31.6%). Similarly, it might also be a reason why the year effect (13.2%) is large when compared to other CSR dimensions (Table 2.2), as CSR reporting has considerably changed over time (Elving *et al.*, 2015).

¹⁵ We searched for news about CEO transitions on Factiva by including the name of the outgoing CEO and a set of signal words related to death and health. For a detailed description of the search procedure see Appendix A in Fee *et al.* (2013). Natural retirements are departures of CEOs aged between 63 and 71 years at firms where the most recent return on assets exceeds the median return for all firms contained in ExecuComp.

the variance explained by CEOs in the full sample is not the result of an omitted endogenous process, as the CEO effect in the sample of exogenous CEO transitions is similar to the CEO effect in the full sample. This finding also resonates with several upper echelons studies on CSR that have investigated and found no evidence of endogenous selection of CEO types into firms that are either embroiled in scandals or have CSR deficiencies (Chin *et al.*, 2013; Davidson, Dey, & Smith, 2018; Petrenko *et al.*, 2016; Wowak *et al.*, 2016).

Table 2.5: Partitioning of variance in CSR by category with the CiC technique on a sample with exogenous CEO transitions.

	Year	Industry	Firm	CEO	Unexplained
Effect size (R^2)	6.5	3.5	33.2	31.8	25.0

Finally, we compared estimates from the CiC technique applied to the KLD data to estimates derived from three other commonly used VPMs, namely sequential ANOVA, multilevel modeling (MLM), and the Mover Dummy Variable (MDV) approach.¹⁶ Sequential ANOVA is one of the most frequently employed VPM techniques in the literature on the CEO effect (Quigley & Graffin, 2017). Typically, fixed effects of all predictors are successively added to the model, and the increase in the variance explained corresponds to the effect of the added predictor (Bowman & Helfat, 2001). For example, after year, industry, and firm fixed effects have been estimated, the incremental increase in variance explained that is due to the addition of CEO fixed effects is attributed to the influence of top executives. Sequential ANOVA assumes that categorical data are independent so that there is no shared variance across predictors (Bliese & Hanges, 2004).

Akin to sequential ANOVA, MLM also relies on nominal indicators of all predictors to decompose variance, but achieves this instead by simultaneously estimating random intercepts of calendar years, industries, firms, and CEOs (Misangyi *et al.*, 2006). However, unlike

¹⁶ Due to data limitations, we were able to compare all VPMs only on the KLD data.

sequential ANOVA, MLM does not assume independence amongst predictors, but is designed to explicitly account for the inherently hierarchical structure of data such as when observations are nested within CEOs, CEOs are nested within firms, and firms are nested within industries (Crossland & Hambrick, 2011). Because both of these VPM techniques have similar data requirements, we constructed one sample. We excluded CEOs who served only one year, as their fixed effects perfectly predict the movement of the dependent variable, thereby artificially inflating the contribution of executives. Similarly, we also excluded firms with only one CEO from the sample, because the contribution of firm and CEO fixed effects cannot be disentangled in such cases. Although similar requirement is necessary to separate firm and industry influences, we followed prior work and required at least four firms per industry in order to capture stable industry differences (Hambrick & Quigley, 2014).¹⁷

The MDV approach is a popular method in the finance literature to estimate manager fixed effects (Cho *et al.*, 2016; Graham, Li, & Qiu, 2011). Whereas sequential ANOVA and MLM differ in their assumptions with respect to shared variance among predictors, the distinctive feature of the MDV approach is sampling. Inspired by the problem of separating firm fixed effects from CEO fixed effects when firms do not experience any managerial turnover, the MDV approach was developed by Bertrand and Schoar (2003). The authors suggested to limit the study to a sample of CEOs who have switched firms, because the separation of firm and CEO fixed effects becomes possible when a firm has at least one mover. Relative to other VPM techniques, the MDV approach is very conservative, because CEOs ‘matter’ only to the extent that the organizational outcome is correlated across different firms when the same individual is at the helm. Similar to sequential ANOVA and CiC, predictors also enter estimation successively.

¹⁷ The final sample consisted of 1,935 CEOs at 793 firms in 35 industries (10,519 firm-year observations) from 1992 to 2015.

However, a common critique of the MDV approach is that moving CEOs might be different from CEOs who never change firms, which could result in sample selection bias and limited generalizability of the CEO effect (Graham *et al.*, 2011). Additionally, in practice the MDV approach yields relatively small sample sizes, because executive movement from and to the CEO position is rarely observed. To address these concerns, an extension of the MDV approach involves additionally including in the sample all CEOs who worked for a firm at which at least one moving CEO was present (Mackey, 2008). Hence, the CEO effect then corresponds not only to stable movements in the organizational outcome across firms for moving CEOs, but also to mean differences in the organizational outcome between moving and non-moving CEOs within the same firm.

To construct the sample for the MDV approach, we included in the sample only those firms that contained at least one CEO that was present at two or more firms in the sample (Bertrand & Schoar, 2003). For those firms, we retained *all* observations, even for the years when the moving CEO was not at the firm. Departing from Bertrand and Schoar (2003), we also required that an industry contained at least two firms across the sample, in order to be able to disentangle firm and industry fixed effects.¹⁸ In addition to the inclusion of fixed effects for all predictors (calendar years, industries, firms, moving CEOs), in line with Bertrand and Schoar (2003) we also included time-varying firm controls, all measured in year t-1, to account for time-varying firm influences: *firm performance* measured ROA (Tang *et al.*, 2015); *slack resources* measured the ratio of current assets to current liabilities (Petrenko *et al.*, 2016); and *firm size*

¹⁸ We limited this requirement to a bare minimum, because of severe sample size limitations of the MDV approach due to following moving CEOs exclusively.

measured as the logarithm of firm sales (Gupta *et al.*, 2017).¹⁹ Following Mackey (2008), we also extended the MDV dataset by including in the sample all non-moving CEOs who worked for a firm at which at least one moving CEO was present. This addition resulted in a slight decrease in the number of total observations, because we required at least two observations per CEO-firm match.²⁰

The results of the comparative analysis are shown in Table 2.6. In line with the notion that the MDV approach is a very conservative technique for estimating the CEO effect, top executives explain 7.8 percent of variance in CSR on a sample of moving CEOs only. When fixed effects of non-moving CEOs, who were present at firms with at least one moving CEO, are added, the MDV approach yields the CEO effect of 17.5 percent. This effect size is similar to the CEO effect estimated with sequential ANOVA—14.9 percent. This result is intuitive, because both the MDV approach on a sample of moving and non-moving CEOs and sequential ANOVA exploit variance in the organizational outcome between CEOs within a firm. Finally, we document the CEO effect of 22.3 percent with MLM.²¹

**Table 2.6: Partitioning of variance in CSR by category with customary VPMs
(measured with the R²).**

VPM technique	Year	Industry	Firm	CEO	Unexplained
Sequential ANOVA	5.8	7.3	48.7	14.9	23.3
MLM	4.8	4.1	37.7	22.3	31.1
MDV _(moving CEOs only)	7.5	14.3	35.9	7.8	34.5
MDV _(moving and non-moving CEOs)	7.2	14.1	35.3	17.5	25.9

¹⁹ The final sample consisted of 48 moving CEOs at 92 firms in 19 industries (1,011 firm-year observations) from 1992 to 2015.

²⁰ The final sample consisted of 159 (moving and non-moving) CEOs at 92 firms in 19 industries (981 firm-year observations) from 1992 to 2015.

²¹ The difference in the variance attributed to groups between CiC, MLM, and ANOVA is similar to what Hambrick and Quigley (2014) find for ROA.

2.5 Discussion

We applied the CiC technique proposed by Hambrick and Quigley (2014) to estimate the CEO effect on CSR. Using two different aggregate measures of CSR, we find that CEOs explain a substantial part of the total variance in CSR (32.7% – 34.6%). We also find that the relative size of industry and firm effects is substantially lower when CEOs are accounted for. For example, in related VPM research, firm-specific factors explain between 58 percent (Moura-Leite *et al.*, 2012) and over 70 percent of the variance in CSR (Orlitzky *et al.*, 2015), whereas the effect is considerably lower in our analyses (33.8% for the KLD data and 37.7% for the Asset4 data). This difference is not surprising, as prior research had not considered the impact of CEOs when explaining variation in composite CSR measures. As for macrolevel and industry influences, we find in line with the earlier VPM literature that when put in a larger perspective, these factors explain comparatively little of the variance in CSR. However, we would like to stress that the small effect of macro factors might stem from the fact that our sample is from one country only. Pressures on firms with regard to their CSR initiatives might not vary strongly across different industries within one country, a limitation that future research could overcome by utilizing samples that span multiple countries.

When studying individual stakeholder categories in KLD, we find that the amount of variation explained by industry and firm factors and macro factors varies considerably across specific types of CSR. For instance, the fact that industry matters more with respect to concerns, environment, and human rights is probably related to the ‘fundamentals’ of the production process, which differ between industries. Some industries (e.g., petroleum) have higher production risks and weigh much more on the environment than others. Human rights issues are likely more important in industries with global supply chains compared to those with local ones. This implies that firms are expected to devote more attention to certain CSR issues depending on industry membership. The stark differences in how much industry and firm

effects and macro effects vary across different categories of CSR suggest that using aggregate CSR measures masks important differences and that future theoretical and empirical research on the antecedents of CSR will benefit greatly from unpacking these measures (Wang *et al.*, 2016b). In line with prior studies (Mazzei *et al.*, 2015; Short *et al.*, 2016), we also observe that CEO and firm effects are greater for socially responsible activities than they are for socially irresponsible ones, suggesting that CEOs and firms have greater discretion over maximizing societal good than they do over minimizing negative externalities. Overall, we find it remarkable how relatively stable CEO effects are across categories. While it is beyond the scope of this research note to theorize about this finding, we strongly believe that this an interesting outcome for future research to explore.

The size of the CEO effect in our study is similar to the CEO effect that Hambrick and Quigley (2014) find for ROA (38.5 percent) using the same method. In contrast, the effect of firm-level variables is 33.8 percent for KLD and 37.7 percent for Asset4—roughly three times as large as the 12.1 percent that Hambrick and Quigley (2014) estimate. Hence, compared to financial performance, CSR is relatively more strongly impacted by firm-level factors, supporting the view that CSR activities often demand significant resource commitments that “tend to have a long-lasting effect on the firm’s evolutionary trajectory and cannot be easily reversed” (Bansal, Jiang, & Jung, 2015: 70). Nevertheless, by showing that approximately a third of the variation in CSR is due to the CEO effect, our study gives a solid basis to the upper echelons research that explores the effect of specific CEO characteristics, values, and beliefs on CSR.

For comparative purposes, we also assess the CEO effect on CSR with a battery of customary VPMs. We find the lowest effect size (7.8%) with the MDV approach, a 14.9 percent CEO effect with sequential ANOVA, and that a 22.3 percent of variance in CSR is explained by CEOs with MLM. These estimates are generally very consistent with expectations and the

mechanics of respective VPMs—for instance, in the MDV approach, the CEO effect reflects only stable tendencies in CSR of the same executives in different firms, whereas the CiC technique compares the contribution of CEOs to organizational outcomes relative to their predecessors, thereby omitting firm fixed effects from the estimation. Although this study draws heavily on Hambrick and Quigley (2014) and situates the CiC technique as the most suitable VPM to account for the proximal context in which executives operate, we provide this range of estimates of the CEO effect so that the reader can ultimately decide on the appropriateness of the analytic technique.

Our research also makes methodological contributions. As we apply the CiC method to the context of CSR, we had to make a choice with regard to which variables to include to account for the firm conditions that new CEOs face. While we strongly believe that the variables that we included—the pre-succession levels of the focal firm’s CSR, ROA, and the level of slack resources—account well for firm differences, there is a long list of further factors that are potentially relevant in our context. However, when we additionally included other measures—for example, for the CEO pre-succession firm size (Chin *et al.*, 2013)—we found that our results did not change significantly.

2.6 Conclusion

In this research note, we used the novel ‘CEO in context’ VPM technique suggested by Hambrick and Quigley (2014) and assessed the impact that contextual influences—industry, firm, and macro predictors—and CEOs have on CSR using the two most widely used measures of CSR in empirical research, KLD and Asset4. We find that of the total variation in CSR, CEOs account approximately for a third. This effect is remarkably stable across the two measures of CSR, different CSR categories and dimensions, and exogenous CEO transitions. In summary, CEOs seem to matter a great deal in explaining variation in CSR.

CHAPTER 3:

A Neuroscientific Microfoundation of CEO Social Value Orientation, Incentives, and Prosociality in Strategic Decision-making

Why and when do top executives value prosocial decision outcomes? In this paper, we take an interactive approach to strategic decision-making to theorize how intrinsic motivations and the incentivizing context jointly determine an executive's concern for prosocial outcomes. In the context of corporate social responsibility, we develop a multi-level framework that links, on the one hand, the upper echelons perspective on managerial decision-making at the individual level with, on the other, corporate governance and institutional theory literatures that stress the incentivizing and constraining context in which managerial behavior occurs. Based on evidence in neuroeconomics, we propose that social value orientation is the compass by which corporate leaders make sense of complex social problems. Social value orientation biases the executives' decision-frame to yield boundedly rational outcomes that may vary in terms of social and environmental advances and determines how they attend to contextual incentives.

3.1 Introduction

Both popular and scholarly attention is increasingly paid to prosocial organizational outcomes such as corporate social responsibility (CSR), distributive justice, and pay inequality (Aguinis & Glavas, 2012; Colquitt *et al.*, 2013; Mattingly, 2017; McGinn, 2016).²² Of topical interest, especially in the light of the recent financial crisis, is the question how the immense variance in such outcomes could be driven by an organization's Chief Executive Officer (CEO). This

²² Prosociality refers to different types of social behaviors that benefit other people or society as a whole such as cooperation, sharing, helping, and giving (Declerck & Boone, 2016).

matter lies at the heart of Hambrick and Mason's (1984) 'upper echelons perspective'—which builds on the behavioral theorists' idea of bounded rationality to argue that organizations are a reflection of their top managers' intrinsic values and preferences. In this respect, recent evidence suggests that particularly CEOs' *social values*²³—i.e., whether they mainly care about personal wealth or also about the fate of others—might be important precursors of socially responsible leadership (e.g., Boddy, Ladyshevsky, & Galvin, 2010; Haynes, Josefy, & Hitt, 2015b; Mazutis, 2013; Rijssenbilt & Commandeur, 2013).

Although very promising, the studies that have so far addressed the role of CEO social values in shaping organizational outcomes tend to make abstraction of the (micro-level) psychological mechanisms that are assumed to underlie the link between executives' intrinsic motives and distal organizational outcomes (Aguinis & Glavas, 2012). To fully understand how such personal values are manifested, it is necessary to unravel *how* the brain processes and translates them into behavior (Sagiv *et al.*, 2017), an issue that is rarely addressed in prior literature (Powell, 2014; Powell, Lovallo, & Fox, 2011). Therefore, the current study aims to integrate recent developments in (neuro)psychology, behavioral economics, and management to develop a solid, theoretical grounding for the fundamental question of *when* and *why* CEOs will value prosociality in strategic decision-making.

According to the *prosociality as a trait* approach, people differ systematically with respect to the valence attached to outcomes for self and others. In psychology there is substantial experimental evidence, both in the laboratory and in the field, that a person's stable *social value orientation (SVO)*—i.e., their self- vs. other-regarding preferences—predicts how resources become allocated across a wide range of situations (Bogaert *et al.*, 2008; Declerck & Boone,

²³ Values refer to an individual's stable set of intrinsic motives and preferences (cf. Chin *et al.*, 2013). In the remainder of this paper we use the terms 'social preferences', 'social values', 'social value orientations', and 'social value inclinations' interchangeably.

2016), as well as their emotional reactions to equality violations (Stouten, De Cremer, & Van Dijk, 2005). In behavioral economics, likewise, much attention has been given to inter-individual differences in inequity aversion (Fehr & Schmidt, 1999) and justice sensitivity (Edele, Dziobek, & Keller, 2013). In upper echelons research, scholars have studied the impact of CEO characteristics such as narcissism (e.g., Rijsenbilt & Commandeur, 2013), and more recently greed (Haynes *et al.*, 2017) on CEO's sensitivity to prosocial outcomes. For instance, research has shown that CEOs with narcissistic tendencies (referring to an overblown sense of self) are more prone to display exploitative and unethical work behavior (Grijalva & Harms, 2014) or committing fraud (Rijsenbilt & Commandeur, 2013), and more likely to endorse a larger compensation gap in the top management team (O'Reilly *et al.*, 2014).

In contrast, scholars that adhere to the *prosociality as a state* approach emphasize that the context incentivizes people to place more or less importance on outcomes for others (Scott *et al.*, 2014). Among the contextual incentives, at least two categories have been studied widely, again in diverse fields ranging from biology and psychology to economics and management. First, *monetary incentives* motivate prosocial behavior, depending on the opportunity to accumulate personal wealth (Wowak & Hambrick, 2010). This phenomenon has been well-documented with economic games, where decision-makers will care more for other people's payoff when monetary incentives align self- with collective interest (e.g., reviewed in Bornstein, 2003). Similarly, CEO compensation packages can be constructed in various ways to serve as motivation devices (Devers *et al.*, 2007; Wowak *et al.*, 2017). Second, *social incentives* induce group-appropriate behavior. For instance, people conform to social expectations regarding prosociality in order to avoid bad-mouthing, punishment, or even social exclusion (Cialdini & Goldstein, 2004).

Both streams of literature are burgeoning, yet repeatedly reveal conflicting findings. For example, the effects of compensation packages have proven to be not at all unequivocal (e.g.,

Devers *et al.*, 2007; Wowak *et al.*, 2017; Wowak & Hambrick, 2010). Moreover, concern for prosociality often shows significant within-person variation (Scott *et al.*, 2014) and sometimes research reports effects that are not as expected. The negative outcomes of narcissism (reported above), for example, are not always confirmed (Chatterjee & Hambrick, 2011). Clearly, a comprehensive micro-foundation about prosociality considerations in CEOs' strategic decision-making requires an *interactionist* approach, combining the trait and state approaches (see e.g., Chatterjee & Hambrick, 2011; Wowak & Hambrick, 2010). With respect to traits, we introduce SVO in the CEO literature because it represents a person's core intrinsic motivation to adhere to prosociality, and lie at the heart of other traits, such as narcissism and greed that received attention in CEO research (as explained below). In addition, recent neuroscience evidence underscores that social values play a defining role in the way people mentally frame decision problems and in the type of rationality and heuristics that people use to solve them. SVO can therefore be regarded as a compass that helps to make sense of complex decision environments.

We present a conceptual framework arguing that the effects of contextual incentives on whether or not CEOs adhere to prosociality will depend on these CEOs' SVO, and vice versa. To develop specific, tangible predictions, we then apply this framework to one important prosocial organizational outcome: CSR initiatives (for a recent review of CSR research, see Aguinis & Glavas, 2012). CSR is an umbrella expression for all organizational actions and practices that are meant to spur interests that go beyond that which is obligated by law, generating benefits not only to the firm's owners, but to multiple stakeholders, including employees, customers, communities, and society as a whole (McWilliams & Siegel, 2001). Not only do scholars view equitable allocation of resources among different stakeholder groups as an important indicator of organizational prosociality (Aguilera *et al.*, 2007; Tian, Liu, & Fan,

2015), an increasing majority of corporations have also committed to addressing CSR issues (Wang *et al.*, 2016b).

To substantiate our model, we rely on recent findings in neuroeconomics. This new and growing field of research combines neuroimaging techniques with real-time behavioral experiments to identify both the brain regions involved in the decision-making process, as well as the different motivations behind that decision. Such interdisciplinary approach enables us to develop an integrative perspective on the micro-level processes of boundedly rational decision making (Robertson, Voegtlin, & Maak, 2017). Understanding how brain works “is not just a matter of scholarly curiosity; it is essential for ultimately improving the insights we can provide executives regarding how they might surmount or overcome the biases associated with their experiences and dispositions.” (Hambrick, 2007: 337). Hence, by consolidating empirical research findings from psychology, behavioral economics, and neuroscience, we provide a micro-level theoretical grounding for predicting when, and how, CEO’s SVO translates into prosocial strategic decisions. We thereby respond to the calls of the management scholarship for “a holistic view of executive behavior and the motives that propel it” (Wowak *et al.*, 2017: 693). Researchers in various disciplines have shown sustained interest in the drivers of executive behavior, but the diversity of perspectives has led to increasingly fragmented literature (Wowak *et al.*, 2017). We aim to contribute to this scholarship by illustrating specifically how a neuroscience perspective of values can inform us about the underlying nature of CEO’s valuation of prosociality that ultimately give direction to a firm’s CSR.

In the next section, we first explain how CEO SVO is related to other frequently studied CEO characteristics before introducing our interactionist conceptual model. Next, we zoom in on the neuroeconomic underpinnings by showing how SVO is part and parcel of a decision makers’ utility function, and how it interacts with contextual incentives to shape alternative heuristic decision-making processes. Based on this micro-level analysis, we then turn to the

CSR literature to propose that (1) monetary and (2) social incentives shape how CEOs with opposing SVO make CSR decisions. Finally, we conclude with a discussion of the implications and contributions of our model to upper echelons and CSR research.

3.2 Social Value Orientation and CEO Decision Making

3.2.1 Social value orientation in CEOs

In the upper echelons literature much attention has already been paid to CEO traits or leadership styles that reflect concern for others, such as altruism (Haynes *et al.*, 2015b), commitment to ethics (Muller & Kolk, 2010), political liberalism (Chin *et al.*, 2013), charisma (Wowak *et al.*, 2016), transformational (Waldman *et al.*, 2006) and servant (Christensen, Mackey, & Whetten, 2014) leadership, or, conversely, to (excessive) self-interest that compromises prosociality, such as greed (Haynes *et al.*, 2017; Haynes *et al.*, 2015b), narcissism (Chatterjee & Hambrick, 2007; O'Reilly *et al.*, 2014; Petrenko *et al.*, 2016), transactional leadership (Waldman *et al.*, 2006) and psychopathy (Boddy *et al.*, 2010). Given this interest, it is surprising that, as far as we know, the upper echelons literature still lacks a systematic analysis of executives' SVO – i.e., their self- vs. other regarding preferences. While the concept of SVO is not strictly new to the upper echelons research (e.g., Agle *et al.*, 1999; Ng & Sears, 2012), previous studies have not fully explicated its ramifications for strategic decision-making. In contrast, psychologists and behavioral economists have repeatedly verified that an individual's SVO is not a momentary motivation, but a crucial element in understanding within-individual consistency in adherence to prosociality (Bogaert *et al.*, 2008).

SVO is a stable part of personality, underscored by genetics and further shaped through social learning experiences, that indicates whether individuals primarily strive to serve their own well-being (self-regarding) or whether they favor equal outcomes the most (other-regarding) (Bogaert *et al.*, 2008). We propose that this construct is especially useful in the

upper echelons literature if we accept that it serves as a *common denominator* for several of the traits that are typically studied when investigating the driving force behind prosocial outcomes. Hence, we are not interested in merely “adding yet another construct (...) to an already large collection of them” (Wowak *et al.*, 2017: 686), nor do we claim that these CEO traits are equal to SVO, but we contend that there is sufficient overlap, and that some of the underlying mechanisms that link these traits to CEO strategic decision-making, are in fact the same as those underlying SVO.

For example, the negative effects of CEO narcissism on equity in internal pay systems (O'Reilly *et al.*, 2014) can to some extent be explained by narcissists' lack of regard for others in decision-making.²⁴ Related to this is Boddy *et al.*'s (2010) finding that CEO psychopathy—referring to a complete inability to feel empath—reduces organizational commitment to employees. Furthermore, evidence that management's commitment to ethics (Muller & Kolk, 2010) and ethical leadership (Tian *et al.*, 2015) are positively associated with CSR, indicates that CEOs who value prosocial outcomes care more about how their firms' social objectives are met. They do this by suppressing self-interest and taking multiple stakeholders into account. Likewise, the empirical evidence that CEOs' liberal versus conservative political ideology is related to differences in CSR initiatives (Chin *et al.*, 2013), is compatible with the notion that, on average, liberals are more sensitive to social issues and equality, while conservatives generally place more emphasis on individualism (Chirumbolo, Leone, & Desimoni, 2016). Finally, caring for others is part and parcel of the concepts of charisma (Wowak *et al.*, 2016), transformational (Waldman *et al.*, 2006) and servant (Christensen *et al.*, 2014) leadership.

While these studies on a range of different CEO personality traits and leadership styles advance our knowledge of strategic decision making by offering unique theoretical insights,

²⁴ When CSR engagement generates media attention and public praise, however, narcissistic CEOs also find it lucrative (Petrenko *et al.*, 2016).

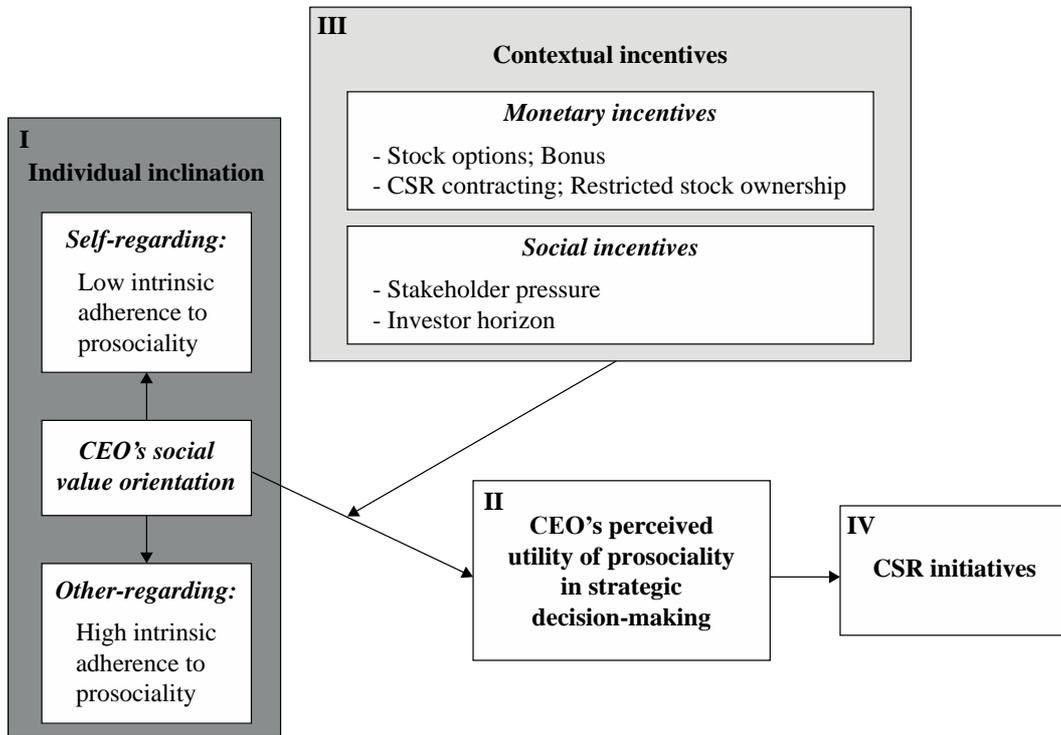
they also lead to fragmentation of findings (Bromiley & Rau, 2016). SVO is clearly a basic component of different psychological constructs that are of interest in the upper echelons literature, hence we conceptualize it here as a fundamental intrinsic motivation that underlies a CEO's adherence to prosociality.

3.2.2 An interactionist model of the impact of CEO social value orientation

Economists have long argued that the study of the impact of individual values and preferences on rational choice behavior is futile as they cannot be observed in the first place (Chin *et al.*, 2013). However, the tools used in neuroeconomics now allows one to open the black box of individual decision making, which is essential to validate that also strategic decisions are boundedly rational and the result of heuristic processes occurring, often unconsciously, at the neural level. Recent neuroeconomic research substantiates that SVO indeed acts as a compass that biases the perceived utility of the decision outcome according to the fit between one's individual inclination and the decision context (Declerck & Boone, 2016).

Figure 3.1 proposes that: (1) a CEO's SVO, reflecting an intrinsically high- or low adherence to prosociality (box I), partakes in the computation of the *perceived utility of prosociality* in CEO strategic decision-making (box II), and (2) in this computation, the CEOs with a self-regarding SVO, and hence a low intrinsic adherence to prosociality, will be especially affected by contextual *monetary or social incentives* (box III). In short, a CEO's inclination and the decision context *jointly* affect the perceived utility CEOs attach to prosociality considerations in *hic et nunc* strategic decision making. This in turn has important implications for prosocial outcomes at the firm level, such as CSR initiatives (box IV).

Figure 3.1: The interactive influence of CEO social value orientation and the incentivizing context on CSR.



Following the upper echelon's basic premise, namely that preferences shape the CEO's (bounded) perceptions of reality and thereby guide strategic choices (Cyert & March, 1963; Hambrick & Mason, 1984), the model proposes that the firm's investments in *CSR initiatives* will reflect CEOs' perceived utility of prosociality, in as much as CEOs have ample discretion in shaping firm strategy. Building on neuroeconomics evidence, we furthermore expect that the interaction between the CEO's SVO and the incentivizing context will explain a substantial part of the variance in CSR initiatives by affecting the CEOs' perceived utility of prosociality. For other-regarding CEOs, their high adherence to prosociality is naturally aligned with strategic prosociality, so that pursuing CSR stems directly from their own intrinsic adherence to prosociality. Self-regarding CEOs who do not value such decision outcomes per se might still embrace prosociality strategically and adopt CSR policies depending on the presence or absence of contextual incentives.

We focus on monetary and social incentives because these forms of incentives have attracted much scholarly attention in the CSR literature, and because their role in heuristic decision-making has been corroborated by neuroeconomic experiments. In the CSR literature, monetary and social incentives are derived from a firm's governance and institutional environment, respectively. From a corporate governance perspective, monetary rewards can incentivize the CEO to pursue the maximization of short-term financial returns versus the firm's long-term value and the welfare of stakeholders. From an institutional theory perspective, stakeholders can employ various tactics to incentivize CEOs to respond to social and environmental concerns. For example, stakeholders can mobilize the public opinion to negatively affect the CEO's reputation or firm owners can submit binding strategy proposals at annual shareholder meetings.

In neuroeconomic experiments, evidence is accumulating showing that monetary and social incentives affect the decision heuristics of individuals depending on their SVO. In the next section, we summarize the results of neuro-imaging studies to substantiate the model in Figure 3.1. Specifically, we present data indicating that: (1) SVO directly affects the neural computation of utility, and (2) individuals with different SVOs vary in the way they attend to extrinsic incentives and hence in the way their nervous system becomes subsequently activated to engage in one decision heuristic over another.

3.3 Social Values and Heuristic Decision Making: Neuroeconomic Evidence

3.3.1 Social value orientation and the computation of utility

Neuroscience is convincingly showing that behavior follows from neural activity, but not necessarily in a straightforward way. The same behavioral response can be driven by different underlying motives, each associated with its own pattern of neural activation (Hein *et al.*, 2016). Put differently, if individuals display the same behavior (e.g., concern for prosocial

outcomes in decision-making), but because of different motivations (e.g., genuine concern vs. strategic reasons), this will be visible in the brain as different regions will be activated. This also implies that individuals with a different SVO may have their own, subjective neural signature, as self- and other-regarding types differ in their motives for prosocial decision making: the former strive for personal gain, while the latter find utility in social welfare and will be especially moved by breeches of prosociality. Below we review neuroscience evidence that shows that these different intrinsic motivations for prosocial behavior is associated with the idiosyncratic decision-making styles of self-and other regarding types are indeed represented in the brain.

Haruno and Frith (2010) used fMRI to compare brain activity of participants with either a self-regarding or an other-regarding orientation while they were evaluating different options of money allocations to themselves and others.²⁵ As expected, the self-regarding individuals consistently preferred greater allocations to themselves, while those with an other-regarding orientation preferred equal allocations the most. For the latter group, the degree of inequity aversion revealed during the task correlated with increased neural activity in the *amygdala*, a subcortical brain region well known for its role in aversive conditioning (LeDoux, 2003) and processing socio-emotional events (Anderson & Phelps, 2001). In a subsequent experiment, these same authors (Haruno, Kimura, & Frith, 2014) found that other-regarding individuals also responded more punitively to inequality in an ultimatum game²⁶, and, importantly, this

²⁵ This technique makes use of the fact that hemoglobin, the iron-containing oxygen-carrier in the blood, behaves differently under changing magnetic fields depending on whether blood is oxygenated or de-oxygenated. Brain regions that are rich in oxygenated blood point to increased blood flow to that region and hence increased metabolic needs. From this correlation neuronal activity is indirectly inferred. In an fMRI study, experimental subjects are asked to perform a choice-task under the scanner and the change in blood flow (the hemodynamic response, or blood oxygen level dependent (BOLD) signal) is continuously imaged and matched with the time-course of the experiment.

²⁶ In this two-person game, a proposer (not under the scanner) can split a monetary endowment in any proportion between self and an anonymous other (the responder under the scanner). If the responder accepts the offer, the split is implemented and both parties receive the proposed share. If, however, the responder refuses, neither party receives anything.

behavioral difference between the two types was predicted by neural activation in the *ventral striatum*. This brain region lies at the core of the brain's motivational system and is believed to play an important role in computing decision utility, as the results of several meta-analyses have shown that it can be activated by different types of rewards (e.g., social vs. monetary rewards), and that it converts them to a common neural currency (Bartra, McGuire, & Kable, 2013; Levy & Glimcher, 2012).

The increased activity in the ventral striatum of other-regarding individuals suggests that they derive more satisfaction from sanctioning inequality. Because, in both experiments, the increased neural activity in the amygdala and ventral striatum were unaffected by cognitive load (in the form of an effortful reasoning task performed concurrently), the distaste for inequality of other-regarding individuals, and the motivation to punish, are automatic responses, similar to what would be expected from an internalized prosocial norm or a stable social preference.

3.3.2 Social value orientation and heuristic processing

The finding that SVO affects automatic responses through neural activity in emotional and motivational regions of the brain (amygdala and ventral striatum) is important because it shows that social values bias the decision frame in the process of computing decision utility. However, these brain regions do not operate in a vacuum, as they also receive inputs from other brain systems that are at the same time processing information regarding the external environment (Declerck, Boone, & Emonds, 2013; Engelmann & Hein, 2013). It is through a combination of contextual information stemming from the environment, and the individual's SVO, that decision heuristics are generated (Declerck & Boone, 2016). Because SVO has profound implications for the way people will attend, react to, and process environmental stimuli (Bogaert *et al.*, 2008; Declerck *et al.*, 2013), the process by which complex problems are

transformed to simple and efficient decision rules (heuristics) is likely to vary as well. That means that contextual incentives are also expected to differentially affect the decision-making process of self- and other regarding types at the level of the brain.

To fulfil economic motives, a self-regarding type who seeks to maximize self-interest is more likely to take into account the presence/absence of contextual incentives. The default heuristic for the self-regarding type is not to care about others' outcomes, *unless* the decision context is such that self- and collective interest are aligned, implying that it is in his/her self-interest to pursue group benefits and prosocial outcomes. Processing whether a self-serving versus a prosocial decision rule is more likely to reach the desired level of satisfaction (e.g., a substantial monetary reward) would rely especially on cognitive control regions in the brain. In contrast, for the other-regarding type who is socially motivated, the default decision heuristic is to decide in favor of the collective well-being (unless there are salient contra-indications not to do so). Being less sensitive to contextual incentives, we expect that other-regarding types recruit fewer cognitive control regions of the brain, and (in line with their high adherence to prosociality) more regions that process socio-emotional stimuli to convey information about the needs of others.

This proposition, that individuals with self- versus other-regarding preferences rely on alternative decision heuristics, supported by different brain regions, was corroborated both in a large scale behavioral experiment (Boone, Declerck, & Kiyonari, 2010) and with fMRI (Emonds *et al.*, 2011). When playing economic games with a partner, self-regarding participants were much more sensitive to changes in the pay-off structure of the games: they tended to defect in prisoner's dilemma games²⁷ (which is the economically rational, yet

²⁷ In a prisoner's dilemma game, mutual defection is the only Nash equilibrium, meaning that, given the choice of the other player, no individual can improve his outcome by changing strategy. Deciding on a strategy in this game requires deliberation and which has been shown with fMRI to require more cognitive control (see Kuo *et al.*, 2009).

collectively deficient, response), and switched to cooperation in an assurance game. In the latter, the temptation to defect has been removed by raising the pay-off for mutual cooperation to the point that the game has a win-win outcome. Thus, the assurance game provides the greatest monetary reward for choosing the prosocial (mutually beneficial) outcome, which generates a strong incentive to cooperate, even for those with self-regarding preferences. This switch in behavior, from defecting in the prisoner's dilemma game to cooperating in the assurance game, was less pronounced for other-regarding participants, who generally chose for the prosocial outcome, regardless of the pay-off structures. When these same games were played in an fMRI scanner (Emonds *et al.*, 2011), self-regarding individuals showed more neural activation in the *dorsolateral PFC*, one of the most important regions implicated in cognitive control. Other-regarding individuals, in comparison, showed more neural activation in a specific region of the brain (the *anterior TPJ*) that has previously been implicated in routine moral judgments.

Incentives to choose for collective well-being are not restricted to monetary rewards, however. Self-regarding individuals are also more likely to cooperate with the group or comply to prosocial expectations when their reputation is at stake (Declerck, Boone, & Kiyonari, 2014; Simpson & Willer, 2008) or when there is a punishment threat. When sanctions substantially increase the perceived cost of free riding, the perceived utility of prosociality increases (Fehr & Gächter, 2002). The brain regions necessary for instrumental attunement to the presence of social incentives, are nicely illustrated in the fMRI experiment by Spitzer *et al.* (2007). Participants were scanned while they split a sum of money (in any proportion) between themselves and an anonymous receiver. In the 'no punishment' condition the receiver passively accepted whatever was allotted, while in the 'punishment' condition, the receiver could impose a monetary sanction if the allotment was perceived to be inequitable. On average, the presence of the punishment threat doubled the level of generosity, and this was especially true for

participants who scored high on Machiavellianism (a trait characterized by a cynical disregard for morality and a strong focus on self-interest and personal gains). Brain contrasts between the two conditions revealed that the threat of punishment was associated with increased activity in the *lateral PFC*, indicating again that the brain accomplishes this task by relying on cognitive control, and that the perceived utility of prosociality in this case was more likely economically motivated. Interestingly, activity in the lateral PFC correlated positively with Machiavellianism, suggesting that it is especially the self-regarding types that take the possibility of being punished into account when making decisions.

In summary, neuroscience research provides us with a solid, micro-level grounding to study CEOs' adherence to prosociality in strategic decision-making. Individual differences in SVO are associated with different neural signatures. Consistent with their greater attention given to contextual incentives, the decision-making scheme of the self-regarding type appears to be dominated by cognitive control. Hence, a CEO of this type will base his/her preference for prosocial decisions, such as CSR, on economic motives involving cost/benefit computations. In contrast, individuals with high adherence to prosociality who value collective outcomes for their own sake, tend to rely more heavily on social motives, empathy, and socio-emotional processing. A CEO of this second type will be much less responsive to contextual incentives, and more to the needs of others. By prioritizing the type of information that will be incorporated in the decision heuristic, SVO is the compass by which CEOs navigate in an environment where incentives to act collectively are constantly changing. In the next section, we apply this logic to develop predictions for a specific outcome of prosocial strategic decision-making: CSR initiatives.

3.4 Predicting CSR Initiatives

In this section, we introduce two components of the business environment that give rise to a number of very specific contextual incentives by which the perceived utility of prosociality in strategic decision-making (and, subsequently, the likelihood of CSR initiatives) is shaped. Keeping in mind the findings from neuroeconomics, we expect these incentives to affect especially (or only) the CSR decisions of CEOs with self-regarding SVO. First, from the corporate governance perspective, we argue that *monetary incentives* may steer a CEO's attention towards financial or social objectives. Second, in line with institutional theory, we contend that *social incentives* such as pressures from stakeholders can influence CEOs' balance to increasingly address social and environmental concerns.

3.4.1 Monetary incentives: Executive compensation

Executive compensation arrangements, such as bonuses and stock options, have been well studied as incentivizing devices (Devers *et al.*, 2007; Wowak *et al.*, 2017). Financial bonuses are a short-term, outcome-based compensation method which reward CEOs for attaining a specific level of year-end performance, but do not penalize them when this performance level is not reached or even declines (Hou, Li, & Priem, 2013). Therefore, bonuses incentivize CEOs to acquire personal wealth through boosting short-term firm performance, potentially at the expense of long-term firm viability. Such short-term pay discourages CSR investments that tend to contribute only to long-term organizational outcomes such as survival, growth, and resilience to external shocks (Flammer & Bansal, 2017; Ortiz-de-Mandojana & Bansal, 2016). In the context of CSR, studies have shown that compensating CEOs with high bonuses reduces investments in social and environmental projects (Fabrizi, Mallin, & Michelon, 2014; Manner, 2010).

With respect to stock options, an analogous argument can be developed: stock options give beneficiaries the right to buy company shares at a predetermined price over a specific period of time, thereby offering them the chance to directly reap the benefits from gains in organizational performance when these gains are associated with a rise in stock price. But when organizational performance declines, not vesting the stocks will limit the losses associated with a decreased stock price (Sanders, 2001). For executives, this means that stock options represent a vast upward potential to increase their *personal* wealth by boosting short-term organizational performance, without having to face the mirroring downward risk. Because of this asymmetric payoff structure, it is not surprising that CEO stock options have been found to induce risky decision-making, leading to more, bigger, and riskier acquisitions, less hedging behavior, and higher investment spending, and more extreme performance outcomes, bringing about big *wins* as well as big *losses* for the organization (Sanders & Hambrick, 2007). As stock options tie CEOs' compensation to rather short-term performance outcomes (Edmans *et al.*, 2012), executives who are interested in maximizing their personal wealth will be tempted to take excessive risks to inflate the stock price in the short-run, even if this were to the detriment of stakeholders and the organizations' long-run stability. For instance, one study found that stock option-loaded CEO pay negatively affects "consumer well-being by inducing behaviors that increase the likelihood of product safety problems, which in some cases pose life-threatening risks" (Wowak, Mannor, & Wowak, 2015: 1083).

In contrast, long-term oriented executive compensation arrangements can incentivize the CEO to promote CSR initiatives, because the positive effects of social and the environmental practices on reputational benefits, organizational resilience, and superior performance take time to manifest, but pay off in the long term. Among long-term focused CEO pay arrangements, restricted stock ownership in particular might force an executive to adopt a long-term horizon, as a sizable portion of the CEO's wealth that cannot be readily exercised becomes

tied to long-term performance outcomes (Johnson & Greening, 1999). It also diminishes the pressure on the CEO to meet quarterly earnings targets, which tend to be at odds with CSR investments (Deckop *et al.*, 2006).

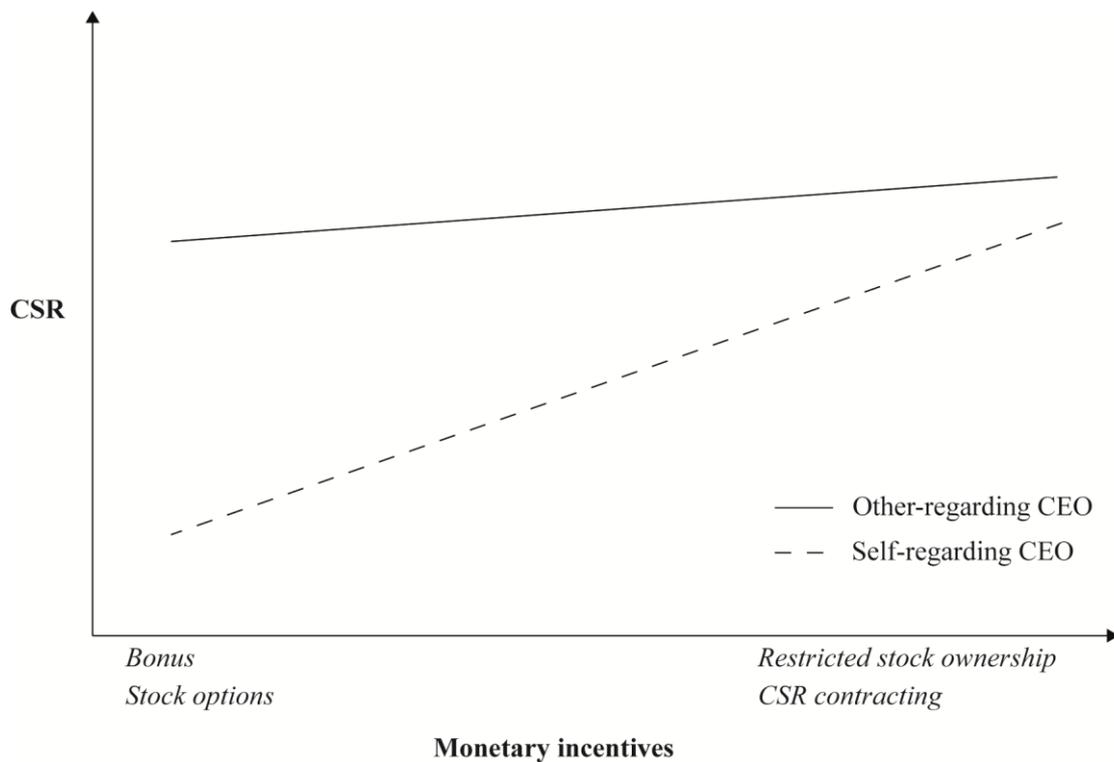
CSR contracting is another important incentive system that recently arose as a governance practice in a considerable number of corporations (Flammer, Hong, & Minor, 2017). The integration of CSR criteria in executive compensation ties CEO pay to various social and environmental target outcomes such as CO₂ emissions and employee satisfaction, thereby directly incentivizing executives to address the needs of stakeholders in their strategic decision making. There is some evidence that long-term oriented CEO compensation arrangements and CSR contracting are positively associated with CSR performance (Deckop *et al.*, 2006; Flammer & Bansal, 2017; Flammer *et al.*, 2017; Mahoney & Thorne, 2005), suggesting that monetary incentives can indeed steer some CEO's attention towards long-term organizational performance.

Despite these documented examples, the empirical findings on the effects of compensation arrangements are not at all conclusive (Devers *et al.*, 2007; Wowak *et al.*, 2017). For example, scholars have documented both positive (Berrone & Gomez-Mejia, 2009) and negative (Berrone *et al.*, 2010) association between CEO stock ownership and firm environmental performance. If, as Wowak and Hambrick (2010) convincingly argue, the effects of compensation on strategic decision-making are dependent on executives' cognitive frame, then neuroscience evidence (summarized above) shows that the CEO's SVO is bound to be an important factor underlying this relation. If self-regarding CEOs are incentivized by pay arrangements with a short-term or high-risk focus, their low adherence to prosociality in the pursuit of immediate monetary rewards will drive out CSR initiatives. But if self-regarding CEOs were incentivized by deferred compensation or CSR contracting, they might be inclined to consider investing in long-term initiatives, including CSR projects. For other-regarding

CEOs, who have a high adherence to prosociality and are motivated to pursue CSR initiatives because this fits with their internalized collective norm, the incentive effects driven by compensation packages are likely to be weaker or redundant. Formally, we propose:

Proposition 1: An executive's SVO interacts with monetary incentives in affecting firm CSR initiatives. Specifically, the more an executive is self-regarding, the stronger the association between monetary incentives and firm CSR initiatives.

Figure 3.2: Joint impact of CEO social value orientation and monetary incentives on CSR.



Hence, we predict that SVO best predicts CSR outcomes only in contexts characterized by high bonuses and stock options, as graphically presented in Figure 3.2. Conversely, the differential effect of SVO becomes masked when CEO pay highly depends on long-term stock price or CSR targets. In this case, it becomes impossible to tell whether CSR is motivated by an intrinsic adherence to prosociality, or whether it is a strategic decision because the goals of self-regarding CEOs are made to align with a firm strategy that benefits the longer term and

the interests of multiple stakeholders. This is consistent with the finding from neuroscience that the same equitable allocation of resources can be the result of activating different decision heuristics, supported by different neural pathways.

3.4.2 Social incentives: Investor horizon and stakeholder pressure

A key insight of the institutional theory is that organizations are constrained to behave in line with sets of accepted norms of the sociocultural milieu in which they operate (Meyer & Rowan, 1977). Social norms represent the unspoken but agreed upon habits and rules of conduct that spell out behavior of people in groups. They describe what is typically done in that situation, or prescribe what should be done in order to gain social approval (Cialdini & Goldstein, 2004). Adherence to norms is a strong social incentive, since failure to do so can pose a major threat to a firm's legitimacy (i.e., social license to operate) and reputation.

Formal and informal demands of internal and external parties upon which the organization is dependent often pressure CEOs to adapt the firm's behavior to societal expectations (DiMaggio & Powell, 1983). Stakeholders in particular are in a position to coerce the firm to engage in CSR activities when they judge its contributions to the societal welfare to be inadequate. Stakeholders represent those individuals or groups that affect organizational outcomes and help the firm achieve its objectives (e.g., consumers, employees, supply chain, local communities, etc.) (Freeman, 1984). For this reason, organizations' continued survival largely depends on the normative expectations of stakeholders.

Traditional economics literature often views shareholders as a primary stakeholder group (Fama & Jensen, 1983), because CEOs have a binding fiduciary duty to follow the interests of the firm's owners. Although it is customarily assumed that shareholders' primary goal is to maximize the firm's profits, research has shown that firm owners can substantially differ in their investment horizons (Bushee, 1998). Investors with a short time horizon predominantly

focus on the return on their financial investment, whereas those with a long time horizon prefer enhancing the firm's long-term value and continued survival. Because CSR investments tend to pay off predominantly in the long run, investors with a short time horizon perceive them as uncertain and profit-draining (Johnson & Greening, 1999; Neubaum & Zahra, 2006) and may pressure CEOs to maximize short-term profitability instead (Connelly *et al.*, 2016). Conversely, investors with a long time horizon are more prone to support CEOs' decisions to advance CSR, as this enables firms to build stable and long-lasting relationships with their stakeholders, thus improving the chances for continued survival (Freeman, 1984; Neubaum & Zahra, 2006).

Firm owners can exert influence on executive behavior in ways that other stakeholders cannot. For instance, they can (1) appoint advisory board members whose primary role is to counsel the CEO on strategic and operative directions (Hillman, Withers, & Collins, 2009), (2) submit proposals at annual shareholder meetings to influence firm strategy (Flammer & Bansal, 2017), or (3) shape executive compensation arrangements to align preferences of CEOs with their own (Jensen & Meckling, 1976). Supporting this view, studies have shown that firms are more likely to invest in CSR (Neubaum & Zahra, 2006) and have lower pay inequality (Connelly *et al.*, 2016) when their owners maintain a long-term investment horizon.

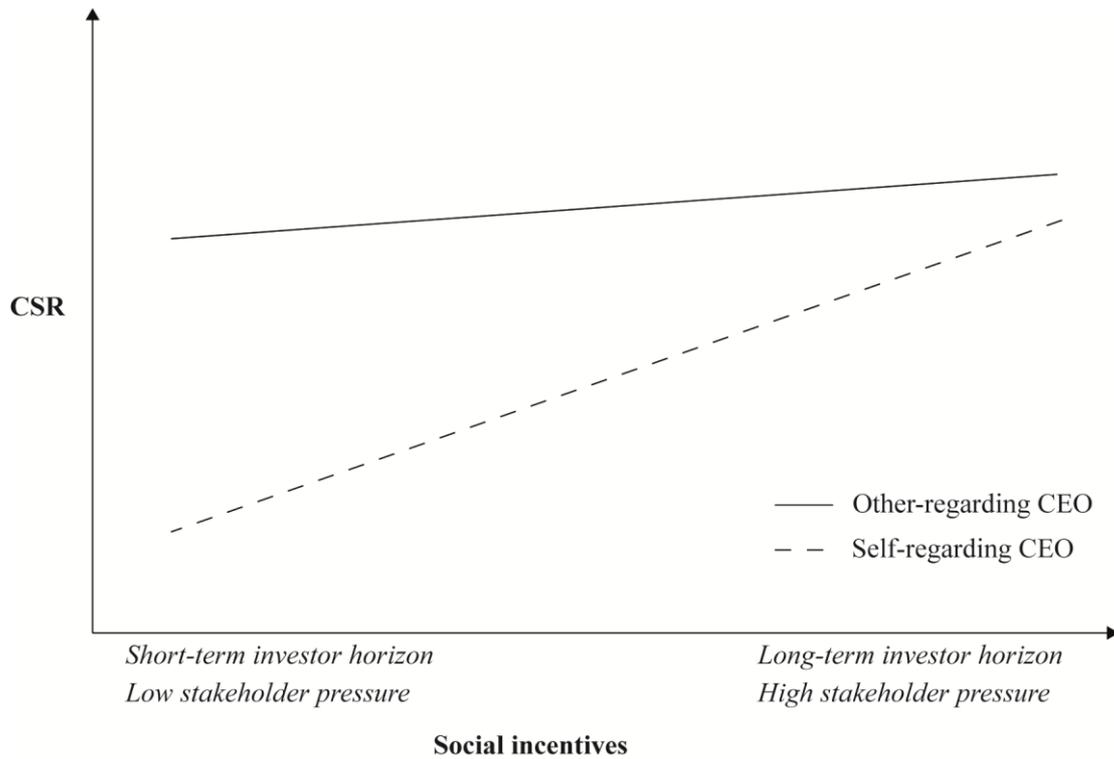
Non-shareholder stakeholders can incentivize CEOs to pursue a CSR agenda as well, but in other ways. In order to exert pressure on firms, external stakeholders such as NGOs, the media, governments, social movements, and communities can transmit negative images about the firm to wider audiences, thereby incurring damage to a firm's public image and its customer relations (Tian *et al.*, 2015). Broadly speaking, external stakeholders have the aptitude to rally up public opinion to damage or improve firms' legitimacy and/or reputation (Freeman, 1984). This might have a tangible impact on firm operations. For example, customers can withdraw their loyalty to the firms' products, whereas communities and social movements can resort to

more radical punishments such as boycott (Chiu & Sharfman, 2011). Furthermore, regulatory agencies and governmental bodies can influence legislation to coerce firms into CSR engagement or sanction them for not doing so (Zhu & Sarkis, 2007). Internal stakeholders can have immediate influence on firm activities. Because employees have control over critical organizational resources and can participate in organizational decision-making (Tian *et al.*, 2015), they can exert pressure on the firm more directly. In summary, this scholarship suggests that the more pressure firms face from stakeholders to engage in CSR, the more incentives their CEOs have to conform to social expectations by advancing CSR initiatives, thereby preserving their reputation and license to operate, while avoiding sanctions.

Nevertheless, there is considerable variation in the way firms respond to stakeholder expectations (Crilly, Zollo, & Hansen, 2012). In line with Figure 3.1, we contend that it largely depends of their key decision makers. Based on the neuroeconomics evidence summarized above, we propose that SVO will affect how, and when, expectations with regards to CSR investments become integrated in CEOs' strategic decision-making scheme. When shareholders have long investment horizons or stakeholder pressure to engage in CSR is high, self-regarding CEOs are prone to instrumentally register the saliency of social expectations in terms of a cost/benefit calculation. The possibility of a deteriorated public image, a boycott, or shareholder activism does not only represent reputational concerns or a punishment threat to CEOs and their careers, but it can also be detrimental to the firms' financial performance and market value (Roberts & Dowling, 2002), hence affecting executive remuneration. Under such circumstances, self-regarding CEOs will thus become incentivized to instrumentally comply with social expectations with respect to CSR. Hence, we propose:

Proposition 2: An executive's SVO interacts with social incentives in affecting firm CSR initiatives. Specifically, the more an executive is self-regarding, the stronger the association between social incentives and firm CSR initiatives.

Figure 3.3: Joint impact of CEO social value orientation and social incentives on CSR.



In Figure 3.3 we graphically present the proposition that SVO best predicts CSR outcomes only in contexts where shareholders focus on short-term profitability or stakeholder pressure to engage in CSR is low or absent. On the other hand, the impact of CEOs' SVO on CSR implementation becomes veiled when owners prefer long-term growth and continued survival or stakeholder pressure is high. In this case, the goals of self-regarding CEOs are also aligned with CSR implementation, hence it is impossible to ascertain whether CSR is driven by intrinsic or contextual motivations (i.e., which decision heuristics were used).

3.5 Discussion

3.5.1 Theoretical contributions

In response to the growing plea for an interdisciplinary consolidation of findings on decision-making in disparate fields of research (Busenbark *et al.*, 2016; Sagiv *et al.*, 2017), we draw from two perspectives—neuroeconomics and management—to present a multi-level

framework that explains the perceived utility of prosociality in strategic decision-making in terms of the CEO's *intrinsic characteristics* as well as the *incentivizing context*, and we used this framework to predict a specific organizational outcome: CSR initiatives. We further argue that the study of prosocial organizational outcomes can only be advanced by combining a *trait* and *state* approach to fully understand how the CEO's perceived utility of prosociality is formed. Taking a trait approach is particularly relevant here, because CEOs operate in uncertain and ambiguous situations, or so-called 'weak' situations where personality differences have been shown to surface (see Mischel & Shoda, 1995). However, we also argue that traits alone do not suffice to explain CEOs' perceived utility of prosociality in strategic decision-making, because their construed reality will also depend on whatever *contextual incentives* are present at the moment of decision making, such as the type of monetary rewards and/or stakeholder pressure.

So far, research on upper echelons has tended to make abstraction of the (micro-level) psychological mechanisms that are assumed to underlie the link between top executives' motives and distal organizational outcomes. While this research has made great strides, it comes short of explaining *how bounded rationality really works*. The neuroeconomic literature we summarized complements the upper echelons perspective because it provides a much-needed, psychologically grounded foundation of the potential impact of CEOs' SVO (Hambrick, 2007; Powell, 2011; Powell *et al.*, 2011). It also advances the emerging fields of *neurostrategy* and *neuroethics*, claiming that management needs neuroscience given the former's interest in the psychological foundations of executive judgment and decision-making. "If executive decision-making and behavior matter, then the brain is already in the game; and the more we can learn about it, the better" (Powell, 2011: 1484). Recently, several papers have already been published to point to neuroscience for the continued development of several fields in the organizational sciences, including strategy (Ashkanasy, Becker, & Waldman, 2014;

Butler *et al.*, 2015; Lee, Senior, & Butler, 2012; Powell, 2011; Robertson *et al.*, 2017; Waldman, Balthazard, & Peterson, 2011). However, it is fair to say that this work has mainly listed the *potential* of neuroscience, but has not yet adequately addressed the questions of prime interest to strategic management (Powell *et al.*, 2011). To contrast this, the model of CEO decision-making developed in this study is built on *actual results* of neuroscience experiments, which we hope demonstrates the usefulness for interdisciplinary work not only in CSR studies, but strategic management in general.

Finally, by incorporating both SVO and the incentivizing context, the model sheds light on a fundamental, more general discussion in the field of strategy regarding rationality in decision-making. At present it is commonly acknowledged that human rationality is ‘bounded’ (Cyert & March, 1963), and that therefore CEOs make a difference in strategic decision-making. Indeed, without bounded rationality, different CEOs would make exactly the same strategic decisions when confronted with the same decision environment (Hambrick & Mason, 1984). This insight is the crucial psychological foundation of upper echelons theory: Complex strategic decision-making is subject to behavioral processes and not necessarily the outcome of economic optimization. Unfortunately, in strategy literature bounded rationality is still often equated with decision heuristics that depart “from the ideals of logic and probability theory” and the axioms of expected utility theory, and are therefore errors against economic rationality (Basel & Brühl, 2013: 747). Our framework, conversely, underscores Levinthal’s (2011) viewpoint that *behavioral* and *rational* choice cannot be separated because all complex decision-making inherently starts with behavioral-based problem framing and representation. Indeed, complex decision problems only become amenable to deductive, rational reasoning by boundedly rational executives when they are behaviorally translated into more simple (small-world) representations. Given its stability, SVO makes problem framing more systematic,

generating within-individual consistency among choices made in different points in time and space.

3.5.2 Future research

In future research, it would be worthwhile to take up the challenge to empirically operationalize and test some of the implications of the model we presented. While we have already listed some preliminary evidence (Tian *et al.*, 2015; Weaver, Trevino, & Cochran, 1999), we invite scholars for more direct tests of the model. Although this task will not be easy, we are convinced that it is feasible because most of the concepts we used, such as investor time horizon (e.g., Bushee, 1998; Neubaum & Zahra, 2006) or stakeholder pressure to engage in CSR (e.g., Tian *et al.*, 2015), have already been measured extensively in previous studies. With respect to a person's SVO, reliable and valid standard paper and pencil techniques have not only been used for decades in social psychology (for a discussion see Bogaert *et al.*, 2008), but have also sporadically been used to survey CEOs (Agle *et al.*, 1999). Other creative methods to assess SVO could involve content analysis of interviews or the Q&A part of firms' quarterly earnings conference calls, the latter representing one of the few incidences of spontaneous, unscripted CEO communication (Davis *et al.*, 2014). Recently, scholars have also made use of novel video-based psychometric approaches to capture CEO personality traits (Petrenko *et al.*, 2016). Given its unobtrusive nature and the rapid growth of big data (e.g., social media), these measurements might become particularly useful in future research.

For the sake of parsimony, we did not address several issues that open the way to major avenues for further research. First, we assumed that the moderating variables are exogenous to the model. However, sorting effects drawing CEOs to specific types of contexts depending on their SVO are, in all likelihood, operating (Wowak *et al.*, 2017). For example, self-regarding (relative to other-regarding) CEOs might be more attracted to firms that allow short-term

personal wealth maximization (e.g., large bonuses) or that operate in less visible industries that are less likely to face high stakeholder pressure than those in more visible industries. It could also be that self-regarding CEOs are better able to reengineer their compensation arrangements to match their preferences. However, as long as such sorting processes are incomplete, an interactionist logic predicting joint effects of SVO and the incentivizing context is still valid. In this respect it is interesting to mention that Wowak and Hambrick (2010) demonstrate dramatic changes of pay arrangements during many CEOs' tenures, implying sufficient variance in combinations of compensation packages and CEO characteristics to study interaction effects.

Second, some might argue that a neuroscience- and psychology-based framework is reductionist, and therefore not very helpful in explaining collective behavior and outcomes at the organizational level. But an interdisciplinary reductionist approach is necessary to uncover the deep-level motivations that underlie CEO decision-making. Obviously, the proof of the pudding is in the eating: upper echelons research has indeed shown that CEO intrinsic motivations have crucial effects on aggregate firm outcomes (Bromiley & Rau, 2016). Notwithstanding this, we still need to explain how individual (CEO) intrinsic motivations scale to collective (organizational) behavior, which is an important task for further research (Powell *et al.*, 2011). It would be very fruitful to study when, and to what extent, CEO other-regarding values have a spill-over effect to other hierarchical layers, facilitating an organizational climate where people normatively engage in prosocial behavior. One vital and well-studied condition that might affect whether CEO's SVO materializes in organizational-level CSR outcomes is the CEO's degree of discretion (Chin *et al.*, 2013).

Finally, a much needed direction for CSR research is to explore the boundaries of other-regarding values. Prosocial behavior is often limited to groups, such that individuals an intrinsic adherence to prosociality may exhibit concern for in-group members, but not for out-

group members (Yamagishi & Kiyonari, 2000). Already we know that people show a bias favoring their in-group when group belonging is highlighted (Wit & Kerr, 2002) or when there is intergroup competition (Bornstein, 2003). The latter is highly relevant for CSR given its multidimensional nature—when firms are experiencing financial constraints, different stakeholder groups often compete for limited resources (Wang *et al.*, 2016b). How would other-regarding CEOs prioritize different stakeholders? Would they display in-group favoritism towards the stakeholder group they identify themselves with, or would they try to balance these tensions equally? Would an other-regarding CEO belonging to an ethnic minority show an exaggerated attention bias towards diversity issues? These questions are wide open for further research.

3.5.3 Practical implications

A crucial implication of our framework is that the potentially detrimental effects of self-regarding CEOs can be curbed by carefully designing extrinsic incentives that redirect a low adherence to prosociality to produce long-run pareto-efficient collective outcomes. Such solutions would create an internal ‘mental switch’ whereby self-regarding CEOs would pay more attention to social welfare, because that would serve them well in their goal to maximize personal benefits. This would be a first step towards answering Lorsch and Khurana’s (2010) call to find out *how* and *for what* senior executives should be rewarded “so that they are motivated not only to create wealth for themselves, but also to build companies that serve society” (34).

CHAPTER 4:

Just Old or from Another Era? The Multifaceted Effect of CEO Age on Corporate Social Responsibility

Why do top executives differ in their values, and how is this heterogeneity reflected in organizational outcomes? To answer this question, we build on the dual aspect of an important CEO characteristic, namely age, to simultaneously examine how stable differences in values between executives and changes in values within executives over time affect firms' corporate social responsibility (CSR) practices. On the one hand, executives' concern for stakeholders changes with age as they advance through their careers and thereby shift their priorities. On the other hand, age also reflects stable differences in values between adjacent birth cohorts who grew up in different historical periods. In this study, we integrate time-stable and time-variant perspectives on executives' values by theorizing about how age simultaneously determines which CSR initiatives CEOs prioritize more and the extent to which CEOs invest in CSR. Our study provides important implications for research focused on the relationship between executives' values and organizational outcomes.

4.1 Introduction

Management scholars have expressed a sustained interest in the motives of top executives to endorse corporate social responsibility (CSR) practices (Christensen *et al.*, 2014; Hafenbrädl & Waeger, 2016; Waldman & Balven, 2014; Wowak *et al.*, 2016). CSR represents discretionary corporate initiatives that generate benefits for multiple stakeholders—for example, employees, local communities, or the natural environment (McWilliams & Siegel, 2001). Because the decision to address stakeholders' welfare is often in the hands of key organizational decision makers (Wang *et al.*, 2016b), researchers view firms' CSR initiatives

partially as a reflection of CEOs' values (Agle *et al.*, 1999; Chin *et al.*, 2013; Waldman *et al.*, 2006). This insight is also the central tenet of the upper echelons perspective, which suggests that heterogeneity in organizational outcomes reflects the heterogeneity of organizational leaders (Hambrick & Mason, 1984).

Extant scholarship that explores how executives' values affect CSR can be categorized into two streams of research based on how executives' values are treated. One stream of research builds on a 'time-stable' perspective of values and assumes that values are formed early in life and persist throughout adulthood (see Wowak *et al.*, 2016). For example, Chin *et al.* (2013) study how stable differences in political ideology between CEOs explain heterogeneity in CSR. The second stream of research adopts a 'time-variant' perspective to study how changes in the values of individual executives over time lead to changes in CSR (Kang, 2016). Scholars in this line of research have, for example, explored how CEOs' commitment to CSR changes across their career (Fabrizi *et al.*, 2014). Both streams of research have greatly increased our understanding of the sources of variance in CSR that are associated with the values that top executives hold. However, in order to fully understand the sources of heterogeneity in CSR that is due to variations in CEOs' values, it is necessary to simultaneously consider the impact of changes in values *within* executives over time as well as stable differences in values *between* executives. For example, if two given CEOs form their values early in life in such a way that they fundamentally differ over environmental attitudes, yet their individual attitudes towards the environment also change across adulthood, in *which ways* do their firms' environmental initiatives reflect these two sources of heterogeneity in the executives' values?

To address this question, we integrate the 'time-stable' and 'time-variant' perspectives to theorize about the relationship between executives' values and CSR. To do so, we make use of the dual aspect of a fundamental demographic characteristic: age. On the one hand, age reflects the fact that CEOs belong to different *birth cohorts*, which is an important source of stable

differences between individuals (the so called ‘time-stable’ age effect). Spurred by the remarkable economic growth and modernization that came about following World War Two, Western societies underwent a dramatic shift in values (Inglehart, 2008). Because birth cohorts are imprinted with societal values that are dominant during a historical period of the cohort’s youth and carry those imprints into adulthood, successive birth cohorts come to reflect the evolution of culture over time (Ryder, 1965). Building on a rich literature from sociology that shows that American society changed profoundly over the course of the 20th century with respect to environmental concerns (Pampel & Hunter, 2012), individualism (Twenge, Campbell, & Freeman, 2012a; Twenge, Campbell, & Gentile, 2012b), and values related to gender egalitarianism and self-expression (Pampel, 2011a, 2011b), we propose that CEO birth cohorts are associated with those *types* of CSR initiatives that reflect the values that were salient during the historical period in which executives grew up.

On the other hand, age is also associated with life-cycle changes in people’s goals and priorities (the so called ‘time-variant’ age effect). In the context of upper echelons, age therefore also reflects the *career stage* that executives are in. Scholars have shown that CEOs’ commitment to long-term investments changes considerably across their career (Heyden, Reimer, & Van Doorn, 2017; Holmström, 1999; Kang, 2016; Matta & Beamish, 2008; Yim, 2013). This scholarship has focused on two important stages in CEOs’ careers in order to examine executives’ concern for stakeholders. The *career concerns* literature suggests that young CEOs refrain from long-term investments such as CSR at the beginning of their career (Fabrizi *et al.*, 2014). This is because during the early stages of their careers, executives are under greater pressure to deliver short-term performance outcomes to signal their managerial talent to the market (Holmström, 1999). The *career horizon* literature explores CEOs’ willingness to invest in CSR at the end of their careers (Oh, Chang, & Cheng, 2016). As executives approach retirement, they become more myopic and are therefore less likely to make

long-term investments (Matta & Beamish, 2008). Combining insights from both streams of research, we theorize that CEOs differ in the *extent* of their commitment to long-term investments depending on the career stage that they are in. In particular, we propose that the relationship between CEO age and CSR follows an inverted U-shape, so that executives are most likely to address stakeholder concerns during the middle of their career.

We sought support for our hypotheses in a longitudinal dataset of 1,055 CEOs of public U.S. companies who were born between 1917 and 1970. Our study makes a number of contributions. First, the strong growth of scholarship linking executive characteristics to firm outcomes has resulted in what Wowak *et al.* (2017: 669) describe as “increasingly fragmented literatures that can differ widely in their causal accounts of executive behavior.” Our contribution is to integrate currently disparate literatures on executives’ values by simultaneously considering how time-stable differences in values between CEOs and changes in values within CEOs over time affect CSR. This integration allows us to examine the complex ways in which executives’ values change and ultimately influence CSR in different ways. We demonstrate that time-stable differences in values influence *which* CSR initiatives executives prioritize, whereas changes in values across the career affect the *extent* to which CEOs endorse CSR engagement. We thereby also answer multiple prominent calls for holistic perspectives on the drivers of executives’ influence on organizational outcomes (Busenbark *et al.*, 2016; Wowak *et al.*, 2017) that allow a “greater consolidation of knowledge and likely more accurate models of executive behavior” (Wowak *et al.*, 2017: 686).

Second, our findings add to the scholarship that explores how historical events shape individuals’ perceptions and have an enduring effect on the strategic decisions taken by organizational leaders (Bianchi & Mohliver, 2016; Kish-Gephart & Campbell, 2015; Lippmann & Aldrich, 2016; Martin, Côté, & Woodruff, 2016; Simsek, Fox, & Heavey, 2015). By examining how birth cohort membership shapes a CEO’s concern for stakeholders, we

respond to the calls in the literature to empirically test whether generational differences might be the reason why a firm pursues certain *types* of CSR initiatives (Aguinis & Glavas, 2012). We argue that this demographic characteristic has important implications for research on CEOs, as birth cohorts have been shown to additionally differ in other relevant traits such as risk preferences (Jianakoplos & Bernasek, 2006) or leadership attributes (Sessa *et al.*, 2007). More broadly, sociologists have widely relied on the idea of cohort replacement to understand social change. As old guards of traditional values are replaced with younger cohorts who hold different beliefs and values, society transforms through a process of ‘demographic metabolism’ (Ryder, 1965). Therefore, focusing on CEO birth cohorts might prove especially useful for organizational scholars who explore the microdynamics of institutional change (see Lippmann & Aldrich, 2016).

Finally, by considering the ‘time-variant’ perspective on values, we are able to examine how executive behavior changes across the *entire career*. Considering how CEOs’ concern for stakeholders evolves across the entire career—as opposed to focusing on change only during either early or late career stages—enables us to theorize about a nonlinear relationship between CEO age and CSR. We argue that top managers’ commitment to long-term investments is the highest at the middle of their career, a point in time when CEOs feel less pressure from the executive job market and their career horizons are sufficiently long. We thus contribute to research in strategic management by combining two disconnected literatures on executive career dynamics that lead to conflicting views on the relationship between CEO age and CSR (Fabrizi *et al.*, 2014; Oh *et al.*, 2016) through their focus on executive behavior only at the extreme ends of a career.

4.2 Theory and Hypotheses

4.2.1 *Upper echelons and CSR*

The central premise of the upper echelons perspective is that firm strategies are frequently traceable to the values of the individuals who are at the top of the organizational hierarchy (Hambrick & Mason, 1984). Not only do executives have ample discretion in the formulation and implementation of strategies, but they also operate in environments that are too complex and ambiguous for them to comprehend. Because values play a key role in shaping individual perceptions and interpreting the world, strategic choices are highly influenced by executives' values (Hambrick & Mason, 1984). Values are defined as “broad desirable goals that motivate people’s action and serve as guiding principles in their lives” (Sagiv *et al.*, 2017: 630). Most notably, CEO values seem to be particularly relevant in explaining why some firms pursue actions that further certain social and environmental forms of good in a way that goes beyond firms’ legal obligations (Chin *et al.*, 2013; Waldman *et al.*, 2006; Wowak *et al.*, 2016). Chin *et al.* (2013), for instance, provide evidence that firms led by politically liberal CEOs make greater advances in CSR compared to firms headed by politically conservative CEOs. The authors argue that liberal executives are “more likely to endorse the firm’s social engagement and its pluralistic responsibility to multiple stakeholders” (Chin *et al.*, 2013: 204), because the firm’s commitment to the broader society corresponds to their personal value systems. This relationship is made possible due to discretionary nature of CSR initiatives (Petrenko *et al.*, 2016; Wang *et al.*, 2016b), which gives CEOs the opportunity to be deeply involved in shaping and selecting those stakeholder-oriented activities that they *intrinsically* value (Agle *et al.*, 1999; Waldman *et al.*, 2006).²⁸

²⁸ A decision outcome is intrinsically valued when it possesses value ‘for its own sake’ in the eye of the beholder. This stands in contrast to extrinsic valuation, which depends on incentives—for example, monetary rewards.

4.2.2 *CEO age and CSR*

When Hambrick and Mason (1984) formulated the upper echelons perspective, they proposed executives' age as one of the key observable CEO characteristics that could explain variance in organizational outcomes. The authors argued that aging is not merely a biological process but also something that reflects executives' movement through various career stages, which are associated with different prioritizations of strategic investments. Management scholars have adopted two perspectives in order to examine this idea that career stage influences how executives evaluate strategic decisions. On the one hand, researchers have explored how *CEO career horizon*, defined as the time remaining in the executive's career until retirement, affects a decision maker's temporal orientation (Matta & Beamish, 2008). This stream of research argues that CEOs tend to forgo long-term investments when they approach retirement (Antia, Pantzalis, & Park, 2010), because they are less likely to reap the benefits from investments that might pay off only after they retire (Dechow & Sloan, 1991; Matta & Beamish, 2008).²⁹ On the other, the literature on *CEO career concerns* focuses on executives' behaviors at the outset of their careers (Holmström, 1999). This perspective states that younger managers are under greater scrutiny relative to their older counterparts, because their ability is unknown to the market (Serfling, 2014; Yim, 2013). Hence, younger CEOs are more likely to neglect long-term investments and instead focus on boosting short-term performance, which is easier to evaluate.

²⁹ In addition to shirking time horizons, CEOs that near retirement might also become concerned with their legacy. Matta and Beamish (2008) argue that concerns over legacy induce avoidance of strategic investments that might dampen firm performance in the short run and therefore damage executives' reputation during the final years of their employment. This concern is especially pronounced if CEOs seek positions on corporate boards post-retirement and therefore face labor market evaluations (Kang, 2016). In contrast, others have built on this idea and suggested that CSR has become an important part of executives' legacy, therefore CEOs might be reluctant to reduce investment in CSR as they approach retirement (Kang, 2016). While it remains an open question whether firm performance or CSR is more the important legacy component, in our empirical context of U.S. corporations firm performance is arguably more salient, given that an overwhelming majority of retired CEOs hold at least one board seat (Brickley, Linck, & Coles, 1999).

Building on the notion that nurturing stakeholder relationships is a long-term investment with a delayed payoff (Kang, 2016; Ortiz-de-Mandojana & Bansal, 2016), both the ‘career horizon’ and ‘career concerns’ perspectives have been applied to research on CSR. For instance, some have argued that CEO age is negatively associated with CSR because executives are less likely to benefit from social and environmental outlays when they are approaching retirement (Oh *et al.*, 2016). In contrast, others have suggested that the association is positive because younger managers avoid investing in CSR and rather focus on delivering short-term financial results to signal their previously unknown ability to the market for managerial talent (Fabrizi *et al.*, 2014). Hence, the existing evidence is inconclusive: both perspectives find support for their respective predictions (Fabrizi *et al.*, 2014; Oh *et al.*, 2016). Both perspectives suggest executives’ concern for stakeholder well-being changes with age: one focuses only on the early stages of the career and the other just on the late stages of it.

In contrast, lifespan psychologists explore how personal values change across an individual’s *entire* adulthood (Gouveia *et al.*, 2015; Jaspers & Pieters, 2016). In lifespan psychology, arguments are made about change in values as a function of developmental priorities, opportunities, and obstacles that people face during different life stages (Heckhausen *et al.*, 2010). These arguments are analogous to those made in the CEO career literature. For example, during young adulthood people are more self-oriented as they focus on acquiring material resources and building a career, whereas middle adulthood is characterized with an increased altruistic concern due to the growing importance of family and community (Erikson, 1950). There is mounting evidence in the lifespan literature that change in personal values follows a curvilinear trajectory across life (Gouveia *et al.*, 2015; Jaspers & Pieters, 2016; Milojev & Sibley, 2016). In a large longitudinal study, for instance, Jaspers and Pieters (2016) found that materialistic values decrease in middle adulthood (reaching the lowest value around the age of 55) but then increase again during advanced age. Similarly, other scholars have also

found that middle-aged people are more intrinsically motivated (and thus less extrinsically motivated) than younger and older people are (Sheldon & Kasser, 2001). In contrast to extrinsic goals such as financial success, image, and fame, intrinsic motives include increased emphasis on community well-being, close relationships with family members, and environmental values (Hurst *et al.*, 2013; Kasser & Ryan, 1996).

Prior studies on executive career dynamics and CSR either compared early-career CEOs against all older CEOs or late-career CEOs against all younger CEOs. However, lifespan research suggests that changes in executives' concern for the well-being of stakeholders should be examined across the entire career span. We therefore theorize that the relationship between CEO age and CSR is nonlinear.³⁰ Compared to their middle-aged counterparts, younger and older CEOs will be more negatively associated with CSR. At the beginning of their executive careers, younger CEOs are driven by greater career concerns and prioritize leaving their mark on the executive job market (Fabrizi *et al.*, 2014). Extrinsic values are therefore the most salient at this early stage. Relative to middle-aged CEOs, younger CEOs are less inclined to prioritize CSR that are unlikely to produce returns in the short term but have higher intrinsic value. As these young executives age, however, the growing importance of family and decreased career concerns facilitate the development of intrinsic values, thereby increasing their concern for stakeholders. Finally, as CEOs enter an advanced age, their career horizons shrink (Antia *et al.*, 2010). Compared to their middle-aged counterparts, executives nearing retirement will increasingly forgo social and environmental investments that may not be realized during their tenure (Oh *et al.*, 2016). Therefore, we formulate the following hypotheses:

³⁰ It is not necessary that adding up two opposite linear relationships yields a curvilinear form, but it could still result in a linear relationship that is either positive, negative, or flat. However, the key point in our argument is that the two opposing mechanisms operate at different ends of the CEO's career, the positive one at the beginning and the negative one at the end. Combining them in a single trajectory thus yields a curvilinear curve.

Hypothesis 1: The relationship between CEO age and (all types of) CSR initiatives follows an inverted U-shaped trajectory.

4.2.3 CEO birth cohort and CSR

Upper echelons scholarship that studies executives' dispositions (see Chatterjee & Hambrick, 2007; Chin *et al.*, 2013) has primarily explored how temporally stable differences among CEOs contribute systematically to variability in firm outcomes. While heterogeneity in CEOs' values is usually taken as given (Koch & Wernicke, Forthcoming), recent research has also started to explore how these differences are formed early in life (Bernile, Bhagwat, & Rau, 2016; Bianchi, 2014; Bianchi & Mohliver, 2016; Kish-Gephart & Campbell, 2015; Malmendier, Tate, & Yan, 2011). One study, for example, has shown that social-class origins have an enduring and differential impact on executives' risk-taking preferences, even in cases where the individual in question was raised in a lower socioeconomic class than that typically inhabited by CEOs. (Kish-Gephart & Campbell, 2015).³¹ A common view among researchers who explore how executives' dispositions are formed early in life is that the cognitive repertoire and value system of a CEO become *imprinted* during a sensitive period with certain features of the environment (e.g., Bianchi & Mohliver, 2016; Koch & Wernicke, Forthcoming) and that this imprint has a persistent influence on strategic choices despite environmental changes later on (Marquis & Tilcsik, 2013).

Surprisingly, the influence of the prevailing cultural context early in executives' lives has been largely absent from this body of research. In contrast, commencing with the seminal work by Ryder (1965), sociologists have long expressed great interest in how values and ideologies differ across birth cohorts. Because adolescents and young adults are especially sensitive to

³¹ The authors argue that growing up in an upper social class produces a heightened sense of security and control, whereas a lower-class upbringing engenders a 'nothing to lose' perspective, both of which positively affect individuals' tendencies to take risks.

environmental imprinting, birth cohorts exhibit heterogeneity due to a systematic variation in cultural context during these formative years (Alwin & McCammon, 2003). When successive historical periods differ with respect to the dominant values and ideologies, the emerging birth cohorts tend to reflect these differences. This suggests that early-life cultural influences represent a rich source of time-stable heterogeneity in individual values. We propose that historical events that gave rise to differences between adjacent birth cohorts can be especially useful in predicting the types of CSR initiatives that executives are likely to value more.

American society changed profoundly throughout the 20th century. With respect to salient societal values, scholars of social change have emphasized the development of two sets of values: postmaterialism and individualism (Baumeister, 1987; Bianchi, 2016; DeWall *et al.*, 2011; Greenfield, 2013; Inglehart, 1977; Myers, 2000; Pampel, 2011b; Pampel & Hunter, 2012; Twenge, 2006). *Postmaterialist values* represent a broad set of values that emphasize self-expression, environmental concern, and quality of life (Inglehart, 1977). People adopt postmaterialist values in times of resource abundance and economic security. In contrast, societies that experience war and economic hardship put more emphasis on material values, because goals such as material sustenance, physical security, and survival acquire top priority (Inglehart, 2008). *Individualistic values* capture the extent to which individuals are likely to conceptualize the self in individual rather than communal terms (Triandis, 1995). In societies that celebrate individualism, the self is construed as autonomous and unique (Hofstede, 1980; Markus & Kitayama, 1991; Triandis, 1995). When a culture is highly individualistic and its social ties are loose, people are expected to look after themselves, follow their personal goals, and relate to each other rationally by evaluating potential gains and losses (Hofstede, 1991). In contrast, in collectivistic societies the self is defined through relationships with others (Hofstede, 1980; Markus & Kitayama, 1991; Triandis, 1995). Collectivists, who include the surrounding social context within the boundary of the self, aspire to achieve group goals and

conform to social expectations, and they are highly attentive to others' needs (Markus & Kitayama, 1991).

4.2.3.1 CEO postmaterialist values and CSR

In the United States, the postwar cohorts grew up in times of remarkable economic growth and experienced the rise of the welfare state. Faced with unprecedented prosperity, these cohorts were imprinted with a sense of economic security that allowed them to develop more strongly postmaterialist values in comparison to cohorts that came before them (Inglehart, 2008). When the postwar cohorts eventually became a major cultural and political force, the enactment of their values through, for example, civil rights movements instigated social transformation (Inglehart, 1977, 1990). This shift in public values was the driving force behind the emergence of new norms that supported an increasing adoption of views that favored gender egalitarianism, an emphasis on individual self-expression (Pampel, 2011a, 2011b), and an acceptance of homosexuality (Baunach, 2011). The increase in postmaterialist values also became discernible in the rising awareness of environmental issues on a national scale throughout the 1960s, which eventually culminated in the celebration of Earth Day in 1970, an event that is frequently interpreted as the emergence of a widespread American environmental movement (Dunlap, 1989; Dunlap & Mertig, 1992). Building on these developments, research has shown that birth cohorts born in the 20th century reflect a historical increase in postmaterialist values, such that, compared to older birth cohorts, younger birth cohorts hold stronger proenvironmental views (Pampel & Hunter, 2012) and positions that support gender egalitarianism (Pampel, 2011a, 2011b) and homosexuality (Baunach, 2011).

We argue that unlike CEOs belonging to the older birth cohorts, CEOs who belong to younger birth cohorts have been exposed during their formative years to the rise and diffusion of postmaterialist values throughout society. Because these CEOs were imprinted with a set of

values that emphasize environmental concern, gender egalitarianism, and individual self-expression, firms led by CEOs from younger cohorts are more likely to implement environmental and diversity initiatives because those types of CSR practices reflect their imprinted values:

Hypothesis 2: Relative to CEOs belonging to older birth cohorts, CEOs from younger birth cohorts are associated with more firm environmental initiatives.

Hypothesis 3: Relative to CEOs belonging to older birth cohorts, CEOs from younger birth cohorts are associated with more firm diversity initiatives.

4.2.3.2 CEO individualistic values and CSR

Similar to the development of postmaterialist values, individualism also increases with national prosperity as societies modernize (Baumeister, 1987) and become more complex (Greenfield, 2009). According to Bianchi (2016: 568), “urbanization, declining family size, and greater educational attainment all transform modes of living and working in ways that promote self-reliance and dampen the pull of collective needs and expectations.” Due to the remarkable economic growth that occurred in the postwar period, people in the United States became decreasingly dependent on others, and society as a whole therefore experienced a shift towards individualistic values (Bianchi, 2016). This decay in communal values and promotion of greater emphasis on the individual rather than on society (Baumeister, 1987; DeWall *et al.*, 2011; Greenfield, 2013; Myers, 2000; Twenge, 2006) occurred despite American society’s deep rooting in a culture of self-reliance since its beginnings (Oyserman, Coon, & Kimmelmeier, 2002). Exploring whether increasing individualism over time instilled a lack of communal values in young people, studies have found that younger birth cohorts indeed appear to exhibit a decline in concern for communities (Twenge *et al.*, 2012a) and score higher on individualistic traits (Twenge *et al.*, 2008).

Given the increase in individualism over time, we expect that CEOs belonging to younger birth cohorts will be less likely than their older peers to define their self through their relationships with stakeholders in the local communities in which they are embedded, because they have been exposed during their formative years to an increasingly individualistic culture. As they care less about communal values and cohesion, they will tend to be less attentive to their subordinates and the local community context in which they operate, and therefore they will be less likely to consider how their strategic decisions impact the well-being of these stakeholders. Hence, we hypothesize the following:

Hypothesis 4: Relative to CEOs belonging to older birth cohorts, CEOs from younger birth cohorts are associated with fewer firm community initiatives.

Hypothesis 5: Relative to CEOs belonging to older birth cohorts, CEOs from younger birth cohorts are associated with fewer firm employee initiatives.

4.3 Methods

4.3.1 Sample

To test our hypotheses, we used a large panel dataset consisting of individuals who served at some point between 1992 and 2009 as CEOs of U.S. firms listed on the S&P 1500 index. Our dataset draws on several data sources. The macroeconomic data was from the U.S. Bureau of Labor Statistics. Industry classifications and all firm-level financial data were retrieved from Compustat. Information on CEOs was obtained from BoardEx, ExecuComp, and Marquis Who's Who. Lastly, data on CSR were from the Kinder, Lydenberg, and Domini & Co. (KLD) database, the most commonly used data source in empirical studies on CSR (Mattingly, 2017). KLD is an independent investment firm that has provided annual CSR ratings of publicly traded firms since 1991. Although some have discussed the limitations of KLD ratings (Entine, 2003), the dataset has repeatedly been employed in recent CSR studies (e.g., see DesJardine *et al.*,

2017; Gupta *et al.*, 2017; Kang, 2016; Ortiz-de-Mandojana & Bansal, 2016) and is regarded as the most comprehensive data to measure CSR (Petrenko *et al.*, 2016).

We applied a number of criteria to construct the final sample. As we describe in detail below, our analytic strategy requires us to isolate the influence of individual CEOs while at the same time controlling for firm and industry heterogeneity. To ensure that we were able to disentangle stable differences between CEOs that are due to birth cohort membership from stable differences between firms, we excluded firms in which we could not observe at least two different CEOs. We also required that an executive held the top position for at least two consecutive years. This condition was necessary to at least minimally capture both stable differences between CEOs and changes within CEOs (Wowak *et al.*, 2016). To sufficiently account for unobserved heterogeneity at the industry level, we required that an industry contained at least five firms across the sample (Chin *et al.*, 2013). Following related prior studies, we based industry classifications on two-digit SIC codes (Gupta *et al.*, 2017) and excluded highly regulated industries, where a CEO's discretion over social or environmental investment might be very limited (McNamara *et al.*, 2005).

In 2010, KLD implemented methodological changes to its inventory (Gupta *et al.*, 2017), thereby making comparisons with previous years tenuous (Chin *et al.*, 2013). We therefore ended our observation period in 2009. The final sample was an unbalanced panel that consisted of 1,055 CEOs at 463 firms in 28 industries (or 4,776 CEO-year observations) and that spanned an 18-year period from 1992 to 2009.³²

³² Because some control variables were lagged by one year, the sample did not start in 1991.

4.3.2 Age-period-cohort identification problem

To make valid inferences about how CSR is associated with executives' birth cohort membership and changes in career stages, it is important to disentangle the effects of age (A), the period (P) of measurement, and the birth cohort (C) (Fienberg & Mason, 1985).³³ Known as the 'APC identification problem', the linear dependency between age, period, and birth cohort renders identification of any single effect challenging. If the year of observation and birth year are known, then age is also known ($A = P - C$). Within a given cross-section, individuals of a similar age belong to the same birth cohort, and because of this age and cohort effects cannot be estimated simultaneously (Yang & Land, 2013). To overcome this challenge, cohort-sequential designs have been developed in which longitudinal data from several overlapping age groups are combined (Miyazaki & Raudenbush, 2000). By linking segments of longitudinal data on a specific age cohort together with similar segments from other adjacent age cohorts, a cohort-sequential design allows for a simultaneous estimation of intraindividual changes across lifespan (or, in our case, executive career) and differences between birth cohorts (Yang & Land, 2013).

An additional confounding of effects due to the APC identification problem arises from the fact that individuals belonging to older birth cohorts are overwhelmingly present only in the earlier periods of the sample (and, conversely, younger cohorts are largely present only in later periods). This dependency between birth cohort and period is shown in Figure 4.1, which displays sample proportions of birth cohorts throughout the entire period of observation.

³³ Period effects are associated with changes over time that are due to environmental influences that affect the entire population simultaneously (Yang & Land, 2008).

Figure 4.1: Sample proportions of birth cohorts by year.



To disentangle birth cohort and period effects, Heckman and Robb (1985) developed the ‘proxy variable approach’, in which the period effect is substituted with an empirical measure that captures the underlying reason for changes in the outcome variable that are due to environmental influences. The advantage of such a measure is that it tends not to vary linearly with age and birth cohorts (Heckman & Robb, 1985). We used the proxy variable approach and thereby assumed that CEO values related to CSR are associated with period effects due to macroeconomic fluctuations. This is because economic expansions and rising prosperity spur the development of postmaterialist values and individualism (Bianchi, 2016; Hofstede, 1980; Inglehart, 1977, 1990). We therefore proxied period effects with *unemployment rate* (U.S. Bureau of Labor Statistics, 2017), because this variable is weakly tied to time trends, and it has been frequently used to explore how macroeconomic cycles affect values and behaviors (Bianchi, 2016).

4.3.3 Estimation

We used the two-stage approach of Jaspers and Pieters (2016) to estimate the age and birth cohort effects in longitudinal settings. In the first stage, we specified a multilevel model that describes within-CEO developmental changes (e.g., how the association between CEO age and CSR changes across the CEO's career), while accounting for the unobserved heterogeneity at multiple levels of analysis and the nested structure of observations (Yang & Land, 2013). We specified a four-level model to accommodate the structure of our data, because KLD ratings are nested within CEOs within firms within industries. Level 1 describes within-CEO variation over time and is specified first:

$$Y_{ijkt}^g = \gamma_{0ijk}^g + \beta_1^g \text{age}_{ijkt} + \beta_2^g \text{age}_{ijkt}^2 + \beta_3^g \text{Unemployment rate}_t + \beta_4^g X_{ijkt} + \varepsilon_{ijkt}^g \quad (1)$$

where Y is the observed outcome on CSR initiative g for CEO i in firm j in industry k in year t . γ_0 is the random intercept for CEO i in firm j in industry k , while β_1 and β_2 are the linear and quadratic effects of CEO age. β_3 represents the period effect as proxied by the unemployment rate. The term X_{ijkt} denotes the vector of time-variant control variables, while ε_{ijkt} represents the error term. To account for the nested structure of observations, the variation in the random intercept γ_0 is partitioned further. Level 2 captures the between-CEO heterogeneity:

$$\gamma_{0ijk}^g = \gamma_{00jk}^g + \alpha_{0ijk}^g \quad (2)$$

where γ_{00jk} is the random intercept for a firm j in industry k and α_{0ijk} is a CEO-specific effect. Between-firm heterogeneity is estimated at Level 3:

$$\gamma_{00jk}^g = \gamma_{000k}^g + \pi_{00jk}^g \quad (3)$$

where γ_{000k} is the average outcome for an industry k and π_{00jk} is a firm-specific effect.

Finally, at Level 4 we model between-industry variation:

$$\gamma_{000k}^g = \gamma_{0000}^g + \eta_{000k}^g \quad (4)$$

where γ_{0000} is the population intercept and η_{000k} is an industry-specific effect. Combining Equations 1, 2, 3, and 4 in the first stage thus yields a mixed model consisting of fixed and random effects:

$$Y_{ijkt}^g = \beta_1^g \text{age}_{ijkt} + \beta_2^g \text{age}_{ijkt}^2 + \beta_3^g \text{Unemployment rate}_t + \beta_4^g X_{ijkt} + \gamma_{0000}^g + \eta_{000k}^g + \pi_{00jk}^g + \alpha_{0ijk}^g + \varepsilon_{ijkt}^g \quad (5)$$

Importantly, the CEO-specific term α_{0ijk} in Equation 5 captures the average increase or decrease in the dependent variable that is associated with each individual CEO (i.e., ‘time-stable’ between-CEO differences). Hence, in the second stage, the CEO-specific intercept α_{0ijk} becomes the dependent variable in an ordinary least squares (OLS) regression model:

$$\alpha_{0ijk}^g = \omega_0^g + \omega_b^g \sum_{b=1}^6 \text{Cohort}_{bi} + \omega_7^g Z_i + v \quad (6)$$

where we estimate the CEO birth cohort effects ω_b by means of six dummy variables, each of which represents a birth cohort. The oldest birth cohort (CEOs born before 1936) represents the benchmark group located at the intercept ω_0 . Z_i denotes the vector of other CEO time-invariant control variables, and v is the error term. In summary, the two-stage approach estimates the effect of CEO age and accounts for the period effect in a multilevel model in the first stage, while allowing the means of CEO-specific intercepts to vary systematically between birth cohorts in an OLS model in the second stage. We used Stata commands *xtmixed* and *reg*, respectively.

4.3.4 Dependent variables

KLD provides firm ratings for strengths and concerns along several stakeholder categories.³⁴ We focused on those categories that reflect the CSR initiatives that we hypothesize about: *environment*, *diversity*, *community*, and *employees*. We computed dependent variables by subtracting the sum of concerns from the sum of strengths for each stakeholder category (Gupta *et al.*, 2017; Kang, 2016; Petrenko *et al.*, 2016; Wong *et al.*, 2011; Wowak *et al.*, 2016). Summation of strengths and concerns in a single index reflects the view that firms' social and environmental engagement consists of both maximizing positive impacts and minimizing negative ones on stakeholders (Chin *et al.*, 2013; Wong *et al.*, 2011).

4.3.5 Independent variables

We followed the conventional approach in the APC literature (Jaspers & Pieters, 2016; Milojev & Sibley, 2016) and operationalized *CEO birth cohort* based on executives' birth years within five-year intervals. To avoid any potential bias associated with insufficient birth cohort size, we allowed the intervals for the youngest and the oldest cohort to span more than five years (Yang, 2008). Table 4.1 reports the number of CEOs in each of the seven birth cohorts in the sample.

The concept and measurement of birth cohort is similar to the concept of generations. Whereas apparently arbitrary operationalization of birth cohort as a group of people born within some birth year interval reflects the idea that birth cohort is an atheoretical construct that is somewhat agnostic to the historical process which produced it (Parry & Urwin, 2011), a generation is defined as a group of individuals who “coalesce into a self-conscious group based on date of birth, social proximity to historical events, and a consciousness of

³⁴ Given the widespread use of KLD ratings in the literature, we do not describe these categories in detail. For a comprehensive description, see Waddock and Graves (1997).

belongingness, or an awareness of the ways in which those events connect them to others” (Lippmann & Aldrich, 2016: 662). The concept of generation requires that a generational unit exhibits a high degree of self-awareness as a group. In practice, however,, birth cohort is often employed as a proxy of generational units (Parry & Urwin, 2011).

Table 4.1: Number of CEOs in each birth cohort.

Cohort	Number of CEOs
Cohort 1: –1935	117
Cohort 2: 1936–1940	141
Cohort 3: 1941–1945	172
Cohort 4: 1946–1950	189
Cohort 5: 1951–1955	189
Cohort 6: 1956–1960	155
Cohort 7: 1961–	92
Total	1,055

To define a generation one needs to precisely identify (1) the historical *event* that separated one generation from another (how long did it last and how did it develop?) and (2) the age at which young individuals stop being overwhelmingly susceptible to environmental influences. As both elements are theoretically elusive and therefore hard to pin-point, there is a lack of consensus among scholars which birth years of those being considered count as generational cut-off point (Parry & Urwin, 2011). For instance, Cennamo and Gardner (2008) define Generation X as those individuals born between 1962 and 1979, whereas Smola and Sutton (2002) as those born between 1965 and 1977. In contrast, our theoretical arguments are based on historical *processes* for which we do not assume any specific functional form—for example, we only argue that individualism in the U.S. increased over time. This increase could be linear, non-linear or even in a form of a ‘categorical’ break. Moreover, we do not theorize the exact years during which young individuals are most susceptible to cultural imprinting. Hence, being a neutral construct that more easily lends itself to empirical analysis, birth cohort is better apt

for testing our hypotheses, because birth cohort dummies based on a relatively short birth year intervals do not assume any functional form for the historical process that produced them.

CEO age was based on the executive's age in the given year. We included both linear and quadratic terms to assess whether the relationship between CEO age and the outcome variable is nonlinear (Hypothesis 1).

4.3.6 Control variables

Our econometric specification of a multilevel model accounted for the nested structure of the data, thereby controlling for time-stable unobserved heterogeneity at the industry, firm, and CEO level.

We also controlled for several firm-specific factors that might influence CSR. We measured: firm size as *sales* (logged) (Gupta *et al.*, 2017); firm performance as the *return on assets* (ROA) (Wowak *et al.*, 2016); *slack resources* as the ratio of current assets to current liabilities (logged) (Petrenko *et al.*, 2016); *financial leverage* as the ratio of long-term debt to market equity (logged) (Chin *et al.*, 2013); and *research and development* (R&D) *intensity* as the ratio of R&D expenditures to sales (logged) (McWilliams & Siegel, 2000).³⁵ All firm-level variables are lagged by one year.

Lastly, we controlled for several CEO-specific factors that the prior literature found to be correlated with CSR: *CEO tenure* as the number of years in the top position (logged) (Petrenko *et al.*, 2016); *CEO duality* as a dummy variable that equals one if the CEO is also the chairman of the board (Wowak *et al.*, 2016); *short-term pay focus* as the ratio of the dollar value of bonuses earned by the CEO during the year to the total value of compensation (McGuire, Dow,

³⁵ Because data for R&D expenditures are often missing, we replaced those observations with zero to avoid reducing the sample size. However, firms that do not report their R&D expenditures do not necessarily have no R&D activity, and so we included in all models a dummy variable that equals one where we set the observations with missing data on R&D expenditures to zero (Koh & Reeb, 2015).

& Argheyd, 2003); *long-term pay focus* as the ratio of the dollar value of restricted stock and stock options to the total value of compensation (Deckop *et al.*, 2006); *CEO gender* as a dummy variable that equals one if the executive is a female (Manner, 2010); and *MBA degree* as a dummy variable equal to one if the executive attained an MBA degree (Slater & Dixon-Fowler, 2010).

4.4 Results

The correlation matrix and descriptive statistics are reported in Table 4.2. Table 4.3 presents the results for our test of Hypothesis 1 on CEO age. In Models 1 to 3, the dependent variable is the measure of *environmental* initiatives; in Models 4 to 6, the dependent variable is the measure of *diversity* initiatives; in Models 7 to 9, the dependent variable is the measure of *community* initiatives; and in Models 10 to 12, the dependent variable is the measure of *employees* initiatives. Models 1, 4, 7, and 10 are with control variables only, whereas Models 2, 5, 8, and 11 include a linear CEO age term. In all of the latter, the coefficients on the linear CEO age term are insignificant. In Models 3, 6, 9, and 12 we add the quadratic CEO age term to test for the nonlinear effects of aging. The negative and significant quadratic coefficient in Models 6 (*diversity*) and 9 (*community*) lends partial support to Hypothesis 1's proposition that the relationship between CEO age and CSR initiatives follows an inverted U-shape.³⁶ We depict plots of estimated trajectories of a firm's diversity and community initiatives across the CEO's career in Figure 4.2.

³⁶ We followed Haans, Pieters, and He (2016) to formally test for the inverted-U shape effect of CEO age. For both Models 6 (*diversity*) and 9 (*community*), we used *nlcom* command in Stata to confirm that the slope is positive (negative) and significant at the low (high) end of the CEO age range.

Table 4.2: Correlations and descriptive statistics.

Variables	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. CSR	0.33	2.81	-9.00	14.00																								
2. Community	0.17	0.74	-2.00	4.00	0.54																							
3. Diversity	0.67	1.39	-2.00	7.00	0.59	0.32																						
4. Employees	0.02	1.07	-4.00	5.00	0.54	0.12	0.10																					
5. Environment	-0.18	1.06	-5.00	4.00	0.61	0.21	0.09	0.10																				
6. Unemployment rate	5.55	1.29	4.00	9.30	-0.03	-0.03	0.00	-0.07	0.02																			
7. Prior year ROA	0.05	0.11	-2.61	0.50	0.13	0.07	0.09	0.14	0.06	-0.09																		
8. Prior year sales (log)	8.00	1.42	0.94	12.96	0.03	0.15	0.41	-0.01	-0.21	-0.01	0.15																	
9. Prior year slack resources (log)	0.51	0.58	-2.28	3.09	0.03	-0.03	-0.23	0.07	0.16	0.05	0.03	-0.37																
10. Prior year financial leverage (log)	4.50	2.16	0.00	8.73	-0.15	0.00	0.07	-0.11	-0.22	-0.06	0.00	0.45	-0.45															
11. Prior year R&D intensity (log)	2.76	2.59	0.00	9.41	0.25	0.22	0.21	0.19	0.09	0.02	0.04	0.22	0.20	-0.10														
12. CEO tenure (log)	1.55	0.84	0.00	3.89	0.02	0.03	-0.04	0.02	0.03	0.03	0.06	-0.02	0.07	0.02	0.00													
13. CEO duality	0.63	0.48	0.00	1.00	-0.03	0.07	0.06	-0.00	-0.11	-0.09	0.03	0.21	-0.16	0.28	0.05	0.32												
14. Short-term pay focus	0.14	0.16	0.00	1.00	0.02	0.08	-0.07	0.08	-0.01	-0.13	0.04	0.04	-0.09	0.09	-0.04	0.13	0.17											
15. Long-term pay focus	0.48	0.27	0.00	1.00	0.05	0.03	0.17	0.03	-0.04	-0.06	0.05	0.20	0.01	0.03	0.22	-0.16	-0.01	-0.42										
16. CEO age	55.06	6.78	34.00	80.00	-0.07	0.01	-0.09	-0.00	-0.07	-0.02	0.03	0.06	-0.06	0.18	-0.05	0.45	0.31	0.15	-0.16									
17. CEO gender	0.02	0.16	0.00	1.00	0.15	0.05	0.26	-0.04	0.04	0.02	0.00	-0.04	-0.01	-0.09	-0.01	-0.03	-0.03	-0.03	0.01	-0.11								
18. MBA degree	0.36	0.48	0.00	1.00	0.04	0.11	0.05	-0.01	0.04	-0.01	0.05	0.07	-0.07	0.06	0.15	-0.02	0.02	-0.01	0.11	-0.09	-0.03							
19. Cohort 1: -1935	0.10	0.30	0.00	1.00	-0.01	0.07	-0.13	0.04	0.00	0.07	0.02	-0.05	0.01	0.01	-0.01	0.31	0.17	0.17	-0.17	0.46	-0.05	-0.10						
20. Cohort 2: 1936-1940	0.16	0.37	0.00	1.00	-0.00	0.04	-0.08	0.08	-0.06	-0.10	0.04	0.02	0.00	0.10	0.03	0.18	0.17	0.17	-0.08	0.33	-0.07	-0.04	-0.14					
21. Cohort 3: 1941-1945	0.18	0.39	0.00	1.00	-0.01	0.05	-0.01	0.02	-0.03	-0.13	0.02	0.04	-0.09	0.09	-0.08	0.05	0.10	0.09	0.01	0.19	-0.05	0.01	-0.15	-0.20				
22. Cohort 4: 1946-1950	0.19	0.39	0.00	1.00	-0.03	-0.06	0.06	-0.01	-0.07	-0.03	-0.01	0.05	-0.07	0.02	0.01	-0.07	-0.01	-0.05	0.03	0.03	0.00	0.07	-0.16	-0.21	-0.23			
23. Cohort 5: 1951-1955	0.17	0.38	0.00	1.00	0.02	-0.03	0.08	-0.08	0.07	0.05	-0.01	0.06	0.01	0.04	-0.04	-0.16	-0.08	-0.11	0.10	-0.21	0.06	0.04	-0.15	-0.20	-0.22	-0.22		
24. Cohort 6: 1956-1960	0.14	0.34	0.00	1.00	0.03	-0.01	0.07	-0.03	0.05	0.08	-0.01	-0.05	0.09	-0.15	0.08	-0.15	-0.19	-0.15	0.07	-0.41	0.11	-0.02	-0.13	-0.17	-0.19	-0.19	-0.18	
25. Cohort 7: 1961-	0.07	0.25	0.00	1.00	0.01	-0.05	-0.01	-0.02	0.05	0.12	-0.05	-0.12	0.11	-0.18	0.01	-0.15	-0.22	-0.13	0.01	-0.49	-0.01	0.02	-0.09	-0.12	-0.13	-0.13	-0.12	-0.11

Table 4.3: 1st stage multilevel models.

Variables	(1) Environment	(2) Environment	(3) Environment	(4) Diversity	(5) Diversity	(6) Diversity	(7) Community	(8) Community	(9) Community	(10) Employees	(11) Employees	(12) Employees
Unemployment rate	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	-0.01* (0.01)	-0.01* (0.01)	-0.02** (0.01)	-0.01 (0.00)	-0.01 (0.00)	-0.01* (0.00)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Prior year ROA	0.21** (0.09)	0.21** (0.09)	0.21** (0.09)	-0.08 (0.12)	-0.08 (0.12)	-0.09 (0.12)	-0.06 (0.07)	-0.06 (0.07)	-0.06 (0.07)	0.65*** (0.12)	0.65*** (0.12)	0.65*** (0.12)
Prior year sales (log)	-0.13*** (0.02)	-0.13*** (0.02)	-0.13*** (0.02)	0.36*** (0.03)	0.36*** (0.03)	0.36*** (0.03)	-0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.08*** (0.02)	-0.08*** (0.02)	-0.08*** (0.02)
Prior year slack resources (log)	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	-0.05 (0.04)	-0.05 (0.04)	-0.05 (0.04)	-0.02 (0.02)	-0.02 (0.02)	-0.01 (0.02)	-0.02 (0.04)	-0.02 (0.04)	-0.02 (0.04)
Prior year financial leverage (log)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.02** (0.01)	-0.02** (0.01)	-0.02** (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.03*** (0.01)	-0.03*** (0.01)	-0.03*** (0.01)
Prior year R&D intensity (log)	0.10*** (0.02)	0.10*** (0.02)	0.10*** (0.02)	0.13*** (0.02)	0.13*** (0.02)	0.13*** (0.02)	0.07*** (0.01)	0.07*** (0.01)	0.07*** (0.01)	0.15*** (0.02)	0.15*** (0.02)	0.15*** (0.02)
CEO duality	0.03 (0.03)	0.03 (0.03)	0.03 (0.03)	-0.08** (0.03)	-0.08** (0.03)	-0.09** (0.03)	0.05*** (0.02)	0.05*** (0.02)	0.05** (0.02)	0.03 (0.03)	0.03 (0.03)	0.03 (0.03)
CEO tenure (log)	0.02 (0.01)	0.03 (0.02)	0.03 (0.02)	0.17*** (0.02)	0.18*** (0.02)	0.18*** (0.02)	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)	-0.03* (0.02)	-0.03 (0.02)	-0.03 (0.02)
Short-term pay focus	-0.13** (0.06)	-0.13** (0.06)	-0.13* (0.06)	-0.26*** (0.08)	-0.26*** (0.08)	-0.24*** (0.08)	0.16*** (0.05)	0.16*** (0.05)	0.16*** (0.05)	0.31*** (0.08)	0.31*** (0.08)	0.32*** (0.08)
Long-term pay focus	-0.06 (0.04)	-0.06 (0.04)	-0.06 (0.04)	-0.01 (0.05)	-0.01 (0.05)	-0.01 (0.05)	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	0.05 (0.05)	0.05 (0.05)	0.05 (0.05)
CEO age		-0.00 (0.00)	0.03 (0.02)		-0.00 (0.00)	0.10*** (0.03)		0.00 (0.00)	0.05*** (0.02)		-0.00 (0.00)	0.03 (0.03)
CEO age ²			-0.00 (0.00)			-0.00*** (0.00)			-0.00*** (0.00)			-0.00 (0.00)
Constant	0.56*** (0.18)	0.63*** (0.23)	-0.16 (0.70)	-2.60*** (0.22)	-2.48*** (0.28)	-5.23*** (0.88)	0.13 (0.12)	0.11 (0.16)	-1.21** (0.51)	0.13 (0.17)	0.21 (0.24)	-0.73 (0.83)
Observations	4,776	4,776	4,776	4,776	4,776	4,776	4,776	4,776	4,776	4,776	4,776	4,776
Number of industries	28	28	28	28	28	28	28	28	28	28	28	28
Number of firms	463	463	463	463	463	463	463	463	463	463	463	463
Number of CEOs	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055
Wald Chi ²	62.67	62.97	64.44	665.74	666.28	679.11	75.80	75.85	83.33	131.75	132.07	133.02
Prob > Chi ²	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

Figure 4.2: The effect of CEO age on diversity and community initiatives.

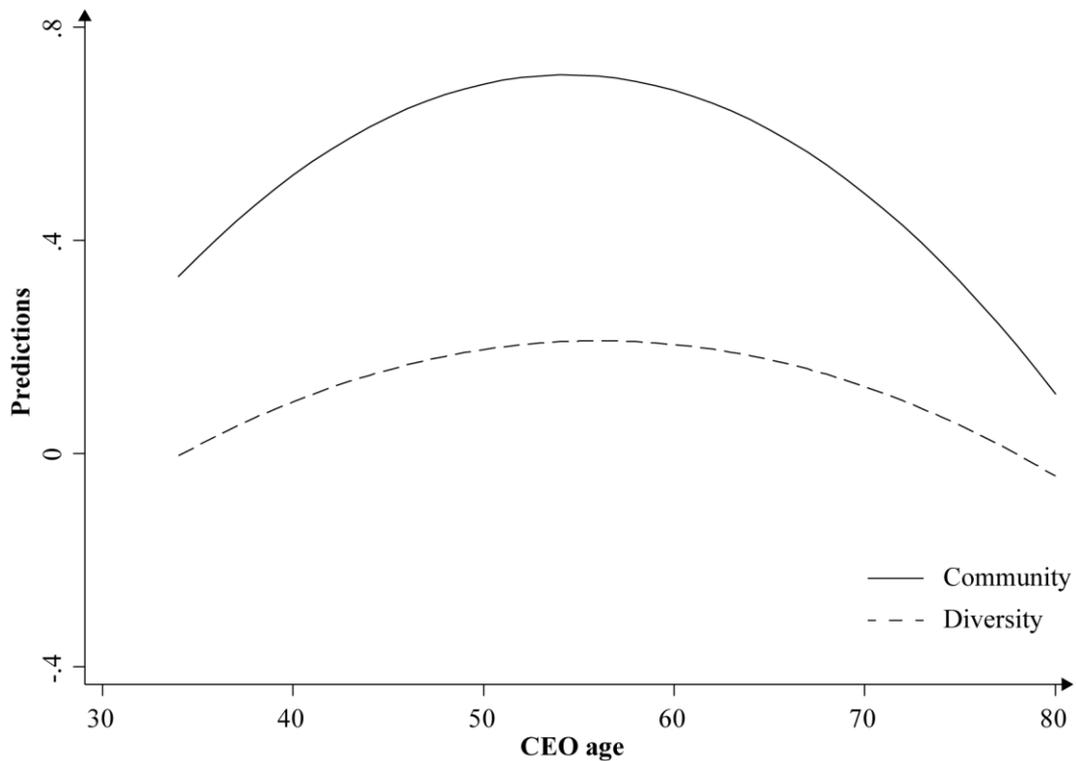


Table 4.4 reports the results for our test of Hypotheses 2 to 5 on CEO birth cohorts. In all models, the dependent variable consists of CEO-specific intercepts from the corresponding full models in the first stage (Table 4.3; Models 3, 6, 9, and 12). For example, CEO-specific intercepts from Model 3 in Table 4.3 are the dependent variable in Model 1 in Table 4.4. In Models 1 and 2, the coefficients of younger birth cohorts are positive and significant, providing support for Hypotheses 2 and 3, where we posited that relative to their older peers, CEOs belonging to younger birth cohorts will be associated with more *environmental* and *diversity* initiatives. In Hypotheses 4 and 5, we predicted that relative to their older peers, CEOs who belong to younger birth cohorts will be associated with fewer *community* and *employees* initiatives. Negative and significant coefficients of younger birth cohorts in Models 3 and 4 support these predictions.

Table 4.4: 2nd stage OLS models.

Variables	(1) Environment	(2) Diversity	(3) Community	(4) Employees
CEO gender	0.01 (0.08)	0.68*** (0.09)	0.03 (0.03)	-0.22*** (0.07)
MBA degree	0.01 (0.02)	0.01 (0.03)	0.02 (0.01)	0.00 (0.03)
Cohort 2: 1936–1940	-0.03 (0.05)	0.08* (0.05)	-0.04 (0.03)	-0.02 (0.05)
Cohort 3: 1941–1945	-0.02 (0.04)	0.14*** (0.05)	-0.05* (0.03)	-0.06 (0.05)
Cohort 4: 1946–1950	-0.01 (0.04)	0.28*** (0.05)	-0.11*** (0.02)	-0.14*** (0.05)
Cohort 5: 1951–1955	0.10** (0.05)	0.35*** (0.05)	-0.11*** (0.03)	-0.20*** (0.05)
Cohort 6: 1956–1960	0.06 (0.04)	0.33*** (0.05)	-0.11*** (0.03)	-0.18*** (0.05)
Cohort 7: 1961–	0.07 (0.04)	0.35*** (0.06)	-0.09*** (0.03)	-0.15*** (0.06)
Constant	-0.03 (0.03)	-0.24*** (0.03)	0.07*** (0.02)	0.12*** (0.03)
Observations	1,055	1,055	1,055	1,055
R ²	0.02	0.13	0.03	0.04
F	2.44	22.52	4.61	6.09
Prob > F	0.01	0.00	0.00	0.00

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

4.4.1 Sensitivity analyses

We conducted a range of auxiliary analyses to assess the robustness of our findings. Although a five-year interval is the conventional measure of birth cohorts (Yang, 2008), some studies operationalize birth cohorts with ten-year intervals (Yang & Land, 2013). To test whether birth cohort effects are sensitive to such differences in their operationalization, we measured CEO

birth cohorts as ten-year intervals. Table 4.5 reports the number of CEOs in each of the three birth cohorts in the sample.

Table 4.5: Number of CEOs in each ten-year birth cohort.

Cohort	Number of CEOs
Cohort 1: –1940	258
Cohort 2: 1941–1950	361
Cohort 3: 1951–	436
Total	1,055

As Table 4.6 shows, the use of a more coarse-grained operationalization of CEO birth cohorts in the second stage of the analysis yields similar results for Hypotheses 2, 3, 4, and 5. In Models 1 (*environment*) and 2 (*diversity*), the coefficient on the youngest birth cohort is positive and significant, whereas in Models 3 (*community*) and 4 (*employees*) it becomes negative and significant. Overall, the results appear to be robust to a coarser classification of birth cohorts.

Table 4.6: 2nd stage OLS models with ten-year birth cohorts.

Variables	(1) Environment	(2) Diversity	(3) Community	(4) Employees
CEO gender	0.01 (0.08)	0.68*** (0.09)	0.03 (0.03)	-0.22*** (0.07)
MBA degree	0.01 (0.02)	0.01 (0.03)	0.01 (0.01)	0.00 (0.03)
Cohort 2: 1941–1950	0.00 (0.03)	0.17*** (0.04)	-0.06*** (0.02)	-0.09*** (0.03)
Cohort 3: 1951–	0.09*** (0.03)	0.30*** (0.03)	-0.09*** (0.02)	-0.17*** (0.03)
Constant	-0.04* (0.02)	-0.20*** (0.03)	0.05*** (0.01)	0.11*** (0.03)
Observations	1,055	1,055	1,055	1,055
R ²	0.02	0.12	0.02	0.03
F	4.75	38.43	6.86	10.66
Prob > F	0.00	0.00	0.00	0.00

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

To address the concern that proxy variables do not sufficiently account for variation in the outcomes that is due to period influences, we specified a crossed mixed-effects model that is identical to the model shown in Equation 7, except that we replaced the unemployment rate with random year intercepts:

$$Y_{ijkt}^g = \beta_1^g \text{age}_{ijkt} + \beta_2^g \text{age}_{ijkt}^2 + \beta_3^g X_{ijkt} + \lambda_{0t}^g + \gamma_{0000}^g + \eta_{000k}^g + \pi_{00jk}^g + \alpha_{0ijk}^g + \varepsilon_{ijkt}^g \quad (7)$$

where λ_{0t}^g is a year-specific intercept that captures the extent to which the average outcome in each year differs from the population intercept and hence represents a more conservative control for period effects in comparison to the unemployment rate. The model is cross nested because observations are, on the one hand, nested within CEOs i , who are nested within firms j , which are nested within industries k , whereas on the other hand, observations are simultaneously also nested within years t (Pampel & Hunter, 2012; Yang, 2008).

The results indicate that the effect of CEO age on CSR initiatives reported in Table 4.3 is robust and remains stable after controlling for both CEO- and year-specific influences. The relationship between CEO age and *diversity* ($\beta_{\text{age}} = 0.10$, $p = 0.00$; $\beta_{\text{age}}^2 = -0.00$, $p = 0.00$) and *community* ($\beta_{\text{age}} = 0.05$, $p = 0.01$; $\beta_{\text{age}}^2 = -0.00$, $p = 0.01$) initiatives follows an inverted U-shape, whereas CEO age does not significantly affect *environment* ($\beta_{\text{age}} = 0.02$, $p = 0.48$; $\beta_{\text{age}}^2 = -0.00$, $p = 0.44$) and *employees* initiatives ($\beta_{\text{age}} = 0.05$, $p = 0.12$; $\beta_{\text{age}}^2 = -0.00$, $p = 0.12$). Next, we examined whether modeling random year intercepts in the first stage influences CEO birth cohort effects in the second stage (Equation 6). Compared to the unemployment rate, employing random year intercepts as a period control generally causes CEO birth cohorts to become statistically insignificant. Given the linear dependency between CEO birth cohort and the year of observation, these findings are not surprising and point to the APC identification

problem. However, it is important to note that with the exception of *diversity* initiatives, the signs of coefficients on CEO birth cohorts remain in line with our hypotheses.³⁷

Another concern might be that recent birth cohorts include more CEOs with different origins. Namely, in the recent decades the U.S. business landscape witnessed an increasing inclusion of ethnic minorities into upper echelons (Hillman, Cannella Jr, & Harris, 2002). To the extent that ethnic differences among CEOs can account for different patterns of firm CSR engagement, it could be that birth cohort effects that we estimated reflect not only historical changes in societal values, but ethnic differences as well. We explored this possibility and reestimated our models by including dummy variables for CEO nationality. The sample size was reduced to 3,839 firm-year observations as we lacked information on 239 CEOs. After controlling for CEO nationality, we found that the results did not change, thereby suggesting that our estimates of birth cohort effects do not reflect differences in CEO ethnic background.³⁸

Research that explores how executives' concern for stakeholders relates to career stages tends to employ composite measures of CSR (e.g., see Kang, 2016). To ensure comparability, we computed a single measure of CSR. We subtracted the sum of all concerns from the sum of all strengths for all the stakeholder categories contained in the KLD database.³⁹ When an aggregate measure of CSR is used in the first stage of the analysis, the results provide strong support for an inverted U-shaped relationship between CEO age and CSR, and this result is robust to controlling for period effects with the unemployment rate ($\beta_{age} = 0.16, p = 0.01; \beta_{age}^2 = -0.00, p = 0.01$) or to using random year intercepts ($\beta_{age} = 0.16, p = 0.01; \beta_{age}^2 = -0.00, p =$

³⁷ Analyses are available upon request.

³⁸ Analyses are available upon request.

³⁹ We exclude KLD ratings for *corporate governance* category from this measure, because those ratings are not directly related to social and environmental practices of the firm (Servaes & Tamayo, 2013).

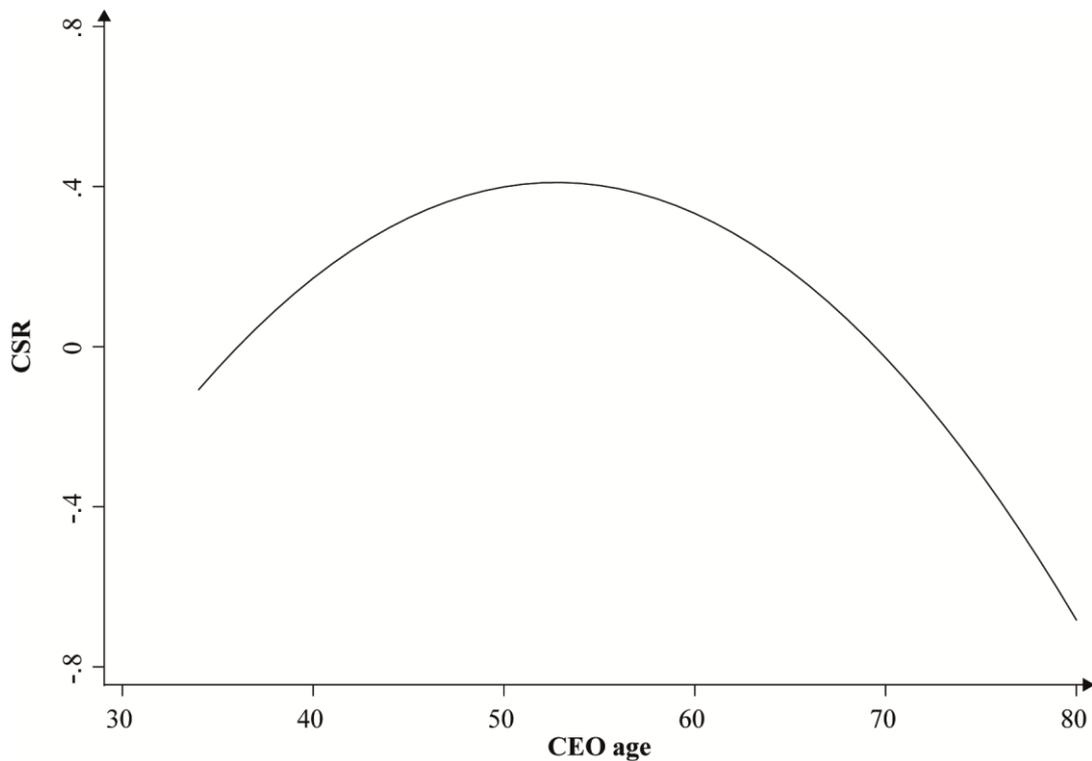
0. 01). We depict plot of estimated trajectory of CSR initiatives across the CEO's career in Figure 4.3. We document no effect of CEO birth cohort (measured as a five- or ten-year interval) on the unidimensional measure of CSR.⁴⁰

4.5 Discussion

Management scholars have repeatedly shown that top executives' values are an important antecedent of variability in CSR (Agle *et al.*, 1999; Chin *et al.*, 2013; Waldman *et al.*, 2006). However, the growing body of literature in this field has resulted in two separate streams of research: one that examines how changes in values *within* executives relate to changes in CSR, and one that explores how stable differences in values *between* CEOs lead to heterogeneity in CSR. In this study, we respond to multiple calls for more holistic models of drivers of executive behavior (Busenbark *et al.*, 2016; Wowak *et al.*, 2017) by exploiting the dual aspect of age, a fundamental demographic characteristic of CEOs. CEO age enables us to simultaneously investigate how executives' concern for stakeholders changes across their careers and how CEOs systematically differ in values related to CSR initiatives depending on the historical period in which they grew up. Our results indicate that both sources of influence on executives' values contribute to variability in organizational outcomes in unique ways. Early-life experiences within a cultural context influence *which* CSR initiatives executives are more likely to prioritize, whereas movement through various career stages affects the *extent* to which CEOs are likely to invest in CSR, regardless of the birth cohort that they belong to. We thus add to the management literature by integrating two perspectives on executives' values to provide a more complete understanding of how organizational outcomes come to reflect those organizations' top managers.

⁴⁰ Analyses are available upon request.

Figure 4.3: The effect of CEO age on CSR.



Our finding that the relationship between CEO age and CSR follows an inverted U-shape suggests that executives are most likely to address stakeholder concerns during the middle of their careers. Prior studies on executive career dynamics have exclusively focused either on early (Fabrizi *et al.*, 2014; Holmström, 1999) or on late stages (Matta & Beamish, 2008; Oh *et al.*, 2016) of the career. Both streams of research have assumed a linear association between CEO age and long-term investments such as CSR, but they have provided opposite predictions. In contrast, we have theorized about how executives' commitment to CSR changes across their *entire* careers. Not only are CEOs less likely to promote long-term investments early in their careers, when they have greater concerns about their professional prospects, but they are also less likely to do so later on in them, when their time horizons are shortening. Consideration of both views implies that executives who are in the middle stages of their careers are best suited to engaging in long-term strategizing. We contribute to the literature on executive career dynamics by theorizing a nonlinear relationship between CEO age and CSR and thereby

providing novel insights into how managerial behavior changes with career advancement. For example, we point out that although executives exhibit more myopic behaviors as they approach retirement, this does not imply that *all* younger CEOs who have longer career horizons are more likely to commit to long-term investments, because younger CEOs are also faced with greater career concerns.

However, although supplementary analyses indicate a robust inverted U-shape relationship between CEO age and a composite measure of CSR, this finding does not hold for all stakeholder dimensions. In particular, our results suggest that executives' concern for stakeholders changes across their careers only with respect to *diversity* and *community* initiatives, but not for *environment* and *employees* initiatives. This finding underscores the growing awareness among researchers that the use of a composite measure of CSR might obscure our understanding of underlying stakeholder dimensions (Aguinis & Glavas, 2012). Although scholars have suggested several CSR categorizations—for example, strategic and tactical CSR (DesJardine *et al.*, 2017)—we find no stakeholder classification that could account for the pattern of our results. A possible explanation could be that CEOs have different degrees of discretion with respect to various CSR initiatives, although we found in Chapter 3 that CEOs explain similar amount of variance across all stakeholder dimensions contained in the KLD database.

To examine stable difference in values between CEOs, we built on the idea that individuals who grow up in successive historical periods that differ with respect to dominant culture are imprinted with values that reflect these differences (Ryder, 1965). Because early-life cultural imprints persist throughout adulthood (Pampel & Hunter, 2012), we propose that the birth cohorts to which executives belong can provide important insights into why firms engage in certain CSR initiatives. In line with our hypotheses, our results indicate that relative to CEOs who belong to older birth cohorts, CEOs from younger birth cohorts are associated with more

environmental and *diversity* initiatives, but fewer *community* and *employees* ones. This finding suggests on the one hand that younger birth cohorts have greater concerns for the environment and self-expression because they have been exposed to the rise of environmental and civil rights movements early in life (Pampel, 2011a, 2011b; Pampel & Hunter, 2012). On the other hand, the growing economic prosperity and increasing individual freedoms during the formative years of younger birth cohorts seems to have engendered more individualistic values (Twenge *et al.*, 2012a; Twenge *et al.*, 2008), such that CEOs from younger cohorts are less concerned with how their strategic decisions affect the well-being of local communities and their subordinates.

We contribute to the CSR scholarship by combining literatures on upper echelons and birth cohorts to theorize about why executives allocate resources toward certain CSR initiatives but not toward others. In doing so, we respond to the calls to articulate the motives that lead executives to prioritize the needs of one stakeholder group over another (Wang *et al.*, 2016b). Examination of birth cohorts and how they have been subject to an early-life imprinting of ‘zeitgeist’ is also of great relevance to the strategic management literature that explores how leaders affect organizational outcomes (e.g., Chin *et al.*, 2013), because birth cohorts represent a profound source of heterogeneity in individuals’ values (Alwin & McCammon, 2003). Future studies could examine whether heterogeneity in firms’ strategic risk is related to CEO birth cohort, given that in the general population younger birth cohorts appear to be willing to take fewer financial risks (Jianakoplos & Bernasek, 2006). More generally, such cohort-based research is particularly interesting as it allows one to investigate whether and how the imprinting of past experiences on CEOs has lasting effects on firms’ contemporary strategies. To the extent that history continues to shape the present via CEO cohorts, the replacement of one generation by the next would be an important driver of macrolevel organizational change, in addition to individual life-cycle changes and shifts in contemporary norms and practices.

Our study makes an important empirical contribution to organizational research that explores time-dependent phenomena in upper echelons in which different sources of change in CEO values operate simultaneously. To understand the dynamics of change in such circumstances, researchers need to address the APC identification problem to make valid inferences about the sources of change. One might consider, for example, narcissism, an important executive disposition that is commonly featured in the management literature and has been linked to important organizational outcomes such as firm performance (Chatterjee & Hambrick, 2007), adoption of discontinuous technologies (Gerstner *et al.*, 2013), and CSR (Petrenko *et al.*, 2016). Research on narcissism in the United States suggests that: (1) people become less narcissistic as they age (Foster, Keith Campbell, & Twenge, 2003); (2) there are stable differences in narcissism between individuals born in successive historical periods (Twenge *et al.*, 2008); and (3) the overall population has become generally more narcissistic over the past decades (Twenge & Campbell, 2009). Each perspective attributes changes in CEOs' levels of narcissism to a different source, but the sources are clearly intertwined. Hence, to further disentangle the different sources of change in CEO narcissism, and by extension the associated heterogeneity of salient organizational outcomes, the APC framework would clearly be informative.

4.5.1 Limitations

Our study is not without limitations. It could be argued that the executives' birth years represented in our sample do not adequately span time periods to yield age groups that profoundly differ in their experiences of historical events, because we examine only seven birth cohorts (or three, depending on the operationalization). Future studies, however, could investigate differences between far more distant birth cohorts. As individuals born during the last decades of the 20th century start to enter the population of CEOs, scholars could explore the behavior of executives whose values were shaped in an era when free-market ideology and

shareholder-value movements were dominant social forces (Davis & Kim, 2015; Mizruchi & Marshall, 2016). Related to this, we could not address concerns about the low convergent validity of different CSR ratings (Chatterji *et al.*, 2016). This is because KLD ratings represent the only available CSR dataset that covers a longer observation period and therefore captures a sufficient movement of birth cohorts throughout the population of executives. Hence, we could not assess the sensitivity of our results to differences in how social rating agencies measure CSR.

The cohort-sequential design of our analytic approach, which enables us to study the association between CEO age and CSR, is based on the assumption that changes in executives' values across their careers are common to all birth cohorts (Jaspers & Pieters, 2016). However, it could be that CEO birth cohorts might not only differ in their time-stable values but may also develop different trajectories of values across the cohort members' careers. Unfortunately, we are unable to identify such interactions between age and birth cohort, because the executives from older birth cohorts whom we observed were predominantly in the later stages of their careers, and those from younger cohorts were largely in the earlier phases of theirs.

Finally, due to the large size of our dataset, it was not feasible to collect information on CEOs in order to account for differences in personality traits or other psychological characteristics. While ordinarily a lack of such control variables might give rise to endogeneity concerns, it is important to emphasize that a CEO's year of birth is by construction exogenous with respect to personality traits. This is because date of one's birth always precedes any psychological development. It follows then, to the extent that differences in personality or experiences are related to birth cohorts, it is because they are themselves a consequence of differences among birth cohorts. However, this implies that birth cohort effects might reflect more than just historical changes in societal values, but also different developmental

trajectories between birth cohorts (e.g., different career or educational paths). Future empirical research could thus pinpoint more precisely how successive CEO birth cohorts come to differ.

4.6 Conclusion

Despite the CSR literature's growing interest in top executives' values (Agle *et al.*, 1999; Chin *et al.*, 2013; Waldman *et al.*, 2006), extant research remains fragmented in its account of executive behavior. In this study, we examined the dual aspect of a single demographic characteristic, namely CEO age. Our results indicate that executives' concern for stakeholders follows an inverted U-shaped trajectory across their careers. At the same time, we suggested and found empirical evidence that the age variable also captures time-stable differences in values between CEO birth cohorts that exist due to differences in early-life experiences within a cultural context and that determine the type of CSR initiatives that executives are more likely to prioritize. We therefore integrated time-variant and time-stable perspectives on CEOs' values to demonstrate the complex ways in which executives change and influence firm outcomes.

CHAPTER 5:

CEO Greed, Corporate Social Responsibility, and Organizational Resilience: An Empirical Analysis of the 2008 Global Financial Crisis

In this study, we explore how top executives affect the well-being of multiple stakeholders and long-run organizational outcomes. In the context of the 2008 Global Financial Crisis (GFC), we examine how CEO greed impacts firms' stance towards corporate social responsibility (CSR) prior to the onset of the GFC and how this, in turn, shapes firms' fate during and after the GFC. We argue that CEO greed will be negatively associated with CSR, because in their unbridled pursuit of personal wealth, greedy CEOs are more likely to exhibit myopic behaviors and neglect investment in CSR. We also adopt a person-pay interactionist logic to theorize that the willingness of greedy executives to invest in CSR will be especially sensitive to different types of pay instruments. Next, we build on recent findings from research on CSR that suggest that social and environmental engagement is a defining feature of resilient organizations. We expect that, due to low CSR investment, firms led by greedy CEOs will experience greater losses in the short run and will take longer time to recover from the September 2008 collapse. For a sample of 301 CEOs of public U.S. organizations, we analyzed CSR during the 2003-2008 period, and resilience during and after the 2008 GFC. We found support for our hypotheses.

5.1 Introduction

Reflecting on the devastating consequences of the 2008 global financial crisis (GFC) in his address to GM employees, President Obama (2009) condemned the corporate “attitude that's prevailed in Washington and Wall Street [...] for far too long; an attitude that valued wealth over work and selfishness over sacrifice and greed over responsibility.” Echoing this sentiment,

both scholars and the media have suggested that unbridled selfishness of top executives may be detrimental to the livelihood of organizations and the welfare of broader society (Cassidy, 2002; Haynes, Hitt, & Campbell, 2015a; Haynes *et al.*, 2015b; Wang & Murnighan, 2011). Greed, defined as “the pursuit of excessive or extraordinary material wealth” (Haynes *et al.*, 2017: 556), is an individual-level motive characterized by an extreme form of self-interested behavior and a low concern for the well-being of others (Haynes *et al.*, 2015b).⁴¹ Despite the widespread agreement on the destructive consequences of executives’ greed, however, there is surprisingly little empirical evidence to corroborate these concerns. Although management scholars have recently taken first steps to explore the influence of chief executive officer (CEO) greed on organizational outcomes and documented a negative impact on shareholder returns (Haynes *et al.*, 2017), systematic evidence about how greedy behavior of executives affects multiple stakeholders and long-run organizational outcomes is still lacking.

In this study, we aim to address this gap in the management literature. We explore how CEO greed shapes firms’ stance towards corporate social responsibility (CSR) and how this, in turn, affects firms’ resilience to systemic shocks such as the GFC. CSR is an umbrella term for organizational actions that generate benefits for multiple stakeholders beyond legal requirements (McWilliams & Siegel, 2001). Because top executives are directly involved in formulating CSR strategies (Waldman *et al.*, 2006), a burgeoning stream of literature that builds on the upper echelons perspective (Hambrick & Mason, 1984) suggests that the immense variance in CSR between firms reflects the heterogeneity in motives of corporate leaders (Chin *et al.*, 2013; Petrenko *et al.*, 2016; Wowak *et al.*, 2016).

⁴¹ Characterized by a low concern for the self and a high concern for others, altruism is the opposite of greed. Both concepts are extremes of a bipolar continuum (Haynes *et al.*, 2015b).

We rely on the upper echelons perspective to argue that CEOs' greed will be reflected in a diminished social and environmental engagement of their firms. CSR is a long-term-oriented strategic investment with limited immediate payoffs (Kang, 2016), therefore we assume greedy CEOs to be more likely to neglect the needs of non-shareholder stakeholders due to their excessive focus on maximizing short-term profitability (Haynes *et al.*, 2015b). Moreover, because executive behavior is shaped not only by intrinsic, but also by extrinsic motives (Wowak *et al.*, 2017), we also adopt a person-pay interactionist logic (Wowak & Hambrick, 2010) to theorize that the relationship between CEO greed and CSR will be contingent on the type of executive pay arrangements. Several scholars have relied on agency theory (Eisenhardt, 1989; Jensen & Meckling, 1976) to argue that monetary incentives are a powerful tool to channel executives' focus towards stakeholders' needs (Deckop *et al.*, 2006; Flammer *et al.*, 2017; McGuire *et al.*, 2003). As the insatiable acquisition of wealth is a hallmark of greed (Wang & Murnighan, 2011), we suggest that the willingness of greedy executives to invest in CSR will be especially sensitive to different types of pay instruments.

To examine the long-run consequences of CEOs' greed, we investigate whether firms, whose greedy CEOs have instigated poor relations with stakeholders, are also less resilient to environmental disturbances. Organizational resilience is the latent "ability of organizations to anticipate, avoid, and adjust to shocks in their environment" (Ortiz-de-Mandojana & Bansal, 2016: 1615). We build on recent findings from research on CSR that suggest that social and environmental engagement is a defining feature of resilient organizations (DesJardine *et al.*, 2017; Flammer & Ioannou, 2018; Ortiz-de-Mandojana & Bansal, 2016). Investment in CSR contributes to organizational resilience in two ways: first, it builds *stability* by creating interdependencies and strengthening relationships between the firm and its stakeholders, thereby fostering firms' capacity to absorb exogenous shocks; second, it also gives rise to greater *flexibility*, because firms with broad stakeholder engagement gain access to diverse and

distinctive points of view, thereby increasing the set of possible adjustments to external changes (DesJardine *et al.*, 2017). Based on these insights, we expect that, due to low CSR investment, firms led by greedy CEOs will experience greater losses in the short run and will take longer time to recover immediately after the occurrence of a systemic shock.

For a sample of 301 CEOs of public U.S. organizations, we analyzed CSR during the 2003-2008 period, and resilience during and after the 2008 GFC. We found support for most of our hypotheses. Our results suggest that CEO greed was negatively associated with CSR before the 2008 GFC and that this relationship was amplified when executive pay was linked to short-term targets. Furthermore, although we do not find that firms with low CSR investment or greedy CEOs experienced greater drops in stock price in face of the September 2008 collapse, our findings do indicate that both CEO greed and low CSR investment are associated with longer recovery times.

Our study makes a number of contributions. First, we contribute to the management scholarship that seeks to understand the drivers of executive behavior (Bromiley & Rau, 2016; Busenbark *et al.*, 2016; Wowak *et al.*, 2017). By integrating the upper echelons perspective and agency theory to predict why and how CEOs shape firms' CSR profiles and long-run performance, we respond to the calls in the literature to integrate pecuniary and non-pecuniary motives of CEOs as antecedents of strategic decision-making (Wowak *et al.*, 2017). We argue and demonstrate that top managers' concern for organizational stakeholders is driven by a combination of intrinsic (i.e., individual trait) and extrinsic (i.e., monetary incentives) motives.

Second, we complement the CSR literature on organizational resilience (DesJardine *et al.*, 2017; Ortiz-de-Mandojana & Bansal, 2016) by illustrating how corporate leaders promote socially responsible initiatives and, in turn, affect the ability of their firms to cope with environmental disturbances. There is growing evidence of long-term benefits of investment in CSR, yet this research has stopped short of examining the antecedents of differential treatment

of stakeholders. We extend this literature by pointing out that considering executives' motives for CSR is essential for a more complete understanding of the drivers of organizational resilience.

Third, we contribute to the upper echelons research that explores the impact of executives' characteristics on organizational outcomes in face of economic crises (Buyl, Boone, & Wade, 2017; Patel & Cooper, 2014). These studies have examined how executives adopt (reckless) risk-taking strategies and thereby affect the long-run fate of their organizations. We add to this research by proposing that top managers may also impact firms' capacity to endure and bounce back from systemic shocks by neglecting investment in CSR due to their excessive focus on current earnings.

Finally, we contribute to the growing management literature that investigates organizational consequences of executive greed (Haynes *et al.*, 2017; Haynes *et al.*, 2015a; Haynes *et al.*, 2015b; Wang & Murnighan, 2011). This research has examined how CEO greed impacts short-run organizational outcomes such as, for example, firm performance (Haynes *et al.*, 2017). We extend this scholarship by providing evidence that executive greed also has important long-run consequences: it jeopardizes organizations' resilience to systemic shocks.

5.2 Theory and Hypotheses

5.2.1 CSR

The concept of CSR encompasses voluntary organizational actions that go beyond generating benefits only for the firm's owners, but for other stakeholders as well (McWilliams & Siegel, 2001). CSR is a strategic investment that is most likely to drain short-term profits, but creates value in the long run. This temporal tradeoff exists because firms benefit from improved relationships with their stakeholders (e.g., superior reputation), but the development of these relationships is a slow, time-consuming process (Kang, 2016). Firms increasingly exert

organizational effort on or dedicate additional resources towards various stakeholder groups such as employees, customers, communities or the environment (Wang *et al.*, 2016b). Yet there is immense heterogeneity in firms' stance towards CSR (Gupta *et al.*, 2017). To explain this variance, a growing stream of upper echelons studies has explored how top executives shape firms' CSR profiles (Chin *et al.*, 2013; Kang, 2016; Tang *et al.*, 2015; Wowak *et al.*, 2016). This literature has argued that CEOs' values and personality profoundly affect the propensity of firms' CSR engagement, because corporate leaders have considerable discretion over social and environmental outlays (Petrenko *et al.*, 2016; Waldman & Siegel, 2008) and "are often deeply involved in promoting the image of their respective firms through social responsibility" (Waldman *et al.*, 2006: 1704).

5.2.2 Greed

Owing to its origins in Adam Smith's *Wealth of Nations* (Smith, 1977), the concept of economic self-interest has traditionally been viewed as the driving force behind individual decision making in classical economic theories (Wang & Murnighan, 2011). Although this idea has inspired a view of uniformly self-interested agents (Hirschman, 1977), abundant evidence indicates that self-interest is subject to systematic individual differences (De Dreu, 2006; Declerck & Boone, 2016; Meglino & Korsgaard, 2004). According to this research, self-interest exists on a continuum and its two extreme ends represent its bright and dark sides (Haynes *et al.*, 2015b). At the dark end, the expression of ultimate self-interest with a lack of concern for the well-being of others morphs into greed (Haynes *et al.*, 2017; Wang & Murnighan, 2011). Most commonly, greed is viewed as an excessive materialistic desire to acquire material wealth and possessions (Balot, 2001). At the bright side, the lack of self-interest becomes synonymous with altruism (Li, Kirkman, & Porter, 2014). Altruistic individuals are highly concerned for the welfare of others and are willing to forgo on economic benefits to help others (Fehr & Fischbacher, 2003). To the extent that CEOs vary in their

economic self-interest, these individual-level differences might be an important predictor of why firms vary in their responsiveness towards collective social issues.

Individual differences in economic self-interest have long attracted the attention of social psychologists (Robertson, 2001). Relying on game-theoretic research designs, these scholars have repeatedly demonstrated that in prisoners' and social dilemma games greedy individuals tend to opt for defection which endows them with short-term gains at the expense of the group welfare (Bogaert *et al.*, 2008). A vast body of literature in this stream of research points to greed as a powerful motivating force that compels individuals to avoid cooperation or contributing to collective outcomes in order to maximize personal benefits (Wang & Murnighan, 2011). People with increased selfish inclinations seek only to fulfil their own goals, tend to behave opportunistically and free-ride on contributions of others, and are unlikely to engage in long-term mutually beneficial cooperation (Declerck & Boone, 2016). Greedy individuals are 'concerned' for the well-being of others purely for strategic reasons—i.e., when their wealth depends on it (Van Lange, 1999; Van Lange, 2000).

5.2.3 CEO greed and CSR

We expect a negative association between CEO greed and a firm's attention to stakeholder needs due to greedy executives' diminished concern for how their decisions at the behalf of the firm affect the well-being of others. In their unbridled pursuit of financial wealth, greedy CEOs may appropriate firm resources that could have otherwise been allocated towards social issues, or compromise the safety of workers and engender devastating consequences for the natural environment as was the case of the 2010 BP oil spill in the Gulf of Mexico (Haynes *et al.*, 2015b). Moreover, even though corporations face increasing pressures from diverse institutional actors to contribute to social welfare (Wang *et al.*, 2016b), greedy executives are less likely to be receptive to the arguments on the organizational benefits of employee

satisfaction or community engagement (Haynes *et al.*, 2015b), to the extent that these pressures do not endanger CEOs' wealth. The opportunistic tendencies of greedy CEOs are also at odds with commitment to the long-run faith of their organizations and building strong stakeholder relations, given that these executives are more likely to leave the firm in pursuit of greater material wealth in the form of higher compensation or prestige elsewhere (Haynes *et al.*, 2015b).

In addition, we argue that the negative association between CEO greed and concern for stakeholders is especially likely to exist in the contemporary business environment. Namely, the corporate milieu surrounding CEOs is in general geared towards short-term strategies and a reduction in activities that benefit larger communities (Hambrick & Wowak, 2012). This is because the combination of an increase in quarterly earnings pressures that executives face and a steep decline of average CEO tenure over the past decades has led to an increased emphasis on short-term decision-making (Mizruchi & Marshall, 2016). In addition, CEO pay is closely tied to firm performance (Frydman & Jenter, 2010) and firms typically experience declines in market value for failing to reach quarterly targets (Mizruchi & Marshall, 2016). This implies that executives with an excessive desire to accumulate material wealth are expected to have especially pronounced short-term interests. Hence, they are less likely to invest in CSR, because committing resources to social issues such as environmental degradation requires a short-term financial sacrifice that primarily pays off only in the long run (Kang, 2016). Taken together, this leads us to hypothesize:

Hypothesis 1: CEO greed will have a negative impact on a firm's CSR.

5.2.4 The moderating role of monetary incentives

According to agency theory, monetary incentives are an important instrument for influencing the behavior of CEOs (Eisenhardt, 1989; Jensen & Meckling, 1976). For example, this insight

has been used by CSR scholars to argue that certain executive pay arrangements can steer CEOs to adopt longer time horizons, which may lead them to establish and strengthen relationships with the company's stakeholders through repeated interactions (Deckop *et al.*, 2006; Flammer & Bansal, 2017). However, the empirical evidence on the effects of CEO pay on CSR is not clear-cut (Hart *et al.*, 2015). In the case of environmental firm performance, for instance, researchers have found both positive (Berrone & Gomez-Mejia, 2009) and negative (Berrone *et al.*, 2010) effects of long-term oriented executive pay. Given this ambiguity, we build on the person-pay logic proposed by Wowak and Hambrick (2010) to theorize that CEOs' tendency to invest in social and environmental outlays when provided with short- or long-term incentives is contingent on their motives and drives (here: CEO greed).

5.2.4.1 Bonus

We propose that the negative effect of CEO greed on CSR will be more pronounced when a high proportion of executive pay consists of an annual bonus. Financial bonuses are an outcome-based compensation instrument that ties CEO pay to almost exclusively financial objectives (McGuire *et al.*, 2003). Bonuses are characterized by an asymmetric payoff structure: Bonus-based pay rewards executives for attaining year-end financial performance targets, but does not penalize them for failing to achieve the required level of performance (Hou *et al.*, 2013). This represents a strong incentive for CEOs to boost short-term firm performance in order to maximize their personal wealth.

Because social and environmental projects require long-term horizons for financial benefits to accrue (Flammer & Bansal, 2017), scholars have argued and found that CEO pay based on a high proportion of bonuses is negatively associated with investment in CSR (Fabrizi *et al.*, 2014; Manner, 2010). Due to the asymmetric payoff structure of financial bonuses, the focus of executives with a strong desire for the accumulation of personal wealth—i.e., greedy

CEOs—on short-term strategic actions will be exacerbated when their pay heavily depends on annual bonus, potentially even at the expense of damaging stakeholder relations. We expect that large bonus-based pay relative to total compensation will represent a stronger incentive to maximize short-term returns, the greedier the CEO. Therefore, we hypothesize:

Hypothesis 2a: The negative impact of CEO greed on firm's CSR will be more pronounced if a higher proportion of the CEO's pay is an annual bonus.

5.2.4.2 Restricted stock

In contrast, we argue that the negative effect of CEO greed on CSR will be less pronounced when a high proportion of executive pay consists of restricted stock, because restricted stock ownership compels CEOs to adopt long-term horizons. Under such pay arrangement, executives hold stock that cannot be sold until certain conditions are met – usually a continued employment for a period of time (Johnson & Greening, 1999). This implies that, on the one hand, a sizable portion of the executive's wealth becomes tied to long-term performance outcomes, whereas on the other, it also reduces the pressure to maximize earnings in the short run (Deckop *et al.*, 2006). Longer time horizons, in turn, may motivate CEOs to become more cognizant of the importance of social and environmental engagement for continued stakeholder support and legitimacy (Johnson & Greening, 1999). Hence, restricted stock that cannot be sold for a longer period of time incentivizes CEOs to treat stakeholders well and build sustainable enterprises (Hambrick & Wowak, 2012). Empirical evidence supports the idea that long-term oriented executive compensation leads to increased investment in CSR (Deckop *et al.*, 2006; Flammer & Bansal, 2017; Flammer *et al.*, 2017; Mahoney & Thorne, 2005).

This suggest that the negative association between CEO greed and CSR might be contingent on whether executive compensation contains long-term incentives. To the extent that a considerable portion of CEO pay consists of restricted stock, especially executives who

have a strong desire to acquire material wealth might become attuned to the well-being of stakeholders. Because restricted stock ties a CEO's wealth to long-term firm valuations, we expect that the greedier the CEO, the stronger large proportions of restricted stock will incentivize the CEO to consider long-term strategic investments such as CSR. This leads us to hypothesize:

Hypothesis 2b: The negative impact of CEO greed on firm's CSR will be less pronounced if a higher proportion of the CEO's pay is restricted stock.

5.2.5 Organizational resilience to systemic shocks

Organizational resilience is the latent ability of a system to endure despite adversity and to recover and maintain the existing structure (Gunderson & Pritchard, 2002). Two essential properties give rise to resilient systems: stability and flexibility (DesJardine *et al.*, 2017). Stability represents a set of capabilities that enable a firm to preserve its key organizational attributes, such as core function or identity, in face of disturbances (Weick, Sutcliffe, & Obstfeld, 2008), whereas flexibility entails a stock of flexible and diverse resources that facilitate the development of alternative solutions to the same disruption (Sanchez, 1995). Resilient organizations are thus better able to preserve their core structures and to bounce back from setbacks, because they excel at anticipating, absorbing, and adjusting to environmental changes (Ortiz-de-Mandojana & Bansal, 2016).

Research on organizational resilience emphasizes that considering organizational features prior to a systemic shock is essential for understanding how the organization will react to the shock (Buyl *et al.*, 2017). Relying on this idea, we explore how two preshock features—CSR and CEO greed—contribute to the two key dimensions of organizational resilience. We propose that both preshock features play a distinctive role in the creation of stable and adaptive organizations. Investment in CSR fosters resilience through mechanisms that are primarily

external to the firm. For example, due to increased stakeholder support and reciprocity, firms become more strongly embedded in its social and natural environment (Ortiz-de-Mandojana & Bansal, 2016). CEO greed, in contrast, relates to resilience through its impact on internal organizational practices and climate. Because selfish behavior of executives may inspire greedy behaviors across the entire organization and leads to resource depletion (Haynes et al., 2017; Haynes et al., 2015b), it makes organizations more vulnerable to environmental disturbances. We explain both mechanisms in greater detail below.

We assess both facets of resilience by using the stock price data, since market valuations reflect all the relevant and new information about the firm. In line with DesJardine et al. (2017), we evaluate the severity of loss in stock price immediately after the September 2008 collapse to examine stability. To assess flexibility, we consider the time it took firms' stock price to recover to preshock levels (DesJardine et al., 2017).

5.2.5.1 Stability

Social and environmental practices foster the ability of organizations to absorb exogenous disturbances by creating “interdependencies between the organizational system and the social and natural systems in which the organization is embedded” (DesJardine *et al.*, 2017: 5). These interdependencies result from repeated interactions with stakeholders and regularly involve the sharing of resources, values, and information (Albert, Kreutzer, & Lechner, 2015). Organizations that engage in CSR are thus more firmly anchored in the environment in which they operate. For example, employees tend to be more committed to organizations with strong CSR programs, hence they are less likely to depart from the firm when it faces adversity and they are more willing to accept a pay cut to ensure firm survival (Flammer & Luo, 2017). Social and environmental engagement also signals conformity to institutional demands, which leads to increased legitimacy and a diminished exposure to unsystematic market risks (Bansal &

Clelland, 2004). Because investment in CSR signals responsiveness to broader sets of needs of stakeholders such as entire communities, customers or supply chain, stakeholders are more willing reciprocate and share with organizations information about emerging issues or help them identify changes in the environment (Harrison, Bosse, & Phillips, 2010). Firms with high CSR investment are thus strongly embedded in their environment and have deeper relationships with their stakeholders, therefore they are more likely to exhibit greater stability immediately after the onset of a systemic shock. We expect that this will be reflected in less severe drops in the stock price. Hence, we hypothesize:

Hypothesis 3a: The greater preshock CSR, the lesser the severity of loss following a shock.

In addition to its detrimental effect on stakeholder relations, we propose another channel through which greedy executives might also affect the ability of organizations to absorb external shocks: by shaping organizational climate. Organizational climate is defined as the “perceived and recurring patterns of behavior, attitudes, and feelings that characterize life in the organization” (Isaksen, 2007: 456). CEOs can influence and control organizational climate by imprinting firms with their own values through strategic decisions (Agle *et al.*, 1999); by managing the reward systems in the organization (Kerr & Slocum, 2005); by inspiring similar behaviors in lower-level employees (Haynes *et al.*, 2015b); and by attracting and selecting new organizational members with similar values and departing those whose values do not match (Berson, Oreg, & Dvir, 2008). Hence, we suggest that greedy executives who care only about their personal wealth are likely to shape organizations with individualistic climates where employees are encouraged to primarily care about their own wealth as well (Haynes *et al.*, 2015b).

In individualistic organizations, employees are motivated and incentivized to compete with their colleagues (Hart *et al.*, 2015; Lazear & Rosen, 1981), which can give rise to several undesirable conducts such as conflict (Fredrickson, Davis-Blake, & Sanders, 2010),

manipulation of (Milgrom & Roberts, 1988) and lack of sharing of (Eisenhardt & Bourgeois, 1988) information, and self-serving behaviors among TMT members (Fredrickson *et al.*, 2010) and lower-level employees (Connelly *et al.*, 2016). In general, in individualistic organizations transactional interactions between employees and the firm are emphasized, hence employees are less committed to the firm and tend to be less concerned with how they contribute to firm continuity and survival (Brickson, 2007).

Firms can sense and interpret changes in the environment only when there is sufficient attentional capacity throughout the entire organization (Bansal, 2003) and when they are able to capture and share meaningful information that is critical to manage risk (Ortiz-de-Mandojana & Bansal, 2016). Therefore, individualistic organizations are expected to exhibit diminished stability, because they are less likely to integrate multiple perspectives of their members due to a lack of cooperation and because their employees are less likely to pay attention to how their actions affect long-run firm outcomes. In light of this, we argue that firms led by greedy executives will be associated with a depleted ability to anticipate and adjust appropriately to emerging problems which will be reflected in higher losses following a shock. Therefore, we hypothesize:

Hypothesis 3b: The greater preshock CEO greed, the greater the severity of loss following a shock.

5.2.5.2 Flexibility

Not only do increased interdependencies between the organization and its social and natural environment lead to greater stability, but they foster greater flexibility as well (DesJardine *et al.*, 2017). On the one hand, CSR initiatives positively affect stakeholder motivations. For example, workers in firms with positive labor relations may be more willing to adjust their working time and wages, while fair treatment of the supply chain might facilitate the

development of trust and common effort between the firm and its suppliers towards recovery (Ortiz-de-Mandojana & Bansal, 2016). On the other, firms with strong stakeholder relations also gain access to diverse points of view and information. For instance, reciprocal transactions with costumers may lead to faster detection of changes in customer tastes, whereas repeated interactions with other stakeholders can help firms better identify new technologies or environmental threats (Harrison *et al.*, 2010). Furthermore, the resulting increase in knowledge diversity is conducive to firms' ability to navigate uncertain and complex environments (Ferrier, 2001), and it stimulates creativity and innovation (DesJardine *et al.*, 2017) such as, for example, cutting on costs by reducing waste or improving transportation (Ortiz-de-Mandojana & Bansal, 2016). Hence, we expect that firms with high CSR investment will exhibit greater flexibility due to the increased collective will and information sharing among stakeholders. These firms not only depend on stakeholders who are more willing to adapt, but they are also more likely to develop novel solutions in face of adversity. Therefore, they are expected to take less time to recover from systemic shocks:

Hypothesis 4a: The greater preshock CSR, the shorter the time to recovery following a shock.

We also propose that CEO greed will affect the ability of firms to recover from systemic shocks by exhausting internal resources. Namely, greedy executives strive to appropriate excess returns from the firm to satisfy their material desires (Haynes *et al.*, 2017). In addition, to the extent that greedy behavior of the CEO is overt, TMT members and lower-level employees are also more likely to engage in greedy acts, thereby further exacerbating agency costs (Haynes *et al.*, 2015b). In extreme cases, the cultivation of such individualistic organizational climate might even lead employees to steal from the firm (Greenberg, 1990). This implies that greedy behavior of executives results in a depletion of firms' resources, which can profoundly limit organizational ability to recover from a shock (Sutcliffe & Vogus, 2003).

This is because “a sufficient amount of internal resources and the ability to rearrange, transform, and adapt these resources to the uncertain and changed postshock economic conditions” is the key ingredient of flexibility (Buyl *et al.*, 2017: 9). Due to resource depletion, we thus anticipate that firms with greedy CEOs will take longer time to recover from environmental disturbances. Hence, we hypothesize:

Hypothesis 4b: The greater preshock CEO greed, the longer the time to recovery following a shock.

5.3 Methods & Results

5.3.1 Sample

To test our hypotheses, we constructed a panel dataset of CEOs who served prior to the onset of the GFC at public U.S. corporations listed on the S&P 1500 index. Consistent with prior work, we identify September 17, 2008 as the starting date of the GFC, taking place immediately after the fall of the Lehman Brothers and bailout of AIG by the U.S. Federal Reserve (DesJardine *et al.*, 2017). The ensuing economic meltdown resulted in significant corporate losses across industries, markets, and geographies and affected all aspects of the business environment (e.g., firms’ relationships with employees or the supply chain) (Flammer & Ioannou, 2018), thereby making the 2008 GFC an ideal natural setting in which to examine the ability of organizations to absorb and recover from exogenous shocks.

Our dataset was compiled from several data sources. Information on executive compensation and other CEO-related data were retrieved from Execucomp. All firm-level accounting data and industry classifications were obtained from Compustat. Data on board directors were gathered from BoardEx, while information on institutional ownership came from the Thomson-Reuters Institutional Holdings (13F) database. To construct the dependent variables, data were drawn from the Center for Research in Security Prices (CRSP) database

for stock prices and from Kinder, Lydenberg, and Domini & Co. (KLD) database for CSR. KLD is an independent investment firm that provides annual ratings for CSR strengths and concerns under several stakeholder categories (e.g., community, environment, employee relations, diversity, human rights, and product) for publicly traded U.S. firms since 1991. Although scholars have raised concerns about the limitation of KLD ratings to gauge CSR (Entine, 2003), the dataset has been the most widely used data source for empirical research on CSR (Mattingly, 2017), and has repeatedly been employed in studies on upper echelons (Chin *et al.*, 2013; Petrenko *et al.*, 2016; Wowak *et al.*, 2016) and organizational resilience (DesJardine *et al.*, 2017; Flammer & Ioannou, 2018; Ortiz-de-Mandojana & Bansal, 2016).

To construct the final sample, we applied several conditions. We excluded observations with missing data on any of the variables used in the analyses. Following prior work, we excluded highly regulated sectors (i.e., the financial, government, and public) where managerial discretion might be severely curbed (McNamara *et al.*, 2005). Our observation period started in 2003, when KLD greatly expanded firm coverage. To examine the association between CEO greed and CSR, we ended the observation period in 2008, prior to the onset of the GFC. To examine how preshock features affect firm resilience during and after the GFC, we observed firms' stock prices until 2011. To be included in the sample, we required that each CEO was observed for three consecutive years during the 2006-2008 period, in order to capture more than just a snapshot of preshock CEO greed.⁴² Applying these criteria yielded a sample of 301 CEOs.

To test our hypotheses, we used the same matched CEO-firm sample in three sets of analyses that cover different time periods: in Part 1, we examine how CEO greed affects CSR during the 2003-2008 period; in Part 2, we examine how preshock features (CEO greed and

⁴² Each CEO in our sample was observed at least during the 2006-2008 period, but could have entered the sample already in 2003.

CSR) affect the ability of firms to absorb exogenous shocks in the year following September 17, 2008; in Part 3, we examine how preshock features (CEO greed and CSR) affect the ability of firms to recover from adversity during the 2009-2011 period. Because our theoretical predictions rely on explanation of different phenomena (CSR, stability, and flexibility) and require different estimation techniques, we present the methodology and describe the results for each of the three dependent variables in a separate section.

5.3.2 Empirics Part 1: Explaining CSR before the shock

5.3.2.1 Dependent variable

To measure firms' CSR engagement, we used KLD ratings for all stakeholder categories contained in the KLD database (community, diversity, employee relations, environment, human rights and product quality), except for the corporate governance category, because it relates more to mechanisms that enable shareholders to monitor and control managerial behavior in order to maximize the return on investment (Flammer, 2015; Servaes & Tamayo, 2013). Following the common approach in the research on CSR (Chatterji *et al.*, 2016; David, Bloom, & Hillman, 2007; Gupta *et al.*, 2017; Kang, 2016), we measured CSR as the sum of all strength items minus the sum of all concern items across all stakeholder categories. The use of a composite CSR measure reflects the idea that stakeholder relations can improve both by increasing social and environmental engagement and by minimizing negative externalities (Chin *et al.*, 2013; Wong *et al.*, 2011).⁴³

⁴³ An important development in the recent CSR literature is to distinguish between tactical and strategic CSR (Bansal *et al.*, 2015). Whereas strategic CSR requires long-term horizons with significant resource commitments, tactical CSR is oriented towards improving stakeholder relationships in the short-run. This distinction is particularly relevant for understanding how firms respond to certain types of events (DesJardine *et al.*, 2017). For example, tactical CSR such as philanthropic contributions might be particularly useful to quickly garner stakeholder goodwill when environment suddenly changes (Muller & Kräussl, 2011). However, this distinction is less relevant for understanding whether greedy CEOs will engage in CSR in stable environments (e.g., the period we observe prior to the 2008 GFC). Although tactical CSR is easily implemented and can often even be reversed, its positive effects on firm performance nonetheless stem from its contribution to favorable business image and increased reputation, both of which require longer time periods to develop (Kang, 2016).

5.3.2.2 Independent variable

To operationalize the independent variable, we carefully followed Haynes et al. (2017) who recently developed a novel procedure for obtaining an unobtrusive measure of CEO greed. The authors went to great lengths to establish the construct's discriminant and predictive validity, e.g. by conducting several interviews with senior executives, industry analysts, and experts. In addition, they provided empirical evidence to demonstrate that greed is distinct and independent from related constructs such as hubris.

We used three proxies of extraordinary compensation to operationalize *CEO greed* (Haynes et al., 2017). These proxies capture different aspects of abnormal compensation with respect to: (a) the market's view on the appropriate form of compensation; (b) the pay of the next highest paid top executive in the same firm; (c) CEO pay that would be expected based on the known predictors of executive compensation. All three measures represent *actualized* extraordinary wealth, which is an outcome of the latent variable in question—greed, or the pursuit of or desire to acquire excessive material wealth. The use of actualized forms of compensation is important because it relies on unobtrusive indicators from archival data to measure greed. In contrast, the success of primary data collection on a sample of large corporations is not only implausible due to low response rates, but can also be expected to be subject to severe social desirability bias due to sensitivity of the topic. Moreover, in the context of executive pay, weak pursuit of wealth is unlikely to be reflected in abnormally high compensation, because one of the key duties of the board of directors is to evaluate and set the executive pay arrangements (Gupta & Wowak, 2016). This implies that a high score on the compensation-based measure of greed more likely results from an actual pursuit of wealth, rather than being accidental.

The first proxy is the dollar value of *perquisite compensation*—annual compensation not properly categorized as salary, bonus, or long-term incentives (Haynes et al., 2017). This

variable captures the use of perks and various personal benefits, which tend to reflect agency costs and rent extraction, because shareholders do not consider such forms of compensation to reflect pay for managerial ability (Yermack, 2006). Supporting this view, the majority of executives at the S&P 1500 firms receive zero perquisite compensation and the correlation between perks and firm size is negligible (Haynes *et al.*, 2017).

The second proxy is *pay disparity*—the CEO’s cash compensation divided by cash compensation of the next most highly paid officer (Haynes *et al.*, 2017). CEOs yield considerable influence over the pay of their top management team (Chatterjee & Hambrick, 2007). Hence, large pay gaps are highly indicative of the presence of greedy leaders, because uneven distribution of resources is a primary outcome of greed (Wang & Murnighan, 2011).⁴⁴⁴⁵

The third proxy is *CEO overpayment*—that excessive portion of executive compensation that cannot be explained by firm and contextual factors (Haynes *et al.*, 2017). This proxy consists of residuals from a CEO pay regression, where a firm fixed-effects model is estimated along with a number of covariates (Brick, Palmon, & Wald, 2006; Fong, Misangyi, & Tosi, 2010; Wade, O’Reilly III, & Pollock, 2006). Following the standard approach in the literature, we regressed the log of total annual CEO compensation on CEO age, CEO tenure, CEO duality, the percentage of independent directors on board, firm size, firm risk, sales growth, return on assets, and firm and year fixed effects. All explanatory variables were lagged by one year. The resulting adjusted R^2 was 0.67, comparable with prior studies. Because we wanted to capture the excessive portion of executive compensation, CEO overpayment was measured as the

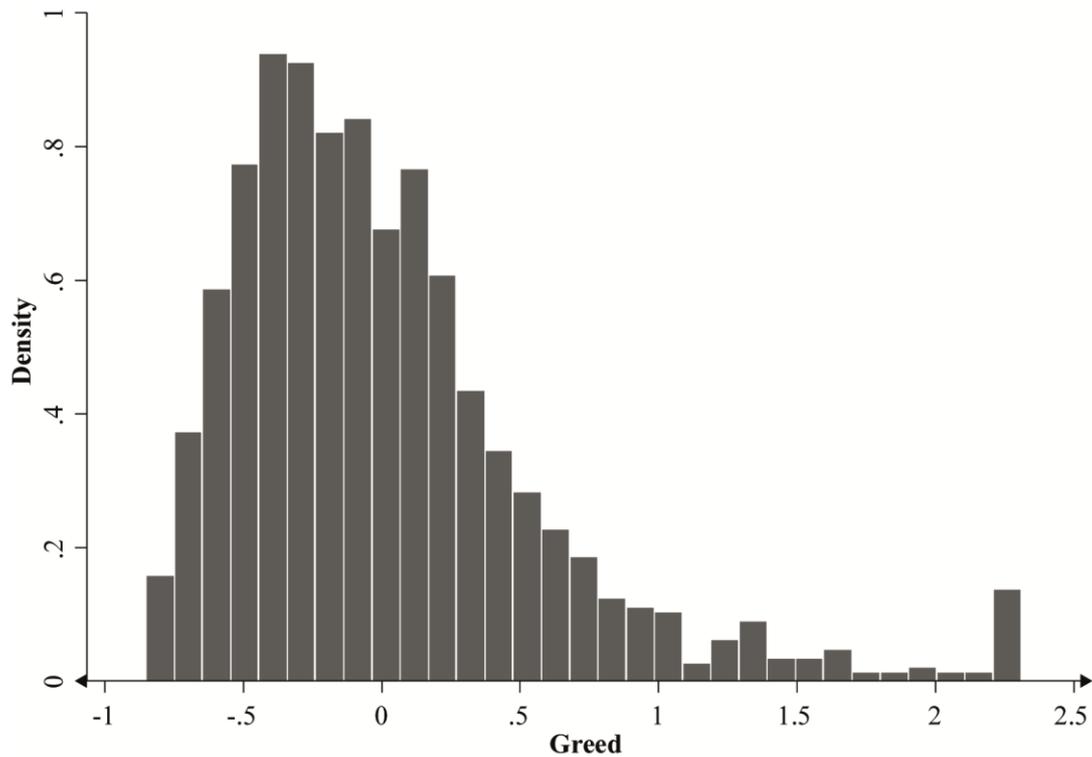
⁴⁴ Pay disparity is also used to construct an unobtrusive measure of CEO narcissism (Chatterjee & Hambrick, 2007; Chatterjee & Hambrick, 2011). Interestingly, Buyl *et al.* (2017) found in their study that this proxy was negatively correlated with other items used to gauge CEO narcissism. This suggests that, in comparison to other items that instead reflect an executive’s attention-seeking behaviors, pay disparity might be less vital to the measure of CEO narcissism.

⁴⁵ Surprisingly, 35 CEOs in our sample actually received less cash compensation than the second most highly paid officer.

residual from the CEO pay regression if the residual was positive and zero otherwise (Carpenter & Sanders, 2002; Haynes *et al.*, 2017).

To construct the independent variable, we combined the three proxies by using principal component analysis with varimax rotation (Haynes *et al.*, 2017). The results revealed significant loadings of all three compensation-based measures of greed on a single factor (eigenvalue = 1.36; 45% variance explained). Hence, we used factor weightings to compute a single measure of CEO greed, which we winsorized at the 1 and 99 percent levels to mitigate the impact of outliers. The distribution of CEO greed is shown in Figure 5.1.

Figure 5.1: Distribution of CEO greed.



5.3.2.3 Moderator variables

We measured *Restricted stock* as the ratio of the annual value of restricted stocks to the total value of all CEO compensation (Deckop *et al.*, 2006) and *Bonus* as the ratio of the annual value of bonus to the total value of all CEO compensation (McGuire *et al.*, 2003).⁴⁶

5.3.2.4 Control variables

To account for macroeconomic fluctuations and industry membership, we include *year* and *industry dummies* (based on 2- digit SIC codes). We control for a number of firm-level covariates that have been widely used in prior work on CSR : *Pre-sample CSR*, measured as the value of firm CSR in the year prior to when the CEO was observed in the sample for the first time (Wowak *et al.*, 2016)⁴⁷; *Firm size* measured as the logarithm of firm sales (Gupta *et al.*, 2017); *Return on assets* measured as the ratio of income before extraordinary items to the book value of assets (Tang *et al.*, 2015); *Slack resources* measured as the logarithm of *long-term debt to market value of equity ratio* (Stevens *et al.*, 2015); *R&D intensity* measured as the logarithm of the ratio of R&D expenses to sales plus 1 (McWilliams & Siegel, 2000)⁴⁸; *Dedicated ownership* measured as the number of shares owned by dedicated institutional investors divided by the total number of shares outstanding (Connelly *et al.*, 2016); *Transient ownership* measured as the number of shares owned by transient institutional investors divided

⁴⁶ In 2006, Execucomp changed calculations of several pay components to reflect new reporting rules required by the SEC. To account for this change, we followed the accepted approach in the literature and accordingly adjusted pre-2006 CEO pay values (e.g., see Gabaix, Landier, & Sauvagnat, 2014; Gupta & Wowak, 2016; Walker, 2011).

⁴⁷ The pre-sample dependent variable is often included as a control for firm conditions at the outset of executive tenure and is usually calculated as an average value of the dependent variable for two or more years prior to the CEO's appointment (e.g., Chin *et al.*, 2013). Unfortunately, following this approach was not feasible because it resulted in an 82 percent reduction of the final sample size.

⁴⁸ The observations with missing data on R&D expenditures were set to zero. However, because firms that do not report their R&D expenditures do not necessarily have zero R&D activity, we created a dummy variable that equals one where we set the observations with missing data on R&D expenditures to zero (Koh & Reeb, 2015). This dummy variable is employed across all models in our study.

by the total number of shares outstanding (Connelly *et al.*, 2016)⁴⁹; *Board independence* measured as the percentage of independent directors on the board (Hart *et al.*, 2015). At the CEO-level, we account for: *CEO duality* measured as a dummy variable that equals to one if CEO is also the chairman of the board (Wowak *et al.*, 2016); *CEO tenure* measured as the logarithm of the number of years in the position (Petrenko *et al.*, 2016).

5.3.2.5 Estimation

Because our data consists of cross-sectional time-series covering the 2003-2008 period, we used panel data analysis. We conducted the Hausman test to select the most appropriate modeling approach. The test failed to reject the null hypothesis, indicating that the random-effect estimator was consistent and therefore appropriate. In our sample, the number of firms equaled to the number of CEOs, hence firm-CEO match was used as the grouping variable. To account for heteroscedasticity and intragroup correlations, we clustered standard errors within the panel. All the independent, moderator and control variables were lagged by one year. This research design alleviates endogeneity concerns due to reverse causality and is in line with our theorized causal direction.

5.3.2.6 Results

The correlation matrix and descriptive statistics are shown in Table 5.1. Table 5.2 reports the random effects model regression results. Model 1 includes control and moderator variables only. The results indicate that *Pre-sample CSR* is a strong predictor of CSR ($\beta = 0.82$, $p = 0.00$). Additionally, larger firms ($\beta = 0.15$, $p = 0.09$) and firms with abundant slack resources (as reflected in lower long-term debt to market value of equity ratios) ($\beta = -0.06$, $p = 0.04$)

⁴⁹ Following the standard approach in the literature, we used Bushee's (1998) categorization of institutional investors. Investors were included in this measure if they held appreciable shares (5% or more) of any of our focal firms. Dedicated owners are defined as those investors that hold large holdings in a limited number of firms for a longer period of time, whereas transient owners are defined as those investors that acquire positions in a wide range of firms and experience high portfolio turnover.

invest more in CSR. Additionally, in line with theoretical expectation, restricted stock is positively associated ($\beta = 0.38$, $p = 0.04$), whereas bonus is negatively associated ($\beta = -0.45$, $p = 0.05$) with CSR. In Model 2, we introduce *CEO greed* and find a negative and significant relationship between executive greed and CSR ($\beta = -0.15$, $p = 0.05$), providing support for Hypothesis 1. A one-SD increase in CEO greed results in a 3.4 percent SD decrease in CSR. In Model 3, we introduce the interaction term between *CEO greed* and *bonus* to test Hypothesis 2a which stated that the negative impact of CEO greed on firm's CSR will be more pronounced if the CEO is paid to a larger degree in bonus. Hypothesis 2a is supported with a negative and significant coefficient of the interaction term ($\beta = -0.67$, $p = 0.05$). All other things being equal, a one-SD increase in CEO greed is associated with a 1.7 percent SD decrease in CSR when the proportion of bonus is low (mean minus one SD), and a 6.5 percent SD decrease in CSR when the proportion of bonus is high (mean plus one SD). To visualize this interaction, we plotted the association between CEO greed and CSR in Figure 5.2 at low and high levels (-1 and +1 SD) of bonus. In Model 4, where we introduce the interaction term between *CEO greed* and *restricted stock*, we fail to find support for Hypothesis 2b. Finally, Model 5 includes all variables and yields further support for the expectation that the combination of greedy executives and short-term oriented compensation (bonus) might have a negative impact on stakeholders.

Table 5.1: Correlations and descriptive statistics.

Variables	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. CSR	-0.28	2.62	-9.00	14.00	1.00													
2. Pre-sample CSR	-0.05	2.16	-8.00	9.00	0.72	1.00												
3. Firm size (log)	7.68	1.48	3.94	12.84	-0.02	-0.06	1.00											
4. Return on assets	0.07	0.06	-0.65	0.50	0.09	0.09	0.09	1.00										
5. Debt-equity ratio (log)	4.16	2.54	0.00	8.73	-0.17	-0.13	0.50	-0.20	1.00									
6. R&D intensity (log)	0.04	0.10	0.00	1.21	0.19	0.12	-0.28	-0.33	-0.26	1.00								
7. Dedicated ownership	0.10	0.07	0.00	0.37	0.10	0.09	0.08	0.00	0.03	0.12	1.00							
8. Transient ownership	0.16	0.09	0.00	0.64	0.00	-0.04	-0.25	0.03	-0.17	0.09	-0.08	1.00						
9. Board independence	0.79	0.12	0.25	0.94	0.05	-0.03	0.19	-0.02	0.24	0.02	0.04	0.02	1.00					
10. CEO duality	0.59	0.49	0.00	1.00	0.01	0.03	0.21	0.03	0.19	-0.09	0.04	0.02	0.21	1.00				
11. CEO tenure (log)	1.98	0.70	0.69	3.58	0.00	0.01	-0.24	0.09	-0.19	0.14	0.04	0.11	-0.13	0.19	1.00			
12. Restricted stock	0.18	0.22	0.00	0.94	-0.06	-0.10	0.26	-0.05	0.24	-0.13	0.04	-0.08	0.16	0.07	-0.09	1.00		
13. Bonus	0.14	0.17	0.00	0.97	-0.04	-0.01	0.01	0.06	0.09	-0.11	-0.05	-0.00	-0.11	-0.02	-0.12	-0.20	1.00	
14. CEO greed	0.02	0.58	-0.85	2.31	-0.02	-0.06	0.19	0.12	0.14	-0.02	0.04	0.03	0.09	0.14	0.10	0.25	-0.07	1.00

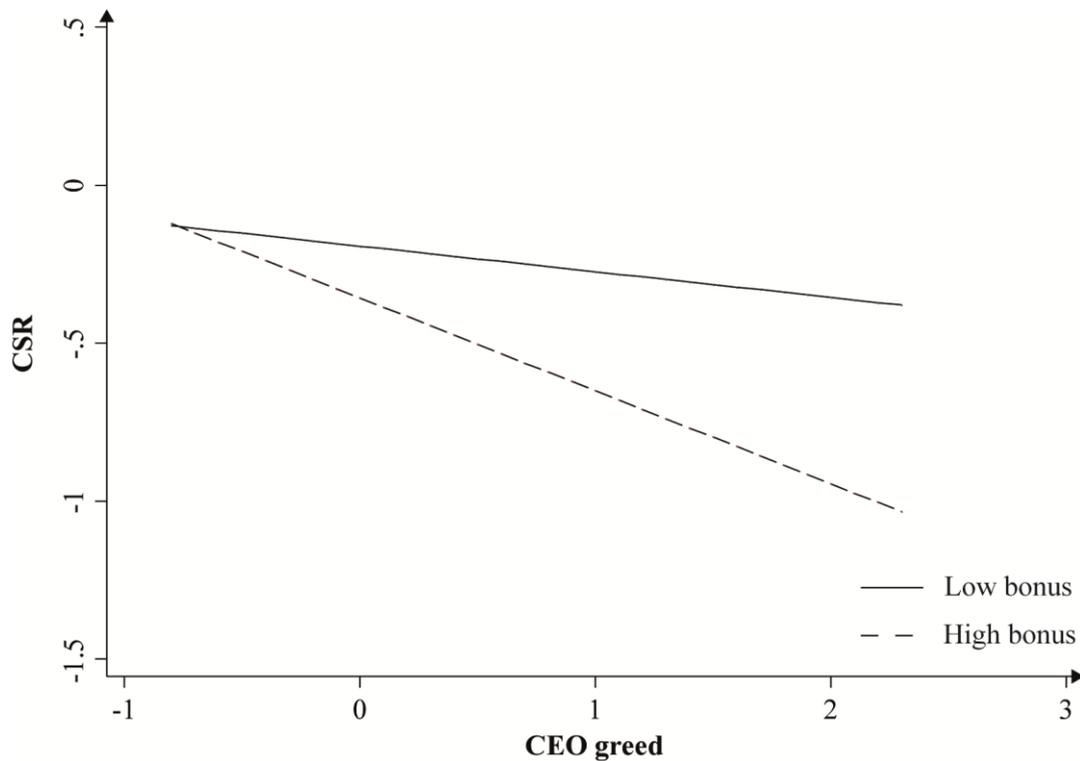
Table 5.2: Random effects models for CSR.

Variables	(1)	(2)	(3)	(4)	(5)
Year dummies	Included	Included	Included	Included	Included
Industry dummies	Included	Included	Included	Included	Included
Pre-sample CSR	0.82*** (0.04)	0.82*** (0.04)	0.82*** (0.04)	0.82*** (0.04)	0.81*** (0.04)
Firm size (log)	0.15* (0.09)	0.17* (0.09)	0.18* (0.09)	0.17* (0.09)	0.18* (0.09)
Return on assets	0.25 (0.87)	0.45 (0.85)	0.40 (0.86)	0.44 (0.85)	0.38 (0.86)
Debt-equity ratio (log)	-0.06** (0.03)	-0.07** (0.03)	-0.07** (0.03)	-0.07** (0.03)	-0.07** (0.03)
R&D intensity (log)	1.06 (0.78)	1.14 (0.78)	1.14 (0.78)	1.14 (0.78)	1.15 (0.78)
Dedicated ownership	1.18 (0.83)	1.13 (0.82)	1.11 (0.82)	1.13 (0.82)	1.11 (0.82)
Transient ownership	-0.11 (0.63)	0.05 (0.63)	0.05 (0.63)	0.05 (0.63)	0.06 (0.63)
Board independence	0.61 (0.66)	0.62 (0.66)	0.61 (0.66)	0.62 (0.66)	0.61 (0.66)
CEO duality	-0.04 (0.16)	-0.04 (0.16)	-0.03 (0.16)	-0.04 (0.16)	-0.04 (0.16)
CEO tenure (log)	-0.02 (0.11)	-0.01 (0.11)	-0.01 (0.11)	-0.01 (0.11)	-0.01 (0.11)
Restricted stock	0.38** (0.18)	0.50** (0.20)	0.47** (0.20)	0.51** (0.21)	0.50** (0.21)
Bonus	-0.45** (0.23)	-0.46** (0.22)	-0.52** (0.24)	-0.47** (0.22)	-0.52** (0.24)
CEO greed		-0.15** (0.08)	-0.08 (0.09)	-0.14 (0.11)	-0.04 (0.12)
CEO greed X Bonus			-0.67** (0.34)		-0.71** (0.35)
CEO greed X Restricted stock				-0.05 (0.21)	-0.13 (0.22)
Constant	-2.41** (0.97)	-2.63*** (0.99)	-2.66*** (0.99)	-2.63*** (0.99)	-2.68*** (1.00)
Observations	1,419	1,419	1,419	1,419	1,419
Number of CEOs	301	301	301	301	301
Wald Chi ²	2611.65	3740.28	5003.78	3949.39	7546.53
Prob > Chi ²	0.00	0.00	0.00	0.00	0.00
R ²	0.60	0.60	0.60	0.60	0.60

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

Figure 5.2: The joint effect of CEO greed and bonus pay on CSR.



5.3.2.7 Sensitivity analyses

We conducted a battery of robustness tests to address endogeneity concerns stemming from the possibility of the omitted variables bias or reverse causality. First, we estimated a change regression (Chen, Huang, & Wei, 2013). We specified an ordinary least squares (OLS) model with robust standard errors to regress the *change in CSR* ($CSR_t - CSR_{t-1}$) against the *change in CEO greed* ($CEO\ greed_{t-1} - CEO\ greed_{t-2}$), controlling for the changes in all control variables, as well as year fixed effects. The sample size was reduced to 1,184 CEO-year observations due to the additional data requirements. Regression results shown in Table 5.3, column 1 indicate that the coefficient of *change in CEO greed* remains negative and significant ($\beta = -0.10$, $p = 0.06$).

Second, we employed the generalized method of moments (GMM) approach (Arellano & Bond, 1991), which handles endogeneity by incorporating internal instruments consisting of first-differences of multiple lags on all right-hand side variables. GMM estimators are designed

for ‘small T, large N’ panels with fixed effects, fitting the empirical design of our study. We used lags of $t-2$ and $t-3$ as instruments to avoid the problems arising from instrument proliferation that are associated with longer lags (Roodman, 2009). Due to the specification of this lag structure, the sample size was reduced to 1,118 CEO-year observations. Both Sargan and Hansen test for overidentifying restrictions failed to reject the null hypothesis, indicating that the internal instruments were exogenous. We specified a two-step first-difference GMM estimator and applied Windmeijer-corrected standard errors to control for downward bias in the estimator (Windmeijer, 2005). The negative and significant coefficient of *CEO greed* ($\beta = -0.48, p = 0.03$) in Table 5.3, column 2 provides further support to our findings and suggest that endogeneity is not introducing a bias to our results.

Third, we explored whether our results are driven by reverse causality. To address this possibility, we specified a random effects model with clustered standard errors by using *CSR* in time $t-1$ as the independent variable and *CEO greed* in time t as the dependent variable. The control variables were the same as those that we used in our baseline model. The results of this additional analysis (Table 5.3, column 3) suggest that *CSR* is not a significant predictor of *CEO greed*. The evidence from a series of robustness tests thus strengthens our causal claims and greatly reduces the likelihood that the negative association between *CEO greed* and *CSR* is driven either by omitted variables exerting undue influence in our model or by reverse causality.

We have argued that *CEO greed* leads to a decrease in *CSR* engagement due to a myopic focus of greedy executives on the maximization of profits in the short run. This suggests that *CEO greed* is expected to be positively associated with short-term firm performance. To strengthen our theoretical arguments, we investigated this implication. Following Connelly *et al.* (2016), we operationalized short-term performance as *Return on assets (ROA)* in year t . We regressed short-term firm performance on the same set of lagged covariates as those used in

our main analyses, except that we replaced lagged ROA with lagged CSR as a predictor. The Hausman test rejected the null hypothesis, hence we specified a fixed effects model with clustered standard errors. The positive and significant coefficient of CEO greed in Table 5.3, column 4 provides support to our reasoning that CEO greed indeed leads to an increase in short-term performance.

Table 5.3: Robustness tests.

Variables	(1) ΔCSR (OLS)	(2) CSR (GMM)	(3) CEO greed (RE)	(4) ROA (FE)
Year dummies	Included	Included	Included	Included
Industry dummies	—	—	Included	—
Pre-sample CSR	—	—	-0.00 (0.01)	—
Firm size (log)	0.11 (0.20)	-0.33 (0.75)	0.10*** (0.02)	-0.03 (0.02)
Return on assets	0.43 (0.56)	-0.65 (1.72)	0.28 (0.33)	—
Debt-equity ratio (log)	-0.04 (0.03)	-0.00 (0.08)	0.01 (0.01)	0.00 (0.00)
R&D intensity (log)	0.73 (0.57)	-0.22 (1.89)	0.06 (0.26)	0.13 (0.09)
Dedicated ownership	0.76 (0.73)	0.75 (2.71)	0.15 (0.27)	-0.19*** (0.06)
Transient ownership	0.43 (0.59)	-0.35 (1.66)	0.21 (0.29)	0.11* (0.06)
Board independence	1.41** (0.62)	-2.25 (2.32)	0.15 (0.21)	-0.02 (0.04)
CEO duality	0.15 (0.21)	-0.29 (0.54)	-0.00 (0.06)	-0.00 (0.01)
CEO tenure (log)	-0.08 (0.33)	0.23 (0.46)	0.10** (0.05)	0.01 (0.02)
Restricted stock	0.27* (0.15)	-0.42 (0.55)	0.08 (0.10)	-0.04** (0.02)
Bonus	-0.23 (0.16)	0.17 (0.45)	0.22* (0.13)	0.01 (0.01)
CEO greed	-0.10* (0.06)	-0.44** (0.21)	—	0.01** (0.01)
CSR	—	—	-0.02 (0.01)	-0.00 (0.00)
Constant	-0.40** (0.17)	—	-0.82*** (0.23)	0.20 (0.17)
Observations	1,184	1,118	1,419	1,419
Number of CEOs	301	301	301	301

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

Finally, we also tested whether our results are sensitive to inclusion of the corporate governance dimension in the computation of the composite measure of CSR. Accordingly, we reconstructed our measure of CSR by additionally including strengths and concerns under the corporate governance dimension. We documented a negative and significant relationship between *CEO greed* and CSR ($\beta = -0.16$, $p = 0.09$) and between the interaction term between *CEO greed* and *bonus* and CSR ($\beta = -0.84$, $p = 0.02$), thereby providing additional support to Hypotheses 1 and 2a. The results of this sensitivity analysis are available upon request.

5.3.3 Empirics Part 2: Explaining postshock stability

5.3.3.1 Dependent variable

To capture firms' ability to absorb exogenous shocks, we follow DesJardine *et al.* (2017) and measure *Severity of loss* as the absolute percentage change in a firm's stock price between the closing price just before the onset of the GFC on 16 September, 2008 and the lowest closing price that the stock reached within 12-month period.⁵⁰ A high value on this measure reflects a severe loss in value, hence indicating a sign of diminished stability. A window of 1 year is the standard boundary in related studies (Buyl *et al.*, 2017; DesJardine *et al.*, 2017) and reduces the likelihood that losses in stock price are driven by other events. Additionally, a visual inspection of the average daily stock price movements in Figure 5.3 confirmed that the severest drop in stock price following the economic meltdown occurred in the first quarters of 2009.

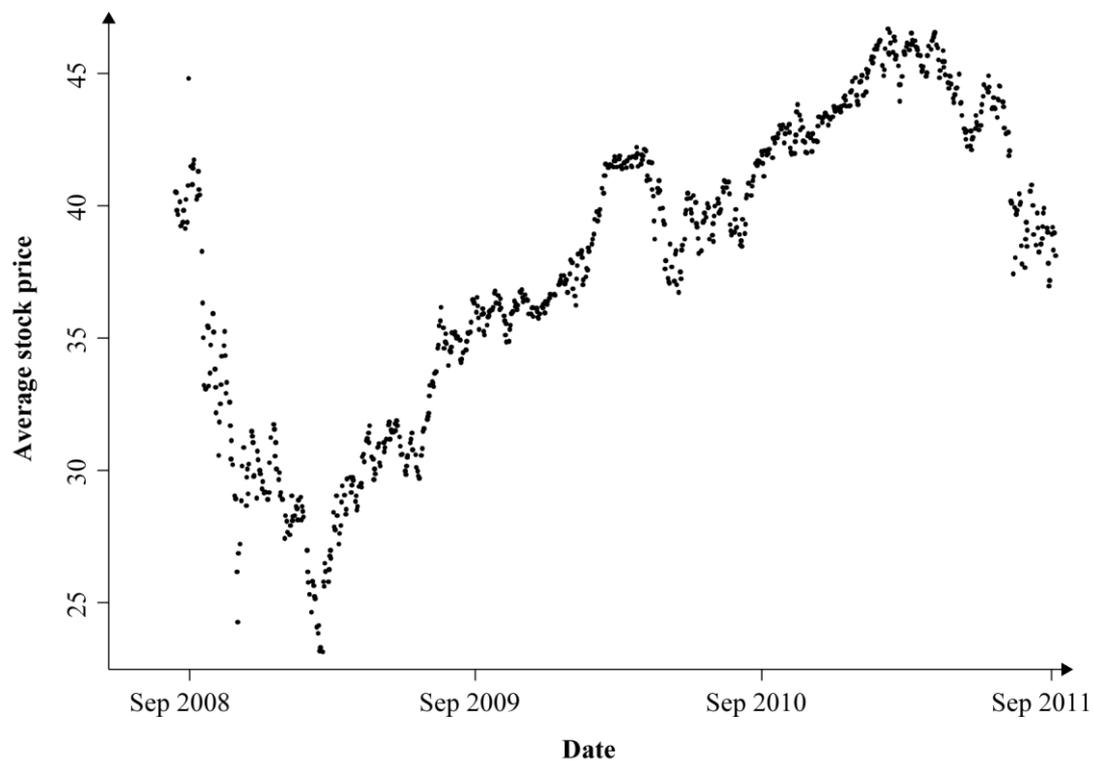
5.3.3.2 Independent variable

The independent variables are *CSR* and *CEO greed*, both operationalized as described above. However, because our goal was to examine how preshock features affect firms' stability, we measured both variables as the average value of the two years before the shock (2007-2008

⁵⁰ Severity of loss in stock price is calculated as (closing stock price on September 16, 2008 – minimum stock price between September 16, 2008, and September 16, 2009) / closing stock price on September 16, 2008.

period). The condition of two years ensured that we are capturing more than just a snapshot of preshock CSR and CEO greed.

Figure 5.3: Average daily stock price during the September 2008–September 2011 period.



5.3.3.3 Control variables

We used the same set of control variables as those employed in Part 1. In line with our measurement of independent variables, all control variables were also computed as the average value of the 2007-2008 period to capture stable preshock tendencies. Additionally, we control for several firm-level factors that might affect the loss in stock price immediately after the shock (DesJardine *et al.*, 2017): *Firm age* measured as the logarithm of the number of years since the firm was first covered by Compustat; *Intangible assets* measured as the logarithm of market-to-book ratio; *Operational efficiency* measured as the ratio of sales to total assets; *Capital intensity* measured as the ratio of capital expenditures to total assets. To account for

regression to the mean (Buyl *et al.*, 2017), we also control for *Pre-crisis stock price* measured as the closing price on September 16, 2008.

5.3.3.4 Estimation

Because our data were a cross-section, we specified ordinary least squares (OLS) models with robust standard errors.

5.3.3.5 Results

The correlation matrix and descriptive statistics are shown in Table 5.4. Table 5.5 reports the OLS regression results for tests of Hypotheses 3a and 3b. Model 1 includes control variables only and indicates that firms with better performance ($\beta = -0.56$, $p = 0.00$), more intangible assets ($\beta = -0.05$, $p = 0.00$), higher R&D intensity ($\beta = -0.52$, $p = 0.00$), and CEO duality ($\beta = -0.04$, $p = 0.04$) prior to the shock experience lesser losses. Surprisingly, both types of institutional ownership are associated with greater losses, although the effect of transient ownership ($\beta = 0.49$, $p = 0.00$) is roughly the double of the effect of dedicated ownership ($\beta = 0.23$, $p = 0.09$). Models 2 and 3 introduce preshock CSR and preshock CEO greed, respectively. Model 4 contains all variables. Overall, we do not find support for Hypotheses 3a and 3b, suggesting that firm and CEO preshock features such as CSR and greed did not affect the drops in stock price immediately after the September 2008 GFC.

5.3.3.6 Sensitivity analyses

To assess whether the results are sensitive to the temporal measurement of preshock features, we ran several analyses where all the explanatory variables were measured either only in 2008 or only in 2007, or as the average value of 2006 and 2007. The results remained consistent. Next, we specified a model without *Pre-crisis stock price* to see whether preshock features affect the drops in stock price if we do not account for regression to the mean. Excluding this

covariate did not affect our findings. We also explored different operationalizations of preshock CSR. CSR scholarship often makes a distinction between CSR *strengths* and *concerns* (Mattingly & Berman, 2006) or between *strategic* and *tactical* CSR (Bansal *et al.*, 2015). For instance, DesJardine *et al.* (2017) argue and find that strategic CSR, which involves significant resource commitments, provides greater benefits for organizational resilience in comparison to tactical CSR, which can be implemented relatively quickly. The additional analyses reconfirmed no association between any of these operationalizations of preshock CSR and firms' stock prices losses. Researchers also increasingly unpack composite CSR indices to explore the impact of individual stakeholder dimensions (e.g., employee relations) on organizational outcomes (Aguinis & Glavas, 2012; Wang *et al.*, 2016b). The assessment of separate stakeholder dimensions was consistent with our findings, with a single exception: we documented a negative and significant effect of *diversity* on severity of loss ($\beta = -0.01$, $p = 0.05$). In practical terms, a one-SD increase in firm diversity initiatives results in a 13.3 percent SD decrease in stock price drop. All robustness analyses are available upon request.

Table 5.4: Correlations and descriptive statistics.

Variables	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. Severity of loss	0.51	0.16	0.09	0.94																			
2. Pre-crisis stock price	38.54	26.24	4.10	277.77	-0.09																		
3. Return on assets	0.05	0.10	-0.62	0.28	-0.31	0.28																	
4. Firm size (log)	7.89	1.48	4.39	12.87	-0.07	0.34	0.18																
5. Firm age (log)	3.32	0.58	2.01	4.07	-0.05	0.14	0.11	0.44															
6. Intangible assets	0.77	0.67	-1.24	4.32	-0.35	0.29	0.35	0.09	-0.04														
7. Operational efficiency	1.13	0.89	0.18	10.41	0.01	-0.08	0.14	0.20	0.03	0.03													
8. Debt-equity ratio (log)	4.17	2.45	0.00	8.63	0.02	0.36	0.04	0.55	0.35	0.01	-0.15												
9. Capital intensity	0.06	0.06	0.01	0.39	0.12	0.07	0.06	0.07	0.01	-0.06	-0.15	0.18											
10. R&D intensity (log)	0.04	0.10	0.00	0.97	-0.14	-0.10	-0.37	-0.27	-0.20	0.22	-0.22	-0.34	-0.18										
11. Dedicated ownership	0.09	0.06	0.00	0.30	0.08	0.05	-0.07	-0.02	-0.04	0.12	-0.00	-0.07	0.16	0.14									
12. Transient ownership	0.16	0.07	0.04	0.42	0.24	-0.07	-0.05	-0.20	-0.27	-0.01	0.11	-0.13	-0.02	0.11	-0.09								
13. Board independence	0.81	0.10	0.29	0.93	0.01	0.21	0.03	0.20	0.18	0.11	-0.10	0.27	0.02	0.01	0.04	0.00							
14. CEO duality	0.61	0.48	0.00	1.00	-0.06	0.19	0.12	0.22	0.14	0.03	0.04	0.22	0.06	-0.14	0.02	0.04	0.17						
15. CEO tenure (log)	2.26	0.54	1.50	3.60	-0.04	-0.05	0.04	-0.23	-0.23	-0.04	-0.05	-0.19	0.00	0.14	0.02	0.08	-0.26	0.17					
16. Restricted stock	0.24	0.22	0.00	0.81	0.04	0.01	-0.11	0.20	0.08	-0.04	-0.10	0.20	0.09	-0.07	0.07	-0.01	0.18	0.05	-0.19				
17. Bonus	0.03	0.09	0.00	0.65	0.09	-0.01	-0.04	-0.11	-0.13	-0.05	-0.08	0.05	0.24	-0.02	0.03	0.10	-0.15	-0.03	0.11	-0.13			
18. CSR	-0.32	2.80	-8.00	13.50	-0.05	-0.01	0.01	-0.00	-0.01	0.21	-0.01	-0.16	-0.16	0.19	0.07	-0.02	0.05	0.01	0.01	0.04	-0.09		
19. CEO greed	0.04	0.48	-0.82	2.44	0.03	0.22	0.07	0.25	0.09	0.13	-0.08	0.26	0.05	-0.05	0.03	0.03	0.08	0.15	0.01	0.15	0.05	-0.08	

Table 5.5: OLS models for Severity of loss.

Variables	(1)	(2)	(3)	(4)
Industry dummies	Included	Included	Included	Included
Pre-crisis stock price	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Return on assets	-0.56*** (0.09)	-0.56*** (0.09)	-0.56*** (0.09)	-0.56*** (0.09)
Firm size (log)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Firm age (log)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)
Intangible assets	-0.05*** (0.02)	-0.05*** (0.02)	-0.05*** (0.02)	-0.05*** (0.02)
Operational efficiency	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)
Debt-equity ratio (log)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Capital intensity	0.21 (0.18)	0.21 (0.19)	0.21 (0.18)	0.21 (0.19)
R&D intensity (log)	-0.52*** (0.17)	-0.51*** (0.17)	-0.52*** (0.17)	-0.51*** (0.17)
Dedicated ownership	0.23* (0.13)	0.23* (0.13)	0.23* (0.13)	0.23* (0.13)
Transient ownership	0.49*** (0.13)	0.48*** (0.13)	0.49*** (0.13)	0.48*** (0.13)
Board independence	0.04 (0.10)	0.04 (0.11)	0.04 (0.10)	0.04 (0.11)
CEO duality	-0.04** (0.02)	-0.04** (0.02)	-0.04** (0.02)	-0.04** (0.02)
CEO tenure (log)	0.00 (0.02)	0.00 (0.02)	0.00 (0.01)	0.00 (0.01)
Restricted stock	-0.05 (0.03)	-0.04 (0.03)	-0.05 (0.03)	-0.04 (0.03)
Bonus	0.03 (0.09)	0.03 (0.09)	0.03 (0.09)	0.03 (0.09)
CSR		-0.00 (0.00)		-0.00 (0.00)
CEO greed			-0.00 (0.02)	-0.00 (0.02)
Constant	0.61*** (0.13)	0.60*** (0.13)	0.61*** (0.13)	0.60*** (0.13)
Observations	301	301	301	301
F	563.85	98.63	308.87	61.31
Prob > F	0.00	0.00	0.00	0.00
R ²	0.54	0.54	0.54	0.54

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

5.3.4 Empirics Part 3: Explaining postshock flexibility

5.3.4.1 Dependent variable

To test Hypotheses 4a and 4b, we examine the amount of time it took firms' monthly closing stock price to fully recover to precrisis (i.e., September 16, 2008) levels following the onset of the GFC (DesJardine *et al.*, 2017). The dependent variable is the hazard rate, representing the probability that a firm recovers at time t . To allow for sufficient recovery times, the observation period spanned a 36-month window, beginning in September 2008 and ending in September 2011.

5.3.4.2 Independent variable

The independent variables, *CSR* and *CEO greed*, are both operationalized as above. In line with the measurement of the independent variables in Part 2, *CSR* and *CEO greed* are also measured prior to the systemic shock, as the average value of 2007-2008 period.

5.3.4.3 Control variables

We include three sets of control variables. Firstly, to account for starting conditions (i.e., 2007-2008 CEO or firm average tendencies), we include all controls variables already employed in Part 2. Secondly, we control for changes in several key firm variables: *Growth in return on assets*, *Growth in firm size*, and *Growth in intangible assets*. These are time-varying covariates, all measured as the difference between firms' contemporaneous value and that in 2008 (e.g., in 2010, growth in ROA is measured as $ROA_{2010} - ROA_{2008}$). Thirdly, because some of the firms in our sample experienced CEO turnover prior to recovery, we excluded those firms from the sample to ensure that we tracked the same population of CEOs across all of our analyses (however, we also include firms with turnover in one of our robustness checks). This implies that the resulting sample might be biased towards certain types of CEOs that are less likely to exit the firm during recovery, which might also affect organizational resilience. To control for

such potential bias, we employ Heckman's (1979) two-stage selection model. In the first-stage probit model (Table 5.6), we use preshock firm and CEO features (i.e., 2007-2008 CEO or firm average tendencies) to predict the likelihood of CEO turnover in the postshock recovery period. After consulting the literature on CEO turnover (e.g., Flickinger *et al.*, 2016; Hubbard, Christensen, & Graffin, 2017; Wiersema & Zhang, 2011), we included the following explanatory variables: *Transient ownership*, *Dedicated ownership*, *Firm size* (logged), *Return on assets*, *Intangible assets*, *CSR*, *CEO tenure* (logged), *CEO duality*, *CEO age*, and *CEO greed*. We used the predicted scores to calculate the *Inverse Mills ratio*, which we subsequently employed in the regressions as a control for sample selection.

5.3.4.4 Estimation

To estimate how preshock CSR and CEO greed impact firms' recovery times, we specified Cox proportional hazard regression models. A positive coefficient of a covariate in the survival model indicates increased probability of a faster recovery, hence suggesting a contribution of the covariate towards greater organizational flexibility. Survival analysis was suitable for our data, because it can accommodate right-censoring and skewness of survival data (DesJardine *et al.*, 2017). During the observation period, 37 firms in our sample did not recover from the systemic shock, whereas none failed. The spells in our survival models were defined at the monthly level. The origin was September 2008 and we continued to observe the firm until it either fully recovered or until the end of the observation period. We specified robust standard errors.

Table 5.6: First stage probit for CEO turnover.

Variables	(1)
Transient ownership	1.75 (1.10)
Dedicated ownership	-2.29* (1.35)
Firm size (log)	0.10* (0.06)
Return on assets	-1.91** (0.88)
Intangible assets	-0.10 (0.13)
CSR	-0.02 (0.03)
CEO tenure (log)	-0.06 (0.16)
CEO duality	-0.00 (0.18)
CEO age	0.04*** (0.01)
CEO greed	-0.25 (0.18)
Constant	-3.26*** (0.97)
Observations	301
LR Chi ²	24.11
Prob > Chi ²	0.01
Pseudo R ²	0.07

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

5.3.4.5 Results

The correlation matrix and descriptive statistics are shown in Table 5.7. The results from our survival analysis are displayed in Table 5.8. Model 1 includes control variables only and indicates that firms with better performance ($\beta = 5.73$, $p = 0.05$), more ($\beta = 0.37$, $p = 0.06$) and

greater growth in ($\beta = 2.15, p = 0.00$) intangible assets, better operational efficiency ($\beta = 0.29, p = 0.01$), and higher R&D intensity ($\beta = 3.30, p = 0.00$) are more likely to recover. In contrast, firms that were valued highly prior to the GFC ($\beta = -0.01, p = 0.06$) and that are older ($\beta = -0.32, p = 0.02$) are associated with a diminished likelihood of recovery. Consistent with Part 2, both types of institutional ownership negatively contribute to this facet of resilience as well, with dedicated ownership ($\beta = -3.82, p = 0.01$) having a stronger effect, compared to transient ownership ($\beta = -2.74, p = 0.04$). In Model 2, where we introduce preshock CSR, we find that firms with higher CSR engagement are significantly more likely to recover faster ($\beta = 0.08, p = 0.01$), thereby providing support for Hypothesis 4a. This means that a one-SD increase in preshock CSR initiatives results in a 25.5 percent increase in probability of recovery.⁵¹ In Model 3, we estimate the impact of preshock CEO greed on recovery times and find support for Hypothesis 4b. The coefficient of CEO greed is negative and significant ($\beta = -0.53, p = 0.00$), which relates to a drop in the recovery rate of 22.4 percent as a function of a one-SD increase in preshock CEO greed. Model 4, where we include all variables, yields additional support for the pattern of our findings. Interestingly, controlling for preshock CSR results in a 17 percent decrease in the negative impact of CEO greed on the recovery rate ($\beta = -0.44, p = 0.01$), a pattern that is suggestive of a partial mediation.

5.3.4.6 Sensitivity analyses

In order to assess the robustness of our findings, we test the assumptions and check the sensitivity of our models. First, we conducted a post-estimation analysis to investigate whether the effects of explanatory variables are proportional over time. This is because Cox proportional hazard models are based on the key assumption that the relationship between

⁵¹ The contribution of a one-SD increase in a covariate towards the probability of recovery is calculated as $[\exp(\beta_{\text{covariate}} \times \text{SD}_{\text{covariate}}) - 1] \times 100$.

predictors and the time to recovery is not a function of time. The test of proportional-hazards assumption on the basis of Schoenfeld residuals failed to reject the null hypothesis, suggesting that time-dependent effects were not likely to be affecting our results. Second, we estimated Cox proportional hazard models with shared frailty. Shared-frailty models are the survival-data analog to random effects models. A frailty is a latent random effect that is used to model within-group correlation, thereby accounting for unobserved group heterogeneity. Our findings remained unchanged after specification of shared frailty. Third, we also lengthen the observation period to a five-year window and found no significant changes in our results. All analyses are available upon request.

Finally, we redid the analyses without excluding the set of firms in which CEO turnover occurred during the recovery period. Accordingly, we replaced the control for sample selection with a dummy variable that equals one if the firm experienced CEO turnover during our observation window. We labeled this variable *CEO turnover*. The results of this analysis are shown in Table 5.9. Model 1 includes control variables only, in Models 2 and 3 we introduce preshock CSR and preshock CEO greed, respectively, whereas Model 4 contains all variables. In Model 2, we document a positive but insignificant effect of preshock CSR on recovery time ($\beta = 0.04$, $p = 0.16$), thereby failing to provide additional support to Hypothesis 4a. In Model 3, however, we reaffirm our prior finding that preshock CEO greed is negatively associated with the time to recovery. The coefficient of CEO greed is negative and significant ($\beta = -0.32$, $p = 0.03$).

Table 5.7: Correlations and descriptive statistics.

Variables	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Recovery	0.05	0.21	0.00	1.00																					
2. Pre-crisis stock price	40.56	25.43	4.10	277.77	-0.03																				
3. Return on assets	0.05	0.09	-0.62	0.28	-0.01	0.29																			
4. Growth in return on assets	-0.01	0.08	-0.36	0.74	0.05	-0.10	-0.66																		
5. Firm size (log)	7.96	1.53	4.39	12.34	-0.01	0.35	0.18	-0.05																	
6. Growth in firm size (log)	-0.05	0.20	-1.50	1.00	0.04	0.10	0.18	0.08	0.00																
7. Intangible assets	0.81	0.69	-1.24	4.32	-0.02	0.24	0.42	-0.15	0.07	0.17															
8. Growth in MTB ratio (log)	-0.03	0.36	-2.85	1.40	0.09	-0.11	-0.41	0.38	-0.08	-0.17	-0.53														
9. Operational efficiency	1.11	0.72	0.18	10.41	0.01	-0.06	0.15	-0.06	0.21	-0.06	0.12	-0.07													
10. Debt-equity ratio (log)	4.32	2.35	0.00	8.63	-0.03	0.39	0.08	-0.05	0.57	0.02	-0.00	-0.17	-0.09												
11. Capital intensity	0.06	0.05	0.01	0.39	0.01	0.10	0.07	-0.13	0.11	-0.09	-0.05	0.02	-0.12	0.21											
12. R&D intensity (log)	0.04	0.08	0.00	0.97	0.03	-0.09	-0.28	0.22	-0.24	0.09	0.15	0.11	-0.25	-0.37	-0.20										
13. Firm age (log)	3.36	0.58	2.01	4.07	-0.02	0.20	0.11	-0.09	0.50	-0.07	-0.03	-0.05	0.05	0.32	0.03	-0.15									
14. Dedicated ownership	0.10	0.06	0.00	0.30	-0.03	-0.01	-0.09	-0.07	-0.12	-0.01	0.08	-0.02	0.03	-0.10	0.10	0.07	-0.08								
15. Transient ownership	0.16	0.08	0.04	0.42	0.01	-0.14	-0.11	0.11	-0.16	-0.02	-0.09	0.10	0.09	-0.12	-0.01	0.10	-0.24	-0.15							
16. Board independence	0.82	0.10	0.29	0.93	-0.01	0.27	0.07	-0.03	0.28	-0.01	0.09	-0.09	-0.08	0.32	0.10	-0.06	0.27	-0.02	-0.06						
17. CEO duality	0.61	0.48	0.00	1.00	-0.00	0.19	0.11	-0.06	0.25	0.02	-0.00	-0.01	0.04	0.18	0.02	-0.09	0.15	0.03	0.01	0.18					
18. CEO tenure (log)	2.22	0.55	1.50	3.60	0.00	-0.11	0.03	-0.06	-0.26	-0.03	-0.11	0.04	-0.04	-0.19	-0.02	0.09	-0.26	-0.02	0.15	-0.33	0.14				
19. Restricted stock	0.23	0.22	0.00	0.81	0.01	-0.01	-0.14	0.12	0.23	0.06	-0.08	0.10	-0.13	0.21	0.12	-0.04	0.10	0.04	-0.02	0.22	0.05	-0.22			
20. Bonus	0.03	0.09	0.00	0.65	0.01	-0.11	-0.07	0.03	-0.16	-0.00	-0.06	0.04	-0.06	-0.02	0.11	0.01	-0.18	-0.04	0.17	-0.12	-0.05	0.12	-0.13		
21. CSR	-0.46	2.93	-8.00	13.50	0.01	-0.01	0.08	0.02	0.00	0.01	0.31	-0.17	0.07	-0.17	-0.17	0.20	0.02	0.07	-0.03	-0.01	0.02	0.04	0.01	-0.11	
22. CEO greed	0.08	0.48	-0.71	2.44	-0.02	0.18	0.02	0.01	0.27	0.05	0.12	-0.01	-0.09	0.23	0.01	0.04	0.12	-0.01	0.07	0.13	0.15	-0.03	0.14	-0.05	-0.06

Table 5.8: Cox survival models for Recovery.

Variables	(1)	(2)	(3)	(4)
Industry dummies	Included	Included	Included	Included
Pre-crisis stock price	-0.01* (0.01)	-0.01* (0.01)	-0.01* (0.01)	-0.01* (0.01)
Inverse Mills ratio	0.39 (0.46)	0.19 (0.47)	0.97** (0.47)	0.74 (0.52)
Return on assets	5.73** (2.89)	5.57* (2.86)	4.28 (2.90)	4.44 (2.91)
Growth in return on assets	2.87 (2.55)	2.54 (2.52)	2.63 (2.53)	2.45 (2.51)
Firm size (log)	-0.12 (0.09)	-0.15 (0.09)	-0.03 (0.10)	-0.06 (0.10)
Growth in firm size (log)	0.61 (0.44)	0.71 (0.46)	0.59 (0.44)	0.66 (0.45)
Intangible assets	0.37* (0.20)	0.35* (0.20)	0.39** (0.19)	0.37* (0.19)
Growth in intangible assets	2.15*** (0.31)	2.14*** (0.30)	2.14*** (0.30)	2.14*** (0.30)
Operational efficiency	0.29*** (0.11)	0.34*** (0.11)	0.27*** (0.10)	0.31*** (0.11)
Debt-equity ratio (log)	0.05 (0.06)	0.06 (0.06)	0.05 (0.06)	0.06 (0.06)
Capital intensity	0.82 (2.09)	0.54 (2.17)	1.12 (2.07)	0.86 (2.13)
R&D intensity (log)	3.30*** (1.09)	3.26*** (1.15)	3.27*** (1.08)	3.27*** (1.11)
Firm age (log)	-0.32** (0.13)	-0.35** (0.14)	-0.33** (0.14)	-0.35** (0.14)
Dedicated ownership	-3.82*** (1.46)	-3.51** (1.47)	-4.99*** (1.50)	-4.63*** (1.55)
Transient ownership	-2.74** (1.34)	-2.88** (1.37)	-2.04 (1.31)	-2.26* (1.36)
Board independence	-0.29 (0.78)	-0.17 (0.81)	-0.51 (0.77)	-0.40 (0.80)
CEO duality	0.17 (0.14)	0.12 (0.15)	0.23 (0.15)	0.18 (0.15)
CEO tenure (log)	-0.26 (0.17)	-0.26 (0.17)	-0.15 (0.16)	-0.17 (0.16)
Restricted stock	0.40 (0.35)	0.30 (0.36)	0.48 (0.35)	0.39 (0.35)
Bonus	-0.62 (0.74)	-0.49 (0.72)	-0.78 (0.77)	-0.65 (0.76)
CSR		0.08** (0.03)		0.05 (0.03)
CEO greed			-0.53*** (0.15)	-0.44*** (0.17)
Observations	5,164	5,164	5,164	5,164
Number of firms	269	269	269	269
Number of firms recovered	232	232	232	232
LR Chi ²	510.74	513.94	527.69	536.47
Prob > Chi ²	0.00	0.00	0.00	0.00

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

Table 5.9: Cox survival models for Recovery (all CEOs).

Variables	(1)	(2)	(3)	(4)
Industry dummies	Included	Included	Included	Included
Pre-crisis stock price	-0.01*	-0.01*	-0.01*	-0.01*
	(0.01)	(0.01)	(0.01)	(0.01)
CEO turnover	-0.34	-0.32	-0.36	-0.35
	(0.23)	(0.23)	(0.23)	(0.23)
Return on assets	7.66***	7.46***	7.52***	7.41***
	(2.81)	(2.81)	(2.79)	(2.80)
Growth in return on assets	3.56	3.33	3.59	3.42
	(2.54)	(2.53)	(2.52)	(2.53)
Firm size (log)	-0.07	-0.07	-0.04	-0.04
	(0.08)	(0.08)	(0.08)	(0.08)
Growth in firm size (log)	0.67	0.71	0.65	0.68
	(0.47)	(0.48)	(0.47)	(0.48)
Intangible assets	0.40**	0.38**	0.42**	0.41**
	(0.19)	(0.19)	(0.19)	(0.19)
Growth in intangible assets	2.41***	2.41***	2.39***	2.39***
	(0.30)	(0.30)	(0.30)	(0.30)
Operational efficiency	0.17	0.19*	0.18	0.19*
	(0.11)	(0.11)	(0.11)	(0.11)
Debt-equity ratio (log)	0.05	0.06	0.05	0.05
	(0.06)	(0.06)	(0.05)	(0.06)
Capital intensity	1.00	0.86	1.44	1.31
	(2.14)	(2.19)	(2.17)	(2.21)
R&D intensity (log)	3.44***	3.40***	3.47***	3.44***
	(1.10)	(1.13)	(1.10)	(1.12)
Firm age (log)	-0.38***	-0.40***	-0.37***	-0.39***
	(0.13)	(0.13)	(0.13)	(0.13)
Dedicated ownership	-2.01	-1.94	-2.04	-2.01
	(1.30)	(1.29)	(1.30)	(1.30)
Transient ownership	-2.40*	-2.28*	-2.20*	-2.15
	(1.34)	(1.35)	(1.32)	(1.33)
Board independence	-0.33	-0.30	-0.47	-0.43
	(0.83)	(0.85)	(0.83)	(0.84)
CEO duality	0.13	0.11	0.13	0.11
	(0.15)	(0.15)	(0.15)	(0.15)
CEO tenure (log)	-0.41**	-0.41**	-0.37**	-0.37**
	(0.16)	(0.16)	(0.16)	(0.16)
Restricted stock	0.25	0.20	0.36	0.31
	(0.35)	(0.35)	(0.34)	(0.35)
Bonus	-0.17	-0.06	-0.07	0.00
	(0.72)	(0.71)	(0.73)	(0.72)
CSR		0.04		0.03
		(0.03)		(0.03)
CEO greed			-0.32**	-0.29*
			(0.14)	(0.15)
Observations	6,090	6,090	6,090	6,090
Number of firms	301	301	301	301
Number of firms recovered	232	232	232	232
LR Chi ²	446.53	450.29	454.86	459.31
Prob > Chi ²	0.00	0.00	0.00	0.00

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1 (two-tailed tests).

5.4 Discussion

Why do firms differ so much in their ability to overcome adversity and what are the antecedents of this heterogeneity? To answer these questions, we integrated literatures on upper echelons, CSR, and organizational resilience to theorize and test how CEO greed affects firm capacity to absorb and recover from systemic shocks. In line with our expectations that greedy individuals exhibit a diminished concern for the welfare of others and tend to forgo on long-term investments that require short-term financial sacrifices, we found a negative association between CEO greed and CSR. Moreover, we combined the basic insight of agency theory that monetary incentives steer executive behavior (Eisenhardt, 1989; Jensen & Meckling, 1976) with the person-pay interactionist logic (Wowak & Hambrick, 2010) to propose that the negative association between CEO greed and CSR will be more pronounced when a higher proportion of CEO pay consists of annual bonus, but less pronounced when a larger portion of executive compensation consists of restricted stock. Our results indicate that especially greedy CEOs are more likely to neglect stakeholder concerns when their pay heavily depends on annual bonus. This finding suggests that, because bonuses reward CEOs for short-term financial success of the company (Hou *et al.*, 2013), executives with a strong desire for the accumulation of personal wealth are particularly more likely to forgo on long-term investments such as CSR in presence of short-term monetary incentives. However, while we consistently find a positive direct effect of restricted stock on CSR, we document no evidence of interaction between CEO greed and long-term monetary incentives. A possible explanation could be that although greedy CEOs might be more responsive, in comparison to their less greedy peers, to pay arrangements with a long-term focus, this may manifest in adoption of long-term strategies other than CSR, such as investment in R&D, capital expenditure or expansion of the firm's workforce (Flammer & Ioannou, 2018).

We additionally found that stock prices of firms with strong stakeholder relations were associated with higher recovery rates following the September 2008 collapse, whereas firms led by greedy CEOs were less likely to bounce back from the economic shock. This result corroborates the view that investment in CSR contributes to organizational flexibility due to its positive effect on stakeholder motivations and increased knowledge diversity that stems from interdependencies between the firm and its social and natural environment (DesJardine *et al.*, 2017; Ortiz-de-Mandojana & Bansal, 2016). To explain the negative impact of CEO greed on recovery rates, we argued that greedy leaders shape individualistic organizations where subordinates are also inspired to free-ride (Haynes *et al.*, 2015b). Because the resulting increase in agency costs across the entire organization leads to resource depletion, these firms exhibit a diminished ability to recover from adversity (Sutcliffe & Vogus, 2003).

Contrary to our predictions, we found no evidence of an effect of CSR or CEO greed on the severity of loss in the stock price immediately after the onset of the 2008 GFC. When we unpack CSR and assess the impact of individual stakeholder dimensions on firm stability, we find that our results are consistent, with a singular exception: firms with strong diversity practices are associated with less severe losses. This result partially aligns with findings of DesJardine *et al.* (2017) who documented a positive effect of strategic CSR on firms' ability to absorb systemic shocks.⁵² However, when we examine the impact of strategic CSR on firm stability, we fail to fully replicate their results. While we remain agnostic about this discrepancy, it is important to note that their sample is roughly three times the size of ours. Hence, a plausible explanation might be that the authors were better able to detect relationships among the variables in the data, because the precision of estimates increases with sample size (Wooldridge, 2013). Similar to Buyl *et al.* (2017) who examined how CEO narcissism affects organizational resilience, we also fail to find support for the relationship between CEO greed

⁵² Diversity initiatives constitute one of the dimensions of strategic CSR.

and performance drops immediately after the economic collapse. As the authors point out, the sudden economic collapse may have been so grave that it rendered the impact of heterogeneity in executive motives immaterial. In contrast, the lingering effects of CEO motives might become perceptible only in the long run—e.g., different recovery rates.

5.4.1 Contributions

Most broadly, we contribute to the research on the drivers of executive behavior (Bromiley & Rau, 2016; Busenbark *et al.*, 2016; Wowak *et al.*, 2017). The fast pace at which this field is progressing has led to a proliferation of a diverse set of explanatory constructs and increasingly fragmented literatures (Wowak *et al.*, 2017). We add to this scholarship by demonstrating how the concept of CEO greed can be utilized as a CEO characteristic that facilitates the synthesis of disparate disciplinary perspectives on executive behavior—e.g., the upper echelons perspective and agency theory. Because greed has long been a major subject of economic, psychological, political, ethical, and philosophical literatures (Wang & Murnighan, 2011), it represents a core personal motive that can help scholars build richer models about individual behavior that bridge theoretical silos.

Next, we extend the scholarship that explores how strong stakeholder relations contribute to organizational resilience (DesJardine *et al.*, 2017; Flammer & Ioannou, 2018; Ortiz-de-Mandojana & Bansal, 2016). These studies has shown, for example, that investment in CSR fosters employees' motivations, engagement, and commitment to the organization, while mitigating adverse behavior, such as shirking and absenteeism (Flammer & Luo, 2017), all of which have profound consequences for organizational resilience in times of crisis (Gittell *et al.*, 2006). Although this research has made great strides in understanding the link between investment in CSR and organizational resilience, it has stopped short of examining the source of immense heterogeneity in firm social and environmental practices. By building on the upper

echelons perspective to argue that firm CSR practices reflect executives' motives (Hambrick & Mason, 1984), we add to this literature by proposing that CEOs play a central role in shaping organizational resilience.

Finally, our work complements the upper echelons research that focuses on the relationship between CEO characteristics and organizational resilience (Buyl *et al.*, 2017; Patel & Cooper, 2014). These studies have relied on the concept of CEO narcissism to explain firms' capacity to endure and bounce back from systemic shocks. Because narcissistic executives are more prone to adopt reckless risk-taking strategies due to their strong desire to inspire awe and admiration (Gerstner *et al.*, 2013; Wales, Patel, & Lumpkin, 2013), they may endanger the long-run fate of their organizations (Buyl *et al.*, 2017). We contribute to this literature by arguing that CEO greed is an important executive characteristic for understanding how top managers impact organizational resilience in ways other than risk-taking—i.e., due to their excessive focus on current earnings, greedy executives build firms with weak stakeholder support and individualistic climate.

5.4.2 Limitations and future research

Our study is not without limitations. Although we conducted several robustness checks to address endogeneity concerns and even found empirical support, in line with our theoretical argumentation, that greedy CEOs strive for maximizing short-term profitability, we did not control for other CEO characteristics such as narcissism (Petrenko *et al.*, 2016), political ideology (Chin *et al.*, 2013), or hubris (Tang *et al.*, 2015) that have been linked to CSR engagement in prior studies, due to labor-intensive data collection requirements. Narcissistic individuals are “those who have very inflated self-views and who are preoccupied with having those self-views continuously reinforced” (Chatterjee & Hambrick, 2007: 351). Narcissists constantly strive to increase their ‘narcissistic supply’—they seek to reinforce their inflated

self-image by engaging in exhibitionistic acts that attract external praise, awe, and admiration (Chatterjee & Pollock, 2017). Because of this, narcissistic CEOs have been shown to favor CSR investment, as furthering some social good brings about admiration from external audiences and praise from the media (Petrenko *et al.*, 2016). This increased engagement in CSR, however, is opposite to what can be expected from greedy CEOs. In contrast to CEO greed, which represents an excessive desire of an executive to accumulate wealth, CEO political ideology relates to an executive's *beliefs* about the proper role of business in society (Chin *et al.*, 2013). Hence, it is probably less likely that CEOs' beliefs about the appropriateness of CSR would affect how they adjust their behavior in response to different types of monetary incentives, than can be expected of CEO greed. Additionally, Haynes *et al.* (2017) have empirically shown that CEO greed is distinct and independent from CEO hubris. Nonetheless, future studies may want to control for a greater number of CEO constructs when examining the impact of top managers on long-run firm outcomes to better account for other reasonable alternative explanations.

Another limitation related to the measurement of CEO greed is the extent to which the statistical approach based on several proxies of extraordinary compensation that we have relied on in this study accurately captures the psychological construct in question. More broadly, this concern is "a limitation inherent in all nonobtrusive, archival research that attempts to study issues related to individual perceptions and cognitions" (Wade *et al.*, 2006: 540). While future work could strengthen our research by collecting primary data, we pointed out that surveying CEOs on their levels of greed can be expected to be subject to severe social desirability bias. On the flip side, however, this limitation also serves as a stringent test of the proposed relationships, given that inaccurate measurement is less likely to lead to significant findings.

To explain the lack of support for our prediction that a high proportion of CEO pay consisting of restricted stock attenuates the negative impact of CEO greed on investment in

CSR, we proposed that long-term incentives might spur greedy executives to commit to long-term investments other than CSR. Extending this idea, it could be that we failed to detect the interaction effect because restricted stock does not tie a CEO's wealth directly to social and environmental objectives. In contrast, CSR contracting is a recent innovation in corporate governance to integrate CSR targets (e.g., CO² emissions or employee satisfaction) in executive compensation (Flammer *et al.*, 2017). Given the dramatic increase in CSR contracting during the recent years (Flammer *et al.*, 2017), future scholars may want to examine whether CSR contracting is effective at curbing potentially detrimental effects of CEO greed.

Although our findings suggest a partial mediation effect of CEO greed on firm flexibility via investment in CSR, we also document a robust direct negative effect of pre-shock CEO greed on the recovery rate in the stock price following the September 2008 collapse. Our rationale was that by engaging in selfish behavior, greedy leaders foster a culture of greed. Because such firms may exhibit exacerbated agency costs and experience resource depletion across the entire organization, they are less able to bounce back from adversity. However, a potential concern is that we did not directly explore these mediating mechanisms, which limits our causal account of the relationship between CEO greed and firm flexibility. Nevertheless, the robustness and the size of the effect highly warrants further investigation and presents ample opportunities for future work.

Despite that even critics of the efficient market hypothesis accept the idea that stock prices reflect all the relevant information about the firm, our exclusive reliance on the stock price data to gauge organizational resilience might limit the generalizability of our findings. Hence, we encourage future scholars to examine different ways of operationalizing organizational resilience. This could include not only measurement of different types of firm outcomes such as the reliability of firm performance (Sørensen, 2002) or long-term sales growth (Ortiz-de-

Mandojana & Bansal, 2016), but also examination of different types of shocks, for instance natural disasters such as Hurricane Katrina (Muller & Kräussl, 2011).

Finally, a potential endogeneity concern is that current investment in CSR is not independent of past recovery. Namely, it could be that firms which successfully recovered from adversities in the past invest more in CSR due to their superior financial state or a culture of risk management. If so, an omitted variable could account for both changes in CSR and the ability of firms to recover from a systemic shock. Although we did not directly account for this possibility in our analytical approach, it is important to point out that other scholars have employed advanced econometric techniques to address endogeneity threats such as two-stage least squares regression with instrumental variables (DesJardine *et al.*, 2017) or difference-in-differences methodology (Flammer & Ioannou, 2018) and found a positive and significant influence of investment in CSR on organizational resilience.

5.5 Conclusion

Notwithstanding the numerous condemnations of unbridled selfishness of corporate leaders for its negative impact on the societal welfare, the natural environment, and long-run organizational outcomes, empirical evidence on the consequences of executives' greed is scarce. In this study, we examined how differences in motives between CEOs give rise to heterogeneity in firm CSR profiles and how this in turn affects firms' resilience to systemic shocks. We found that CEO greed was negatively associated with CSR before the 2008 GFC, and that this relationship was more pronounced when a higher proportion of CEO pay consisted of annual bonuses. We also found that firms which invested in CSR prior to the onset the financial crisis experienced higher recovery rates in the stock price in its aftermath, whereas the opposite was true for firms led by greedy CEOs. By demonstrating that a combination of intrinsic (CEO greed) and extrinsic motives (monetary incentives) shapes an executive's

inclination to build strong stakeholder relations, we provide an integrative view on how motives of CEOs contribute to long-run organizational outcomes.

CHAPTER 6:

Conclusion

In this PhD dissertation, we developed four studies to explore the complex relation between executive motives and the well-being of organizational stakeholders. Knowledge of why, when, and how CEOs commit their firms to improving social and environmental welfare is important for several reasons. From the business perspective, corporate social responsibility (CSR) is an important strategic investment that fosters long-term competitive advantage in a variety of ways (Bode *et al.*, 2015; DesJardine *et al.*, 2017; Flammer & Ioannou, 2018; Flammer & Luo, 2017; Ortiz-de-Mandojana & Bansal, 2016). From the societal perspective, CSR is often envisioned as the replacement for public goods such as healthcare and education previously provisioned by the welfare state (Maak, Pless, & Voegtlin, 2016; Matten & Crane, 2005; Scherer *et al.*, 2016). Combined with the dramatic increase in the influence of top executives on firm outcomes over the past decades (Quigley & Hambrick, 2015), this implies that fates of not only corporations, but broader communities and the natural environment as well, to some extent, depend on the motives of top organizational decision makers. Hence, unravelling what makes corporate leaders tick is crucial for ensuring a good match between CEOs and appropriate corporate governance models so that all stakeholders can benefit from organizational value creation (Zeitoun & Osterloh, 2012).

In each chapter we explored a particular aspect of the overall framework as illustrated in Figure 1.1 to provide a deeper and more comprehensive understanding of how executive motives lead to variation in CSR and, eventually, contribute to long-run performance outcomes. Before examining the impact of *specific* executive motives on CSR, we first investigated in Chapter 2 how much of variance in CSR is due to CEOs to gauge the *overall* impact of top executives on CSR (boxes II and III). In Chapter 3, we developed a conceptual

essay where we argued how the concept of CEO social value orientation (SVO) can be employed to integrate theoretical perspectives on executive behavior that span multiple levels of analysis (boxes II, III, and IV). Chapter 4 focused on the dual aspect of CEO age by exploring how CEOs' commitment to CSR changes across the executive career and which CSR initiatives CEOs value depending on the historical period they were born in (boxes I, II, and III). Chapter 5 zoomed in on the joint impact of executive greed and monetary incentives on investment in CSR, and the ensuing consequences for organizational ability to endure and recover from systemic shocks (boxes II, III, IV, and V).

In this final chapter, we first briefly summarize the key findings from the three empirical studies (Chapters 2, 4, and 5). Next, we highlight the major contributions of this PhD dissertation to the literature that explores the link between executives and organizations. In the last section, we discuss limitations and conclude by outlining several promising venues for future research.

6.1 Summary of the Empirical Findings

Table 6.1 provides a summary of the key empirical findings from Chapters 2, 4, and 5. In Chapter 2 we applied the 'CEO in context' (CiC) technique—a novel variance partitioning method (VPM) developed by Hambrick and Quigley (2014)—to a large panel dataset of U.S. firms for the years 1993 to 2015 to examine how much of variance in CSR is due to macroeconomic, industry, firm, and CEO influences. By employing the CiC technique, we found that CEOs (32.7% to 34.6%) and firms (37.7% to 33.8%) explain the majority of variance in CSR. We additionally found that the CEO effect on distinct stakeholder categories is remarkably stable (31.7% to 35.6%) and that executives seem to enjoy greater discretion over initiating voluntary CSR projects when compared to minimizing negative externalities. We

also provided a range of estimates of the CEO effect on CSR obtained with customary VPMs. The most conservative estimate yielded a 7.8 percent of variance in CSR explained by CEOs.

Chapter 4 examined, on a sample of 1,055 CEOs of public U.S. companies who were born between 1917 and 1970, how CEO age can be used as a proxy for two distinct sources of executive values related to CSR: one that is a driver of *time-variant* changes in executive values and one that is an antecedent of *time-stable* heterogeneity in executive values. With respect to time-variant changes, we found that CEOs' commitment to investment in CSR follows an inverse U-shaped trajectory across the executive career. CEOs seem to be the most averse to long-term investments at the beginning of the career when they are more likely to be scrutinized by the market for executives and at the end of the career when their career horizon shrinks as they are approaching retirement. With respect to time-stable heterogeneity, we found that CEO birth cohort is an important predictor of the type of CSR initiatives that executives are most likely to prioritize: compared to their older counterparts, CEOs from younger birth cohorts are associated with more *environmental* and *diversity* initiatives, but fewer *community* and *employee* ones.

In Chapter 5, we tested a part of the interactionist model that we developed in Chapter 3 to examine how intrinsic motivations and extrinsic incentives combine to shape executive behavior. On a sample of 301 CEOs of public U.S. corporations, we found that CEO greed was negatively associated with investment in CSR during the 2003-2008 period, and that this relationship was more pronounced when a higher proportion of CEO pay consisted of annual bonus. In one of our robustness checks, we also found that CEO greed is positively associated with short-term firm performance. Next, we explored how CEO greed and investment in CSR contribute to organizational resilience by analyzing firms' stock prices in the aftermath of the 2008 economic collapse. We found that firms that invested in CSR were associated with higher recovery rates, whereas firms led by greedy CEOs were less likely to bounce back.

Table 6.1: Overview of the three empirical studies.

	Chapter 2	Chapter 4	Chapter 5
Title	<i>How much do CEOs matter for corporate social responsibility?</i>	<i>Just old, or from another era? The multifaceted effect of CEO age on corporate social responsibility</i>	<i>CEO greed, corporate social responsibility, and organizational resilience: An empirical analysis of the 2008 global financial crisis</i>
Research question	How much of variance in CSR is due to CEOs, after controlling for firm, industry, and macroeconomic factors?	How do ‘time-variant’ and ‘time-invariant’ effects of CEO age impact CSR initiatives?	How does executive pursuit of extraordinary wealth affect investment in CSR and long-run firm outcomes?
Theory	Variance partitioning research	Upper echelons perspective; Birth cohorts research; CEO career research	Upper echelons perspective; Compensation research; Organizational resilience research
Dependent variable	Corporate social responsibility	Corporate social responsibility	Corporate social responsibility; Organizational resilience
Results	<ul style="list-style-type: none"> • The CEO effect on CSR ranges from 7.8 percent to 34.6 percent, depending on the estimation technique • The CEO effect on CSR is remarkably stable across different stakeholder categories • CEOs matter more for corporate social responsibility than irresponsibility • CEOs and firms explain the majority of variation in CSR 	<ul style="list-style-type: none"> • CEO age is a proxy for two sources of heterogeneity in executive values • Time-variant changes in values within executives affect the propensity of CSR engagement • CSR initiatives follow an inverse U-shaped trajectory across executive career • Time-invariant differences values between executives affect the type CSR engagement • Compared to older birth cohorts, CEOs belonging to younger birth cohorts are associated with more environmental and diversity initiatives, but fewer community and employee ones 	<ul style="list-style-type: none"> • CEO greed is negatively associated with investment in CSR • Short-term focused CEO pay amplifies the negative association between CEO greed and investment in CSR • Investment in CSR positively contributes to firms’ ability to recover following a systemic shock • CEO greed is negatively associated with firms’ ability to recover following a systemic shock • CEO greed is positively associated with short-term firm performance

6.2 Contributions

Throughout this entire PhD dissertation, we have aimed to respond to the repeated calls in the management literature for a more holistic research on top executives and the motives that propel their behavior (Bromiley & Rau, 2016; Busenbark *et al.*, 2016; Wowak *et al.*, 2017). To contribute to this scholarship, we have (1) adopted as the dependent variable a proximal organizational outcome over which CEOs have considerable discretion—CSR; (2) integrated disparate theoretical perspectives on executive behavior, and (3) drawn on diverse literatures to explain the origins of executive motives. Below we list some of the key contributions that resulted from this endeavor.

We make an important contribution to the upper echelons and CSR literatures by providing a comprehensive analysis of the amount of variance in CSR that is due to macroeconomic, industry, firm, and CEO influences. Notwithstanding the recent growth of upper echelons studies on CSR (e.g., Chin *et al.*, 2013; Petrenko *et al.*, 2016; Wowak *et al.*, 2016) and the interest of CSR scholars in the relative importance of industry and firm factors as well as of macro influences on CSR (Moura-Leite *et al.*, 2012; O’Shaughnessy *et al.*, 2007; Orlitzky *et al.*, 2015; Short *et al.*, 2016), surprisingly little is known about the overall impact of CEOs on CSR. In Chapter 2, we sought to fill this gap in the literature. Our results indicate that executives often explain more than a third of variance in CSR, which clearly suggest that research on specific CEO attributes is warranted and that prior studies might have overestimated the importance of firm and industry factors by failing to account for the contribution of CEOs to the variation in CSR.

Even when we use a very conservative VPM technique—the Mover Dummy Variable (MDV) approach—for assessing the influence of CEOs on organizational outcomes, we find that executives account for 7.8 percent of variance in CSR. While some may view this estimate

as evidence that CEOs do not matter very much for addressing stakeholder concerns, the GE example we have pointed out in Chapter 1 to illustrate the scale and importance of investment in CSR suggests that even small fluctuations in social and environmental engagement that is due to CEOs might generate tangible effects on the well-being of stakeholders. From another perspective, supposing executives face enormous constraints due to, for instance, organizational inertia (Hannan & Freeman, 1984) or institutional pressures to conform to social norms (DiMaggio & Powell, 1983) when making decisions related to stakeholder needs, then even a small change in firm CSR profile that is due to the CEO represents a remarkable feat. In other words, it is important to weigh the contribution of CEOs to variation in CSR relative to all other numerous forces that affect firm CSR engagement (for a comprehensive review, see Aguinis & Glavas, 2012).

In their original outline of the upper echelons perspective, Hambrick and Mason (1984) clearly emphasized that values might be one of the core psychological characteristics that bias CEOs to opt for some decision outcomes rather than others. The authors proposed that values have a twofold—direct and indirect—impact on strategic choice: not only do values determine which course of action to prioritize out of a set of strategic choices, but values also shape how executives construe their perceptions of the strategic situation. Yet despite the great body of literature inspired by the upper echelons model of strategic choice, our understanding of how executive values actually enter into strategic decision-making remains very limited (Hambrick, 2007).

We opened this proverbial ‘black box’ in Chapter 3, where we introduced the concept of CEO social value orientation to the upper echelons literature. Because SVO has been thoroughly researched in the fields of behavioral economics, social psychology, and neuroscience (Declerck & Boone, 2016), we were able to pin point exactly how CEO social values act as a compass to navigate in complex business environments where incentives to

invest in CSR vary. SVO not only determines whether CEOs intrinsically care about the well-being of others, but simultaneously affects which brain regions CEOs employ to scan the environment for monetary and social incentives to contribute to collective welfare. This insight turns out to be highly informative for integrating the upper echelons perspective on managerial decision-making with corporate governance (Jensen & Meckling, 1976) and institutional theory (DiMaggio & Powell, 1983) literatures that stress the incentivizing and constraining context in which CEOs are embedded. It also resonates with one of the key tensions in organizational theory (Astley & Ven, 1983): are individuals autonomous and self-directing agents or is individual behavior a deterministic derivate of the context in which decision-making unfolds? Our conceptual model (Figure 3.1) suggests that the truth lies somewhere in the middle. Context indeed greatly matters for determining executive behavior. However, because CEOs likely vary in their values, they are also expected to differ in how they perceive, make sense of, and respond to the same environmental stimuli.

We also extend the more ‘traditional’ research on upper echelons that examines how demographic characteristics of CEOs relate to variation in organizational outcomes. More specifically, in Chapter 4 we draw on rich literatures in lifespan psychology (cf. Erikson, 1950; Jaspers & Pieters, 2016) and sociological research on birth cohorts (cf. Inglehart, 1977; Ryder, 1965) to unravel the complex ways in which CEO age is associated with both the propensity and the type of firm CSR engagement. We demonstrate the importance of simultaneously studying stable differences in values between executives and how values change within executives over time, especially when sources of the two types of heterogeneity in executive values are intertwined. This is clearly the case with CEO age, as it reflects both the fact that (1) as they grow older, executives move through different career stages where they face different opportunities and obstacles, and that (2) executives have been born in successive historical periods that differ with respect to dominant ideologies.

By introducing the sociological research on birth cohorts to inform the study of executive behavior, our contribution to the management literature is twofold. First, although sociologists have repeatedly shown how early-life experiences shape people's values and ideologies (cf. Inglehart, 2008; Twenge *et al.*, 2008), the lingering influence of the early-life cultural context on executive behavior has been largely absent from the research on top managers. Considering the central role that values play in the upper echelons model (Hambrick, 2007; Hambrick & Mason, 1984), the examination of birth cohorts and how they have been subject to an early-life imprinting of 'zeitgeist' provides important insights into why CEOs come to value different strategic choices. Second, and more broadly, the integration of literatures on the upper echelons and birth cohorts is a powerful way to study organizational and social change through the lens of 'demographic metabolism' (Ryder, 1965). In this conceptualization, top executives can be viewed as one of the mediating elements between a society's institutional past and present. With the increasing digitalization and reliance on the use of technology in all spheres of society, corporations are at present arguably more powerful than ever in shaping the everyday lives of young people (Colbert, Yee, & George, 2016). Hence, by injecting their own imprinted values in the behavior of organizations, CEOs directly contribute to the emergence of new and distinct birth cohorts, thereby also shaping the future breeds of executives.⁵³

This PhD dissertation also underscores the increasing awareness in the strategic management research that individual behavior is driven by a combination of intrinsic motivations and extrinsic incentives (Buyl *et al.*, 2017; Muller & Kolk, 2010; Wowak *et al.*, 2017; Wowak & Hambrick, 2010). In Chapters 3 and 5 we have argued that compensation arrangements can be used to steer executives' attention towards or away from the consideration

⁵³ For example, consider how CEOs like Mark Zuckerberg of Facebook or Mark Karp of Tumblr, with their powerful grip on social media, have contributed to the shaping of lives, values and ideas of (predominantly) young people. These young generations will carry new and alternative cultural imprints into the future and, once becoming the dominant sociopolitical force, they will contribute to the macro-level changes in ways of organizing and living, thereby initiating the next cycle of demographic metabolism.

of stakeholders' interests. Echoing the view that a pay package focused on short-term performance disincentivizes executives to commit to long-term investments (Deckop *et al.*, 2006; McGuire *et al.*, 2003), in Chapter 5 we consistently found that firms invest less in CSR when the CEO is paid to a larger degree in annual bonus. However, we have also stressed that the consequences of executive pay arrangements depend on individual differences between executives. As Figure 5.2 clearly illustrates, the negative association between short-term monetary incentives and CSR becomes negligible at low levels of CEO greed—that is, when executives are not primarily driven by a desire to accumulate wealth.

Finally, we contribute to the organizational scholarship by adding to the long-standing debate on the purpose of the firm. The *shareholder view* posits that firms bear responsibility only towards their owners by maximizing financial performance (Fama & Jensen, 1983; Jensen & Meckling, 1976). The *stakeholder view*, in contrast, contends that firms have a duty to balance interests of “any group or individual who can affect or is affected by the achievement of an organization’s purpose” (Freeman, 1984: 53). Whereas the two paradigms usually hold opposing views on the social responsibilities of private corporations, our findings from Chapter 5 suggest that this tension depends on how firm performance is conceptualized. We find that when CEOs are primarily focused on the maximization of profits and neglect investment in CSR, firms are more likely to deliver superior financial performance in the *short-run*. When we examine *long-run* performance outcomes, however, we find that firms which build interdependencies with their stakeholders are better able to recover following systemic shocks. These results are in line with the increasing consensus among CSR scholars (cf. Ortiz-de-Mandojana & Bansal, 2016) that temporal horizon might be one of the key elements that aligns the interests of both shareholders and other organizational stakeholders.

6.3 Limitations and Future Research Avenues

As with any empirical project, ours also has limitations that set the stage for future research. When we introduced the concept of SVO in Chapter 3, we posited that self-regarding individuals rely on the ‘economically rational’ heuristic: “I am selfish, unless there are incentives to cooperate”. However, in order to develop a parsimonious model, we chose to omit the heuristic that other-regarding individuals abide by. That is, other-regarding types intrinsically care about group outcomes, as we have argued, but they stop cooperating when their trust is compromised by the free-riding behavior of others (Declerck & Boone, 2016). Future scholars could identify such *tragedy of the commons* to explore whether other-regarding CEOs indeed rely on the ‘socially rational’ heuristic. This could be studied, for example, in industries that rely on a common natural renewable resource, such as capture fisheries, where competition and overfishing can result in a dramatic reduction of the fish population size to the point that species face extinction. Obviously, the only sustainable course of action is for fisheries to self-regulate and commit to a catch size limit. Other-regarding CEOs that intrinsically care about collective outcomes might naturally follow this logic. In contrast, their self-regarding peers may seize this opportunity and try to catch as many fish as possible so as to gain a competitive edge. To the extent that this free-riding behavior is visible, the insights from behavioral economics would lead us to expect that even CEOs who intrinsically care about the well-being of others would abandon sustainable principles.

Due to our reliance on the KLD ratings to measure CSR, we were only able to study how executive motives relate to the type and the propensity of CSR engagement. However, little is known about the mediating processes—what actions do executives actually take to contribute to the well-being of organizational stakeholders? For instance, whereas some CEOs might take the lead and develop their own initiatives, other may be more likely to build on the proposals of others (Burgelman, 1983). Additionally, executives can foster the development of

stakeholder-oriented firms “through hiring, promotion, and firing of others; their communications with others; the incentives they put in place; and other administrative arrangements they adopt” (Chin *et al.*, 2013: 200). Such in-depth inquiry would immensely increase our understanding of the influence of CEOs on CSR.

In Chapter 4, we made first steps towards understanding how values lead CEOs to prioritize distinct types of CSR initiatives. Yet there are several other research opportunities that arise from unpacking the dimensions of CSR. Corporations operate in increasingly globalized environments where they face competing claims from diverse stakeholders (Wang *et al.*, 2016b). Throughout this PhD dissertation we have implicitly assumed that there is no a-priori ordering of the salience of different stakeholders. In contrast, Mitchell, Agle, and Wood (1997) point out that some stakeholders might have stronger claims relative to others, depending on their attributes such as power, legitimacy, and urgency. Future scholars could thus examine how CEOs distribute limited resources towards CSR initiatives when they favor one stakeholder group but face legitimate claims from another to better approximate the complexities of modern business.

We also concur with Bromiley and Rau (2016) that the upper echelons scholars may want to explore the interplay among different CEO characteristics. For example, political ideology has been identified as an important value-based construct for understanding why firms engage in CSR (Chin *et al.*, 2013; Chin & Semadeni, 2016; Gupta *et al.*, 2017; Gupta & Wowak, 2016). Similar to SVO, political ideology is also conceptualized on a unidimensional spectrum—one that ranges from liberalism on the one end to conservatism on the other (Jost, 2006). However, research on values provides strong support for the idea that human value systems are much more complex and may consist of several orthogonal dimensions (Longest, Hitlin, & Vaisey, 2013; Sagiv *et al.*, 2017). Hence, one interesting venue for future research could be to examine how different combinations of value dimensions lead CEOs to favor particular stakeholder

categories. For example, although we expect that, compared to their self-regarding peers, CEOs with an other-regarding orientation would always be more inclined to build strong relations with organizational stakeholders, the exact nature of this engagement might depend on the political ideology of the executives. Being more open to change, politically liberal CEOs with an other-regarding orientation might place more value on increasing organizational diversity, whereas politically conservative CEOs with an other-regarding orientation might hold more dearly traditional relationships with local communities.

Finally, we believe that exploring literatures on birth cohorts (Ryder, 1965) and generations (Mannheim, 1952) to integrate the past into present holds great promise for organizational studies. Whereas we explored how early-life imprinting of cultural context of CEOs relates to heterogeneity in firm-level outcomes, future upper echelons scholars could also adopt a more macro-level approach. This could include, for example, the investigation of how generations of entrepreneurs such as Silicon Valley pioneers shape economic activity at the regional level (Lippmann & Aldrich, 2016). Moreover, at present we are witnessing disruptions in how business is organized due to the emergence of alternative organizational forms such as platform sharing economies and commons-based peer production (Davis, 2016). Whereas prior research has traced the rise and decline of organizational forms to institutional shifts (Davis, Diekmann, & Tinsley, 1994) and ecological dynamics of organizational populations (Boone & Özcan, 2014), the role that the influx of new generations of executives plays in changing the ways of organizing is wide open for exploration.

We hope that the four studies that we presented in this PhD dissertation offer valuable insights into and push the boundary of our understanding of how executive motives impact organizational stakeholders and long-run performance outcomes. As is typical of any scientific inquiry, plenty of questions arise when new findings abound. Our wish is that some of these research avenues will offer rich opportunities for future research on executive behavior.

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NEDERLANDSE SAMENVATTING

Maatschappelijk verantwoord ondernemen (MVO), dat gedefinieerd wordt als organisatorische acties "die een bepaald maatschappelijk belang lijken te bevorderen, buiten het belang van het bedrijf en dat wat wettelijk vereist is" (McWilliams & Siegel, 2001: 117), fascineert organisatiewetenschappers al meer dan een halve eeuw (de Bakker, Groenewegen, & den Hond, 2005). In de jaren '60 en '70 werd het idee dat ondernemingen met winstoogmerk sociale problemen zouden oplossen fel bestreden (Wang et al., 2016b). Zo beweerden vooraanstaande academische figuren dat slechts "enkele trends zo grondig de fundamenteën van onze vrije samenleving zouden kunnen ondermijnen dan de aanvaarding van een sociale verantwoordelijkheid door bedrijfsfunctionarissen, anders dan het zo veel mogelijk geld verdienen voor hun aandeelhouders" (Friedman, 2002: 133). Tegenwoordig neemt echter een groeiende meerderheid van ondernemingen proactief deel aan maatschappelijke en ecologische uitdagingen (Wang *et al.*, 2016b). General Electric spendeert bijvoorbeeld ruwweg "2 miljard dollar per jaar aan nieuwe milieutechnologieën" en "300 miljoen dollar aan sociale projecten" (Barnea & Rubin, 2010: 71). Sinds kort is MVO ook actueel bij institutionele beleggers. In 2016 breidde de groei van duurzaam en verantwoord beleggen alleen al in de VS uit tot 8,72 biljoen (US SIF, 2016), terwijl Larry Fink, CEO van 's werelds grootste vermogensbeheerder, BlackRock, recentelijk in zijn jaarlijkse brief aan CEO's heeft opgedragen om hun vrijwillige bijdragen aan maatschappelijke welvaart te verhogen (Fink, 2018).

Deze trends ondersteunen het idee dat MVO bedrijven een concurrentievoordeel kan opleveren (McWilliams & Siegel, 2001). Niet alleen zorgen sociale initiatieven ervoor dat bedrijven getalenteerde werknemers kunnen behouden (Bode, Singh, & Rogan, 2015) en dat ongewenst gedrag op de werkplek vermindert (Flammer & Luo, 2017), maar bedrijven die investeren in MVO vertonen ook hogere operationele prestaties na een economische meltdown (Flammer & Ioannou, 2018) en zijn beter in staat om lucratieve overheidsopdrachten binnen te

halen (Flammer, 2018). Echter, sommige onderzoekers hebben ook gewezen op de nadelen van deze focus op MVO. Zo zien we bijvoorbeeld dat het ‘moreel krediet’ dat MVO met zich meebrengt sommige bedrijven net aanspoort om onethisch gedrag te vertonen ten opzichte van andere belanghebbenden (Ormiston & Wong, 2013). Een ander voorbeeld is dat bedrijven soms in MVO investeren, niet om strategische redenen, maar alleen om tegemoet te komen aan de persoonlijke behoeften van de CEO of om hun reputatie te vergroten – een teken van “agency” kosten (Petrenko *et al.*, 2016).

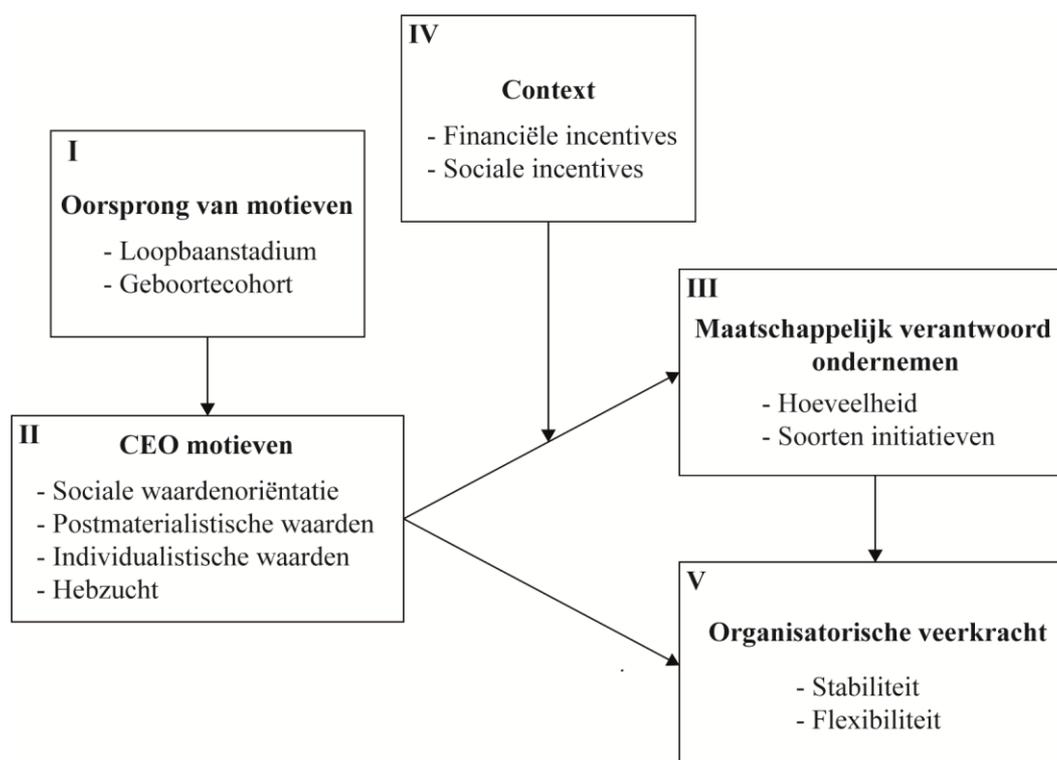
Ondanks de toenemende institutionele druk voor bedrijven om een sleutelrol te spelen bij het aanpakken van sociale en milieukwesties (Wang *et al.*, 2016b), variëren bedrijven toch enorm in hun MVO-profielen (Gupta, Briscoe, & Hambrick, 2017). Om deze heterogeniteit te verklaren, hebben MVO-onderzoekers zich vooral gericht op externe triggers, zoals bijvoorbeeld sociale bewegingen (King, 2008), institutionele eisen (Neubaum & Zahra, 2006), coërcief isomorfisme (Matten & Moon, 2008), belangen van stakeholders (Agle, Mitchell, & Sonnenfeld, 1999) of industriekenmerken (Chiu & Sharfman, 2011) en organisatorische factoren zoals bedrijfsgrootte (Wickert, Scherer, & Spence, 2016), financiële stimulansen voor leidinggevendenden (Deckop, Merriman, & Gupta, 2006), of de beschikbaarheid van buffermiddelen en immateriële activa (Surroca, Tribó, & Waddock, 2010).

Veel minder aandacht wordt besteed aan het idee dat de houding van een bedrijf ten aanzien van sociale kwesties voortkomt uit de beweegredenen van zijn topbestuurders (Gupta *et al.*, 2017), hoewel de populaire pers in ontelbare anekdotische voorbeelden deze koppeling van MVO en bedrijfsleiders suggereert. Als ‘chief decision makers’ zijn CEO’s vaak sterk betrokken bij beslissingen die de behoeften van belanghebbenden aangaan (Waldman, Siegel, & Javidan, 2006). Omdat ze zich in een unieke positie bevinden om bedrijfsmiddelen toe te kennen aan zaken zoals vrijwilligersprogramma’s voor werknemers of diversiteitsbeleid (Wowak *et al.*, 2016), hebben CEO’s een aanzienlijke vrijheid ten aanzien van MVO-

initiatieven (Petrenko *et al.*, 2016). Bestuurlijke discretie ten opzichte van investeringen in MVO impliceert enerzijds dat CEO's kunnen bijdragen aan de variantie in sociale initiatieven door de te beïnvloeden hoeveel middelen hun bedrijf in MVO investeert. Anderzijds geeft het ook aan dat heterogeniteit in MVO kan voortvloeien uit het vermogen van CEO's om een bepaald type MVO-engagement te bevorderen, gezien de toenemende verscheidenheid aan goede doelen en andere MVO-programma's die organisaties kunnen aanwenden om een positieve impact te hebben op de samenleving (Wang *et al.*, 2016b). Voortbouwend op deze inzichten, heeft een kleine groep 'upper echelons' wetenschappers (onderzoekers die de topbestuurders van organisaties bestuderen) onlangs pas de eerste stappen gezet om te begrijpen hoe en in welke mate bepaalde CEO-kenmerken, zoals persoonlijkheidskenmerken (Petrenko *et al.*, 2016), politieke ideologie (Chin, Hambrick, & Treviño, 2013), of leiderschapsstijlen (Wowak *et al.*, 2016) gerelateerd zijn aan de MVO-betrokkenheid van bedrijven.

Het doel van dit proefschrift is om een dieper en meer uitgebreid inzicht te verschaffen in de manier waarop motieven van bedrijfsleiders het welzijn van de belanghebbenden van het bedrijf beïnvloedt. Dit proefschrift bestaat uit vier hoofdstukken, waarin we de aard van leidinggevende motieven verkennen, hun oorsprong, hoe ze veranderen tijdens de loopbaan van een CEO, hoe ze zich verhouden tot MVO, en hoe ze uiteindelijk de lange-termijn-uitkomst van organisaties beïnvloeden. Figuur 1.1 toont het algemeen kader van dit proefschrift. Hieronder geven we een korte samenvatting van de vier papers die de kern vormen van dit proefschrift. We verwijzen hierbij naar figuur 1.1 om te illustreren hoe elk hoofdstuk betrekking heeft op het algemeen kader.

Figuur 6.1: Algemeen kader van dit proefschrift.



Hoofdstuk 2: Hoe belangrijk zijn CEO's voor maatschappelijk verantwoord ondernemen?

Vooraleer we empirisch onderzoeken *hoe* leidinggevend MVO beïnvloeden in hoofdstuk 3, 4 en 5, onderzoeken we in hoofdstuk 2 eerst *of* CEO's van belang zijn om de heterogeniteit in MVO te verklaren. Verschillen in MVO worden al enkele decennia bestudeerd op basis van een diverse set van theoretische perspectieven (Aguinis & Glavas, 2012), maar er is weinig bekend over hoeveel van de totale variantie in MVO er bestaat als gevolg van CEO's in het algemeen. De literatuur die variantie-partitioneringsmethoden (VPM) gebruikt om de relatieve bijdrage van tijd-, industrie- of bedrijfsgerelateerde factoren aan verschillen in MVO vast te stellen, heeft het belang van CEO's tot op heden grotendeels genegeerd. Dit is verrassend aangezien studies die de impact van specifieke CEO-kenmerken op MVO onderzoeken, het belang van CEO's steeds veronderstellen, zonder dat dit getest werd.

Om deze kenniskloof te overbruggen, onderzoeken we het ‘CEO-effect’ –de hoeveelheid van de totale variantie in MVO die verklaard kan worden door CEO’s– door de ‘CEO in context’(CiC)-techniek toe te passen op een grote longitudinale dataset van Amerikaanse bedrijven. De CiC-techniek is een nieuwe VPM, ontwikkeld door Hambrick en Quigley (2014), die de specifieke bijdrage van CEO’s aan bedrijfsresultaten van de contextuele invloeden onderscheidt. We schatten het CEO-effect voor de meest gebruikte dataset van MVO, de KLD social ratings-database. Vervolgens onderzoeken we ook hoe gevoelig onze resultaten zijn voor verschillen in meetwijze van MVO door verschillende sociale ratingbureaus, door het berekenen van het CEO-effect aan de hand van een andere dataset, de Asset4 database. We zien dat bedrijven en CEO’s de meerderheid van variantie in MVO verklaren. De impact van CEO’s geschat met de CiC-techniek is consistent tussen 32,7 procent en 34,6 procent en opvallend stabiel wanneer de afzonderlijke dimensies van MVO individueel worden geschat. Ter vergelijking bieden we bovendien een reeks schattingen van het CEO-effect verkregen met gebruikelijke VPM’s.

Hoofdstuk 2 vertegenwoordigt een van de eerste onderzoeken die een uitgebreid en systematisch inzicht geven in de bronnen van variantie in MVO en zijn subcategorieën. Ter situering aan de hand van figuur 1.1; in dit hoofdstuk behandelen we CEO’s als een ‘zwarte doos’ (kader II), om de omvang van het netto-effect van de motieven van CEO’s op MVO en specifieke types van MVO-initiatieven te onderzoeken (kader III).

Hoofdstuk 3: Een neurowetenschappelijke micro-economische grondslag van sociale waardenoriëntatie, drijfveren en prosocialiteit in strategische besluitvorming

In hoofdstuk 3 combineren we *eigenschaps-* (Bogaert, Boone, & Declerck, 2008) en *staats-* (Scott et al., 2014) benaderingen van prosocialiteit om theorie te ontwikkelen over hoe enerzijds intrinsieke motivaties en anderzijds stimuli uit de context gezamenlijk beïnvloeden in hoeverre een CEO de belanghebbenden in de organisatie betreft bij strategische

beslissingen. We ontwikkelen een multi-level model waarin het perspectief van de hogere echelons (Hambrick & Mason, 1984) op managementbeslissingen op individueel niveau gekoppeld wordt met literatuur over corporate governance (deugdelijk bestuur) (Jensen & Meckling, 1976) en institutionele theorie (DiMaggio & Powell, 1983) die de nadruk leggen op de stimuli en beperkingen uit de context.

We introduceren sociale waardenoriëntatie (SWO) in het ‘upper echelons’-veld, wat de intrinsieke zorg voor het welzijn van anderen kenmerkt in individuen. Het speelt een bepalende rol in de manier waarop mensen nadenken over collectieve versus individuele belangen in beslissingen en in hoe ze reageren op contextuele prikkels (Declerck & Boone, 2016). Door gebruik te maken van dit inzicht, richten we ons op twee omgevingsfactoren die van invloed kunnen zijn op het gepercipieerde nut van MVO: (1) monetaire prikkels -dat wil zeggen, beloningsregelingen die CEO’s op korte versus lange termijn belonen, en (2) sociale drijfveren –de sociale druk die bedrijven ervaren van investeerders en belanghebbenden om te voldoen aan externe verwachtingen.

Ter situering in figuur 1.1.; in hoofdstuk 3 brengen we de gezamenlijke impact van de sociale waardenoriëntatie (kader II) en contextuele prikkels (kader IV) op MVO (kader III) in kaart, waardoor het upper echelons perspectief geïntegreerd wordt met literatuur over corporate governance en institutionele theorie om uit te leggen waarom en wanneer CEO's zich bekommeren om het welzijn van organisatorische belanghebbenden. Hoofdstuk 3 is een van de eerste onderzoeken die voortbouwen op de bevindingen van de neuro-economie om te verduidelijken hoe topmanagers strategische beslissingen nemen zowel op basis van hun persoonlijke waarden als hun omgevingsfactoren.

Hoofdstuk 4: Gewoon oud of uit een ander tijdperk? Het veelzijdige effect van de leeftijd van een CEO op maatschappelijk verantwoord ondernemen

In hoofdstuk 4 onderzoeken we hoe enerzijds stabiele waarden verschillen tussen CEO's en anderzijds veranderingen in hun persoonlijke waarden over de tijd van invloed zijn op MVO door voort te bouwen op het dubbele aspect van een fundamenteel demografisch kenmerk: leeftijd van de CEO. Uit onderzoek blijkt enerzijds dat persoonlijke waarden veranderen naarmate men ouder wordt (het zogenaamde 'tijdsvariabele' leeftijdseffect) als gevolg van de verschillende ontwikkelingsprioriteiten, kansen en obstakels waarmee mensen geconfronteerd worden in verschillende levensfasen (Heckhausen, Wrosch, & Schulz, 2010). Anderzijds weerspiegelt de leeftijd ook het feit dat mensen tot verschillende geboortecohorten behoren (het zogenaamde 'tijdstabiele' leeftijdseffect). Volgens sociologen verschillen opeenvolgende geboortecohorten omdat individuen verschillende maatschappelijke waarden mee krijgen die dominant zijn in de periode van hun jeugd en deze indrukken nagenoeg ongewijzigd blijven als ze volwassen worden (Ryder, 1965). In deze studie integreren we tijdstabiele en tijdsvariabele perspectieven op de waarden van leidinggevendenden door een theoretisch model te ontwikkelen over hoe leeftijd gelijktijdig bepaalt *welke* MVO-initiatieven CEO's voorrang geven en *in hoeverre* CEO's in MVO investeren.

Om goede conclusies te kunnen trekken over hoe individuele waarden in de loop van de tijd veranderen, is het belangrijk om de invloeden van veroudering (A), de periode (P) waarin waarnemingen worden gemeten en geboortecohort (C) te ontwarren, vanwege de lineaire afhankelijkheid tussen de drie factoren ($A = P - C$) (Mason & Fienberg, 1985). We passen het APC-kader toe om de invloed van het CEO-geboortecohort en veroudering op MVO te ontrafelen. Met behulp van een grote panel dataset van 1.055 CEO's van S&P 1500-bedrijven, zien we dat MVO-initiatieven een omgekeerd U-vormig traject volgen doorheen de CEO-

carrière en dat CEO-geboortecohorten een belangrijke bron van heterogeniteit vormen in de verschillende types van MVO-betrokkenheid.

De resultaten in hoofdstuk 4 hebben belangrijke implicaties voor onderzoek gericht op de relatie tussen de waarden van CEO's en de uitkomsten van de organisatie en is een van de eerste managementstudies waarin het APC-kader wordt toegepast op het onderzoek naar de leeftijd van CEO's. Met betrekking tot het algemene kader (figuur 1.1), maken we in dit hoofdstuk een abstractie van CEO-motieven (kader II) om te onderzoeken hoe verschillende bronnen van heterogeniteit in CEO's (kader I) betrekking hebben op de neiging tot en het soort MVO-engagement (kader III).

Hoofdstuk 5: CEO-hebzucht, maatschappelijk verantwoord ondernemen en veerkracht van organisaties: Een empirische analyse van de wereldwijde financiële crisis van 2008

Waarom verschillen bedrijven zo sterk in hun vermogen om tegenspoed te overwinnen en wat veroorzaakt deze heterogeniteit? Deze vraag behandelen we in hoofdstuk 5, waar we in het kader van de Wereldwijde Financiële Crisis van 2008 (WFC) onderzoeken hoe CEO's vorm geven aan MVO-bedrijfsprofielen en hoe dit het lot van hun organisaties op de lange termijn beïnvloedt. We bekijken hoe CEO-hebzucht (Haynes, Campbell, & Hitt, 2017) gecombineerd met verschillende soorten financiële stimulansen de houding van bedrijven ten opzichte van MVO beïnvloedde vóór het begin van de WFC. Wij verwachten dat (1) CEO-hebzucht negatief wordt geassocieerd met MVO, omdat in hun ongebreideld streven naar persoonlijke rijkdom, hebzuchtige leidinggevenden meer geneigd zijn om kortzichtig gedrag te vertonen en investeringen in MVO verwaarlozen en (2) dat deze relatie meer uitgesproken zal zijn wanneer een hoger deel van de CEO-beloning bestaat uit een jaarlijkse bonus, maar minder uitgesproken wanneer een groter deel van de beloning bestaat uit voorwaardelijk toegekende aandelen ("restricted stocks"). Vervolgens bouwen we voort op recente bevindingen uit onderzoek naar MVO dat bedrijven met sterke relaties met hun stakeholders een superieure veerkracht

vertonen (DesJardine, Bansal, & Yang, 2017; Ortiz-de-Mandojana & Bansal, 2016). We beargumenteren dat, omdat hebzuchtige leiders organisaties uitbouwen met een zwakke stakeholderondersteuning en een individualistisch klimaat, hun bedrijven op de korte termijn grotere verliezen zullen ervaren en lagere herstelpercentages zullen vertonen na de ineenstorting van de markt in september 2008.

Voor een steekproef van 301 CEO's van openbare Amerikaanse organisaties, analyseerden we MVO tijdens de periode 2003-2008 en veerkracht tijdens en na de 2008 WFC. We vonden steun voor onze hypotheses. Hoofdstuk 5 is een van de eerste studies die strategisch leiderschap, langetermijninvesteringen en organisatorische veerkracht samen onderzocht. Ter situering in figuur 1.1.; we zien dat een combinatie van CEO-hebzucht (kader II) en financiële stimulansen (kader IV) de CEO motiveren om sterke relaties met stakeholders op te bouwen (kader III), waardoor integratief wordt weergegeven hoe motieven van CEO's bijdragen aan verschillende kenmerken van organisatorische veerkracht - stabiliteit en flexibiliteit (kader V).