Three essays on Organizational Culture

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Daje.

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ABSTRACT

Organizational culture has been studied in organization and management literature for many years. Managers have recognized its importance for the corporation and its potential role as a driver of organizational performance. However, despite both academic and practitioner interest, we still lack a clear understanding of its impact on organizations. This dissertation leverages different research streams to advance our understanding of the relationship between culture and corporate responsible performance and the role that leadership plays in culture perception. For this purpose, I have conducted three empirical studies, leveraging Natural Language Processing (NLP) methods to measure organizational culture unobtrusively, using Glassdoor's employee reviews. These studies are presented in the three chapters. The first chapter examines the effects of organizational culture as an antecedent of corporate misconduct and how organizational structure can exacerbate (or mitigate) its effects. I find that results-oriented cultures can lead to negative consequences when employees face performance pressure issues. Further, this effect worsens in decentralized companies, while more formalized organizational structures hinder this. The second chapter looks at two aspects of organizational culture: organizational purpose and ideology. Recent literature theorized an association of organizational purpose to sustainability as purpose-driven firms are more likely to act responsibly, beyond the constraints of profit maximization. I argue that this relationship would not hold in any organization, but only when it is consistent with the beliefs on the specific issue in the organization and its local community. To do so, I propose a deeper analysis of how purpose and ideology at the organizational and community level can explain reductions in corporate CO^2 emissions. The results show that purpose, mediated by ideology, leads to significant emissions reductions. However, this effect disappears whether the company locates its headquarters in communities with polarized beliefs on climate change issues. The final explores how the public recognition of the CEO can affect how employees perceive their company's culture. Using CEO awards as an exogenous source of CEO prestige, I study the reaction in culture discourse after these events finding short-term positive reactions related to the awards.

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INTRODUCTION

> *"… when Microsoft's board of directors announced that I would become CEO, I put the company's culture at the top of our agenda. I said that we needed to rediscover the soul of Microsoft, our reason for being. I have come to understand that my primary job is to curate our culture so that one hundred thousand inspired minds – Microsoft's employees- can better shape our future."* (Nadella 2017, 17)

Understanding how the values, beliefs, and practices distinguish organizations and explain differences in outcomes has been central for many years for organization theorists. A long research tradition on organizational culture, going back to classic books (i.e., Barnard 1938; Deal and Kennedy 1983; Schein 1985; Selznick 1957), and through hundreds of research articles (for a recent review see Giorgi, Lockwood, and Glynn 2015) has helped us understand how culture is formed, how it changes and how it can affect performance. Not surprisingly, organizational culture has become a central concept for leaders. In a recent survey of Fortune 1000 executives, 79 percent of them placed culture among the most important economic value drivers for the organization, while more than half (54 percent) would not acquire another company if poorly matched with the organization's culture (Graham et al. 2020). However, despite the interest in the concept, much is left to know about how organizational culture evolve and how it affects organizations (Chatman and O'Reilly 2016).

My exploration of organizational culture builds on a recent resurgence of studies on the concept, which adopts computational methods to measure cultural features from language (Cremer, Garicano, and Prat 2007; Pinker 2008; Bhatt, Goldberg, and Srivastava 2021). All my empirical work is based on the idea that language can function as a "window into culture" (Srivastava and Goldberg 2017) and can be a helpful predictor for individual and organizational action. Srivastava et al. (2018) used an interactional language use model to study the trajectory of cultural fit (i.e., enculturation) of employees in a mid-size technology firm starting from a corpus of e-mail exchanges finding that the individual level of enculturation predicted individual attainment, voluntary or involuntary exit, and career paths. Corritore et al. (2020) used Glassdoor employee reviews to study cultural heterogeneity, finding that homogeneity of cultural representations by

employees predicted higher performances, while the different conceptualizations of culture predicted higher innovative output.

Anthropological studies on organizational culture emphasized the importance of language in discovering the "native's point of view" (Geertz 1973; Ouchi and Wilkins 1985). Geertz (1973) was among the first to underline the importance of a "semiotic" approach in studying culture, one that focused mainly on language and symbols as the principal tools to comprehend the individual's point of view. Using NLP methods to study organizational culture can be the closest method to mixing the specificity of qualitative anthropological studies with a much broader sample of data given by the current availability of public data from multiple sources like online platforms (i.e., Glassdoor, FishBowl), social media (i.e., Twitter, Facebook, Instagram), and many other sources that can enrich our knowledge on the effects of culture.

From a substantive point of view, my research on organizational culture departed from the traditional focus on financial performance to study how different dimension of organizational culture can affect a corporation's social and environmental performance. My works contributes to literature on organizational misconduct (Palmer, Smith-Crowe, and Greenwood 2016a; Vaughan 1999), performance pressure (Mitchell et al. 2018; 2019), corporate sustainability (Bansal 2003; Marquis, Glynn, and Davis 2007), organizational purpose (C. Gartenberg, Prat, and Serafeim 2019; Henderson and Serafeim 2020), and ideology (Gupta, Briscoe, and Hambrick 2017; Gupta and Briscoe 2019; 2020; Briscoe and Gupta 2016). Finally, I test a long-standing notion that describes organizational culture as a strictly internal construct deeply rooted in CEO values and beliefs (Schein 1985) by testing how the prestige associated with the CEO can affect how employees perceive the culture of the company. I further explain each study below.

Chapter 1:

This study (co-authored with Prof. Fabrizio Ferraro and Prof. Sampsa Samila) examines how the management's excessive focus on goals and performance can lead to the development of a culture that brings constant performance pressure to employees. In this article, we reconceptualize strain theory (Merton 1938) at the organizational level due to both organizational culture and organizational structure. We follow recent literature in social psychology on performance pressure

(Mitchell et al. 2018; 2019) in arguing that organizations with a culture characterized by strong performance pressure are more likely to engage in misconduct. Furthermore, we build on the literature on bureaucracy and monitoring (Haveman 2009; Heese and Pérez-Cavazos 2019) to argue that more formalized organizations, which arguably have more controls, have fewer adverse effects of performance pressure. Likewise, more decentralized organizations, which tend to have less effective monitoring mechanisms, provide more fertile ground for performance pressure to have adverse effects.

To test these hypotheses, we analyzed the regulatory and law violations of 880 publicly traded firms in the United States from 2008 to 2019 and measured organizational culture and structure through an NLP analysis of the firms' employee reviews on Glassdoor.

We find that performance pressure significantly increases the likelihood of organizational misconduct. We also find that the negative effect of performance pressure is more substantial for companies that rely on a more decentralized structure, while the results for companies that rely on a more formalized structure are mixed.

Chapter 2:

In the second chapter, I look at two specific aspects of organizational culture. The focus of this study is centered upon the effect of organizational purpose (i.e., a set of beliefs about the meaning of a firm's work beyond measures of financial performance - Gartenberg, Prat, and Serafeim 2019) and political ideology (the prevailing beliefs among organizational members about how the social world operates - Simons and Ingram 1997) and how these constructs interact to explain differences in organizational actions toward the reduction of carbon emissions. I build on recent research (Gartenberg 2021; Henderson and Serafeim 2020) that studies the relationship between organizational purpose and sustainability and argue that this relationship can become more/less effective depending on the prevailing beliefs among the body politic of the firm. Furthermore, drawing from the literature that studies how institutional pressures at the community level shape corporate social action (Marquis, Glynn, and Davis 2007) and open polities (K. Weber and Waeger 2017), I analyze how the polarization of beliefs at the community level regarding climate change can hinder the effects of purpose and liberalism in reducing carbon emissions.

I gathered data from Glassdoor reviews to measure employees' perception of organizational purpose, clarity, and mission, joined with data from the Federal Election Committee (FEC), which provides individual contributions to political parties and includes information regarding the individual's company, data on carbon emissions from Trucost, and data on community beliefs regarding climate change from the Yale Climate Opinion survey.

The results show that organizational purpose and ideology (i.e., liberal vs. conservative firms) do not explain significant differences in CO2 reductions at the organizational level. However, when mediated, I find that high employee perception of organizational purpose in liberal-leaning organizations explains significant reductions in carbon emissions. Furthermore, this effect is more substantial in carbon-intensive industries, which are the most sensitive to carbon emissions and their repercussions. Finally, the effect of purpose and ideology towards sustainability is erased in contexts of polarized communities on climate change.

Chapter 3:

In the last chapter of my dissertation, I follow the literature on organizational culture that describes leadership and culture as intertwined (Schein 1985) and question whether organizational culture, a concept formed inside the organization, can be influenced by external events in the firm. To do so, I build on the literature of status (Hall 1992; Gould 2002) to study the relationship of culture evaluation (i.e., the collective perception that employees have about the organizational culture) with CEO status. I focus on CEO awards to represent an exogenous event to the firm and examine the symbolic value that awards can have on the subsequent collective description of the company's culture. I argue that the culture evaluation of companies with award-winning executives can be positively biased as a result of both an increase of perceived credibility and charisma of the CEO from employees.

I test the hypothesis using NLP and topic modeling (LDA) to derive the measures of culture evaluation using employees' job rating posts from Glassdoor. I measure status through CEO awards data from multiple sources from 2010 to 2020. I adopt a mix of difference-in-difference and coarsened exact matching methods to account for endogeneity concerns. The results show that CEO awards improve the homogeneity of culture discourse and the overall appreciation of the

organization's culture, therefore, contributing to the literature by providing a test of the effects of environmental influences on organizational culture.

The three essays in the following chapters thus constitute the body of this Ph.D. thesis. They provide detailed information on the research gap and questions, the methods used, and the findings, discussions, and conclusions generated. After the three essays, a final section of general conclusions completes this dissertation.

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CHAPTER 1

UNDER PRESSURE: CULTURE AND STRUCTURE AS ANTECEDENTS OF ORGANIZATIONAL MISCONDUCT[1]

INTRODUCTION

Virtually every analysis of corporate misconduct in the last two decades, including Enron (Sims and Brinkmann 2003; Kuliks 2005), Wells Fargo (Independent Directors of the Board of Wells Fargo 2017), Boeing (Bretton Putter 2019), and Deutsche Bank (Enrich 2020), points to toxic organizational cultures with strong performance pressure as a key antecedent of misconduct. Organizations that set challenging goals for employees can benefit in terms of higher productivity, employee's motivation and engagement, proficiency, and citizenship (Mitchell et al. 2019; Gardner 2012; Locke and Latham 2002; Latham, Stajkovic, and Locke 2010; Locke and Latham 2013; 1991). However, recent development in organizational behavior suggests that the same productivity expectations can also lead to situations of performance pressure (Mitchell et al. 2018) that increase the risks for mental stress and anxiety (Karasek 1979; Demerouti et al. 2001; Fox, Dwyer, and Ganster 1993; Mitchell et al. 2019; Yip et al. 2021), strain (J. L. Johnson, Martin, and Saini 2011), moral disengagement (Welsh et al. 2020), and unethical behavior (Schweitzer, Ordóñez, and Douma 2004; Ordóñez and Welsh 2015; Ordóñez et al. 2009a) when the employees do not have the resources to meet expectations.

At the macro level, starting from Merton's (1938) foundational strain theory of social deviance and Sutherland's (1949; 1939) work on white-collar crimes, sociologists laid out the theoretical foundations of the association between culture and misconduct (Merton 1936; Vaughan 1999; Sutherland 1949). However, as organization theorists moved from an earlier emphasis on intra-organizational processes (incentives, structure, culture) towards broader institutional and network mechanisms, they all but abandoned this topic in the misconduct

[1] This chapter is co-authored with Prof. Fabrizio Ferraro and Prof. Sampsa Samila, from IESE Business School.

literature (Greve, Palmer, and Pozner 2010; Cooper, Dacin, and Palmer 2013). Indeed, at the organizational level, empirical evidence on the relationship between performance pressure and misconduct is mixed (Daboub et al. 1995; Hill et al. 1992) and also not necessarily convincing from an empirical point of view. One important, but theoretically limited, exception in the accounting literature is Campbell and Shang (2021), which propose a similar empirical approach to ours though focusing on developing indicators of corporate misconduct risk starting from employees' reviews.

To clarify the relationship between culture and misconduct, this paper reconceptualizes strain theory (Merton, 1938) at the organizational level by teasing out its cultural and structural mechanisms. First, we hypothesize that organizations will have higher tendencies to misbehave when their culture is characterized by strong performance pressure. This cultural hypothesis is consistent with the nature of the mechanism suggested by Merton's strain theory and Agnew's general strain theory (1992). However, testing this cultural hypothesis beyond individual case studies has been not possible so far, given the lack of systematic data on organizational culture and misconduct. Integrating recent psychology and behavioral ethics results on the dynamic effects of performance pressure on individual behavior (Mitchell et al., 2019), we argue that employees' perception of performance pressure can indicate situations of strain that can increase the likelihood for misconduct. Specifically, as performance pressure becomes part of the organizational routines, organizations with results oriented cultures incur higher risks to increase the negative effects of performance pressure.

Furthermore, drawing on the literature on bureaucracy (Adler & Borys, 1996; Blau, 1963; Gouldner, 1954; Merton, 1940; Weber, 1922[2019]), we hypothesize that performance pressure will have fewer adverse effects on more formalized organizations, which arguably have more controls in place. Likewise, more decentralized organizations, which tend to have less effective monitoring mechanisms, provide more fertile ground for performance pressure to have negative effects. In doing so, we follow previous studies that related organizational structure as the opportunity factor towards misconduct, though finding no significant results (McKendall and Wagner 1997). To reconcile these results, we propose to look at culture and performance pressure as the leading factor that relates structure and misconduct.

We test these hypotheses using data from a panel of 880 firms in the United States on 420,000 civil and criminal cases resolved with total penalty amounts of $616 billion between 2008 and 2019, as well as 2.6 million employer reviews gathered from Glassdoor.com, which we used to peek inside corporations and unobtrusively observe the digital footprints (Golder and Macy 2014) of their cultures. Not surprisingly, this resource has enabled organization theorists to reignite research on organizational culture (Corritore, Goldberg, and Srivastava 2020). To disentangle the different topics and dimensions of employee reviews, we used natural language processing (NLP) tools—specifically, unsupervised topic modeling (i.e., latent Dirichlet allocation [LDA] Blei, Ng, & Jordan, 2003) and word embedding (Mikolov et al. 2013).

This article makes several contributions to the literature on the antecedents of organizational misconduct and strain theory (Greve, Palmer, and Pozner 2010; Agnew 1992; Vaughan 1999), as well as literature on the consequences of goal setting in organizational psychology (Schweitzer, Ordóñez, and Douma 2004; Ordóñez and Welsh 2015) and the literature on the effects of performance pressure (Mitchell et al. 2019; 2018). First, we provide systematic, empirical evidence on the relationship between organizational culture and misconduct in a large sample of organizations. These results contribute to recent studies that used employee reviews as a predictor of misconduct (D. Campbell and Shang 2021) and provide empirical evidence on the effects of performance pressure on misconduct at the organizational level (Mitchell et al. 2019; 2018; Baumeister 1984; Gardner 2012). Second, from a theoretical point of view, we contribute to the development of Merton's strain theory at the organizational level, articulating the role of culture and structure in predicting misconduct. We show that decentralization creates the conditions for misconduct only when mediated by organizational culture and that formalization removes the effects of performance pressure. Third, our findings also contribute to the literature on the dark side of goal setting by showing the importance of culture and structure in linking stretch goals with misconduct (Ordóñez et al., 2009b:86). Finally, our methodological approach offers researchers new tools to revive organizational culture and structure research and offers practitioners a forensic tool to predict organizational misconduct.

THEORETICAL FRAMEWORK

Organizational Misconduct and Strain Theory

Following Greve et al. (2010), we define organizational misconduct as "behavior in or by an organization that a social control agent judges to transgress a line separating right from wrong" (Greve et al. 2010: 56). Although our empirical test focuses on behaviors deemed illegal by U.S. regulatory agencies or the Department of Justice, our theorizing need not be limited to illegal activity. Corporate misconduct is widespread, with survey data, for instance, showing that 20% of CFOs in U.S. public companies engage in earnings management practices (Dichev et al. 2013), despite the increasing sophistication of internal and external control mechanisms.

Organization theorists have long sought to understand misconduct, as it is foundational to the discipline's mandate to explore how organizations affect the societies in which they are embedded (Boulding 1958; Stern, and Barley 1996). Scholars have been exploring the antecedents and consequences of misconduct for decades (see Szwajkowski 1985; Vaughan 1999; Simpson and Weisburd 2009; Greve, Palmer, and Pozner 2010; Cooper, Dacin, and Palmer 2013; and more specifically on CEO misconduct, Schnatterly, Gangloff, and Tuschke 2018) under the definition of misconduct, or others (i.e., wrongdoing, illegality, fraud, white-collar crime). Nevertheless, despite decades of scholarly inquiry, the development of research at the meso and macro levels has lagged behind research at the individual level (MacLean, 2008; Palmer, Smith-Crowe, and Greenwood, 2016; See Treviño, Den Nieuwenboer, and Kish-Gephart 2014 for a review of the micro literature). Most recent advances in the macro-level literature, furthermore, have drawn on institutional theory (Gabbioneta et al. 2013) and theories based on the concepts of embeddedness and social networks (Yenkey 2018) to explain inter-organizational processes of diffusion of misconduct (Mohliver 2019), devoting less attention to intra-organizational dynamics.

In a review of the literature on organizational misconduct, Diane Vaughan (1999: 273) suggested: "Merton's thinking is the foundation of any consideration of the dark side of organizations. He observed that any system of action inevitably generates secondary consequences that run counter to its objectives." In this quote, she referred to his work on strain theory (Merton, 1938) and the dysfunctional consequences of bureaucracy (Merton,

1940), framing both within his general theoretical insight that the same mechanisms and processes that generate positive outcomes can lead to negative consequences under certain conditions (Merton 1936). In "social structure and anomie," Robert Merton directed sociologists' attention away from examining individual-level antecedents of deviance towards discovering "how some social structures *exert a definite pressure* upon certain persons in society to engage in nonconformist rather than conformist conduct" (Merton 1938:672). Society, he suggested, defines aspirational references (goals, purpose, interests) that are not attainable by all members. Individuals in lower social classes who do not have the same educational and economic resources as individuals in more privileged ones are still expected to achieve wealth and fame. This situation creates frustration and might translate into deviant and criminal behavior. At the societal level, strain theory leverages both a cultural mechanism (i.e., the widespread adoption of cultural goals of success and the meritocratic ideal) and a structural one (i.e., a lack of resources preventing some groups from achieving these ideals). In this paper, we theorize strain at the organizational level as the result of a cultural mechanism (performance pressure perceived by employees) and a structural mechanism (the degree to which this pressure is counterbalanced by formalization and centralization, two key components of organizational structure).

This conceptualization is consistent with the original theoretical emphasis on both a cultural/symbolic mechanism (i.e., the widespread adoption of cultural goals of success and the meritocratic ideal) and the role of broader structural features of society (i.e., stratification and a lack of resources which prevents some groups from achieving those goals). Strain theory had already inspired much research in management on organizational misconduct, exploring how environmental and organizational characteristics can create situations of strains for the organization and create opportunities to violate laws or norms (Baucus 1994; Finney and Lesieur 1982; Szwajkowski 1985; Staw and Szwajkowski 1975; Vaughan 1982). However, empirical results for this "pressure and opportunity" model had been mixed (Clinard, Yeager, and Clinard 2017; Hill et al. 1992). Moreover, recent studies which integrated organizational culture as a mechanism for the normalization and rationalization of organizational misconduct (MacLean, 2008; Campbell and Göritz, 2014) relied on single case studies and thus cannot explore whether specific cultural and structural factors lead to organizational misconduct.

Organizational Culture, Performance Pressure, and Organizational Misconduct

As high expectations for performance become part of employees' learning experience (i.e., their routine), the performance orientation of the organization will become part of its culture (Chatman & O'Reilly, 2016; Schein, 1996), defined as "a system of shared values (that define what is important) and norms that define appropriate attitudes and behaviors for organizational members (how to feel and behave)" (O'Reilly and Chatman 1996: 160). In line with goal setting theory, an organizational culture focused on results-orientation (one dimension of the Organizational Culture Profile developed by O'Reilly and Chatman, 1991) can positively affect individual and organizational performance. Indeed, in decades of research in goal-setting theory, scholars have documented how ambitious goals can increase individual effort and performance (Locke and Latham, 2002, 2013). However, considerable evidence has documented how aggressive goals can lead to higher stress and anxiety for employees (Demerouti et al. 2001; Fox, Dwyer, and Ganster 1993; Karasek 1979; Yip et al. 2021), situations of strain (Johnson, Martin, and Saini, 2011), and improper behavior (Ordóñez and Welsh 2015; Schweitzer, Ordóñez, and Douma 2004; Barsky 2008).

Scholars studying these negative consequences suggest that the same psychological mechanisms that explain the benefits of performance oriented cultures (i.e., increased performance) might also lead to unethical behavior under specific conditions (see Ordoñez et al. 2015 for a review). For instance, experimental evidence on goal-setting across multiple rounds shows that people with unmet goals were more likely to engage in unethical behavior (Schweitzer, Ordóñez, and Douma 2004) and that the depletion of self-regulatory resources mediates the relationship between goal structures (high-low) and unethical behavior (Ordoñez et al. 2015). Furthermore, as shown by Wakeman, Moore, & Gino (2019), misconduct can act as a self-protective behavior that restores the individual's feeling of competence when under threat. Whether these psychological mechanisms affect at the individual level, several studies demonstrated how several unethical/illegal group activities could be compensated in several ways (Wiley, Wakeman, and Moore, 2018), contributing to a morally disengaged culture (Moore 2008; Moore et al. 2012; Barsky 2008; MacLean 2008).

At the organizational level, several case studies, ethnographies, and journalistic investigations have confirmed the insight that "toxic" performance cultures can create conditions that facilitate misconduct. In a study of Enron's accounting fraud, Simms and Brinkmann (2003) described how the adoption of performance rankings to evaluate employees created a culture based on pressure and competition with peers. However, performance pressure can arise even in the absence of rankings and performance bonuses, as the manager of the equity derivatives trading room studied by Beunza (2019) explained: "Even if you tell a guy, 'I'm going to pay you $2 million no matter what,' he will still like to show a $50 million profit and not $10, because $50 million means he's a rooster. He can walk through the hen house as the biggest rooster." (2019:229). Another recent example comes from the Wells Fargo accounting fraud of 2016, whereby bank employees created millions of fraudulent savings and checking accounts on behalf of clients. Findings from investigations show that individual workers and branches charged fees and issued unexpected credit or debit cards to customers to meet the company's incentives to sell multiple financial products. The company's strong emphasis on its sales goals "distorted the sales model" and translated into a performance culture that fostered "an atmosphere that prompted low-quality sales and improper and unethical behavior" (Shearman and Sterling LLP, 2017).

The literature in finance, accounting, and management has also documented the relationship between aggressive financial targets and organizational misconduct (O'Connor et al. 2006; Zhang et al. 2008; Johnson et al. 2009). For instance, executives who committed fraud had greater financial incentives to do so (Johnson, Ryan, and Tian, 2009). CEOs are more likely to misrepresent company earnings if their financial incentives are linked to company performance (Bergstresser and Philippon 2006; Zhang et al. 2008). Also, aggressive financial targets can be the result of managerial aspiration levels, whether to outperform their peers (Harris and Bromiley 2007) or to exceed shareholders' expectations (Mishina et al.. 2010). In addition to executives, middle managers can play a crucial role in translating high-level abstract performance objectives into lower-level ones that induce deceptive performance, as shown in an ethnographic study of sales at a telecom firm (Den Nieuwenboer, da Cunha, and Treviño 2017).

One common element that is shared across all of these studies is the presence of performance pressure to reach organizational goals. Baumeister (1984: 610) defined pressure as "any factor or combination of factors that increase the importance of performing well on a particular occasion." Performance pressure, in psychology, is characterized as a work stressor that represents the urgency to improve performances to reach individual/organizational goals and avoid negative consequences (Richard S. Lazarus 2000; Baumeister 1984). Results in psychology on the effects on performance pressure found that, similar to goal-setting theory and other work stressors, the concept can take both negative and positive consequences (Lazarus and Folkman 1984). Research on teams found that performance pressure can lead to suboptimal results by promoting heuristics that favor productivity over quality (Gardner 2012). Recent literature building on these results focused on employees' perception as a decisive factor that can drive performance pressure in a positive or negative direction. Employees that perceived performance pressure as challenging experienced showed higher task proficiency and citizenship, while employees that experienced performance pressure as threatening were more correlated with unethical behavior (Mitchell et al. 2018; 2019). While these studies have been limited to individual level or experimental settings, we posit that organizations with results oriented culture increase the potential for performance pressure to become institutionalized into the company's culture and, consequently, increase the risks for misconduct.

Regardless of whether misconduct originates from the top or lower levels of an organization (Palmer 2008), the literature on the diffusion of misconduct within organizations concur that misconduct tends to become institutionalized in routines and embedded in organizational culture (Brief, Buttram, and Dukerich, 2001; Ashforth and Anand, 2003; MacLean, 2008; Campbell and Göritz, 2014). For example, in a large insurance company, MacLean (2008) found that deceptive sales practices were part of the interpretive frames used by employees in their daily routines, which became taken-for-granted operating procedures. Thus, different sources of pressure on organizations, and specific incentive design decisions can translate into a culture of performance for all employees, and in turn, lead to unethical behavior and organizational misconduct. Building on these arguments, we expect:

Hypothesis 1. Performance pressure for employees is positively related to organizational misconduct.

Organizational Structure and Misconduct: Formalization

Despite its central role in the early development of the field, formal organizational structure has been neglected by organization theorists for many years, in what some scholars refer to as a period of "collective amnesia" in the field (McEvily, Soda, and Tortoriello 2014: 302). However, as predictions regarding the disappearance of bureaucracy have been proven wrong, we have experienced a (small) revival of studies of bureaucratic organizational structure (Adler and Borys 1996; Adler 2012; Du Gay 2005; Clement and Puranam 2018; Sandhu and Kulik 2019).

In line with the traditional Columbia approach to bureaucracy, which explored the dark side of bureaucracy (Merton 1940; Gouldner 1954; Blau 1963), sociologists initially tended to consider bureaucratic organizational structure as a factor that makes organizations more prone to misconduct or accidents (Perrow 2011; Vaughan 1999). However, empirical evidence on this relationship remains flimsy and is limited to individual case studies. Furthermore, more recent theorizing on bureaucracy has reinvigorated a more complex—and more positive—view of bureaucracy, emphasizing its enabling properties (Adler and Borys, 1996) by developing a hitherto underappreciated insight from the Columbia school that formal bureaucratic rules might have different effects depending on the informal organizational and cultural practices used to introduce them (Gouldner 1954; Blau 1963). Adler and Borys (1996) reconceptualized the Toyota Production System as a form of enabling bureaucracy, given that formal rules were coupled with workers' control of the process. This enabling form contrasted with traditional coercive ones wherein workers have no control over rules, perceive them as a control device, and exhibit typical signals of alienation.

Building on Adler and Borys (1996), we theorize the relationship between organizational structure and misconduct by distinguishing an organization's level of formalization – traditionally defined as "the extent to which rules, procedures, instructions,

and communications are written" (Pugh et al. 1968: 75) but more broadly intended as the degree of codification of work activities - from its degree of decentralization and considering how each contributes to shaping the organization's culture by moderating the effect of performance pressure. In line with this more positive view of bureaucratic organizing, more formalization should reduce the likelihood of misconduct by making work routines more transparent; in turn, higher efficiency might reduce pressure to engage in malfeasance. Notice that this does not necessarily mean that employees will have a positive perception of formal rules. Indeed, even when formalization is designed in enabling ways that can lead to individual and collective improvements in productivity, individual workers might still express ambivalence about the rules, as revealed in Adler's (1993, 2012) interviews with Nummi workers.

This expectation is also consistent with the economics literature on crime and deviance, which models deviant behavior as the result of rational calculations wherein individuals weigh the benefits of engaging in misconduct against the costs of sanctions and likelihood of getting caught (Becker 1968; Milgrom and Roberts 1988). Empirical research on the topic has confirmed this basic insight. For example, a field experiment on the effects of headquarter's visits to subsidiaries found that efficient control systems can substitute for direct monitoring in reducing malfeasance (Heese and Pérez-Cavazos 2019). Whereas higher formalization is not limited to control mechanisms, it is likely that more formal organizations adopt stricter and more extensive management control practices. In line with our theoretical argument and the empirical evidence we described, we expect:

> *Hypothesis 2. Formalization of organizational structure and processes negatively moderates the relationship between performance pressure and organizational misconduct.*

Organizational Structure and Misconduct: Decentralization

Decentralization is another key structural feature of organizations and affects the locus of decision-making power: in more decentralized organizational structures, employees participate more in decisions and have more autonomy in their jobs (Hage and Aiken 1967;

Pugh et al. 1969). A decentralized, or flattened, structure can increase the benefits of a performance oriented culture by enhancing market responsiveness, morale, and employee accountability (Rajan and Wulf 2006). However, precisely the increased autonomy of employees in a decentralized structure can also increase the likelihood of misconduct.

Decentralization fosters an entrepreneurial environment that enables quick responses to local demands. Although this autonomy, coupled with performance pressure, may yield performance benefits (Hoskisson and Hitt, 1988; Williamson, 1975), it might also lead to increased risk-taking by local managers to meet goals and expectations established by the headquarter. Furthermore, higher decentralization is usually more common in larger and more diversified organizations. In these more complex organizations, monitoring is usually more complicated, which might facilitate misconduct (Jamieson 1994). As the allocation of decisions is sparse throughout the organization, a decentralized organizational structure involves a more complex control systems design, as evidenced by Abernethy et al. (2004). In their analyses on multiple subsidiaries, the author found that decentralization was positively related to the level of information asymmetries between headquarters and subsidiaries. Similarly, Heese and Pérez-Cavazos (2019) provided evidence that direct supervision from the headquarters' managers during visits in decentralized organizations reduced the number of violations by 2 percent and penalties by 23.4 percent.

Previous studies on the effect of organizational structure on misconduct suggest that the organization's structural feature is not a sufficient condition to explain misconduct (Hill et al. 1992; Simpson and Koper 1997; McKendall and Wagner 1997). For example, Hill et al. (1992) studied misconduct in the manufacturing sector by analyzing a range of different factors, from firm size to financial strain and decentralization, using Environmental Protection (EPA) and Occupational Safety and Health Administration (OSHA) data. They found that decentralization could not explain misconduct in either category. Focusing on violations of environmental laws in the manufacturing industry, McKendall and Warner (1997) found that while decentralization alone could not explain an increased likelihood of misconduct, the interactions between structure and organizational culture (i.e., ethical climate), and to a lesser extent, industry profitability, decreased the likelihood of serious environmental violations.

Even if decentralization might not have an independent effect on misconduct, we propose that decentralization would facilitate the development of a toxic performance culture in the organization and thus strengthen the positive relationship between performance pressure and misconduct. For instance, in the Wells Fargo accounting fraud scandal of 2016, a decentralized organizational structure coupled with aggressive sales targets at the regional level led to illegal sales practices in multiple branches of the bank. Results of an independent investigation of Wells Fargo show that the company's "decentralized corporate structure gave too much autonomy to the Community Bank's senior leadership, who were unwilling to change the sales model or even recognize it as the root cause of the problem" (Shearman and Sterling LLP, 2017: 2). Flatter organizations might reduce the effectiveness of hierarchical control. At Wells Fargo, for instance, the control function at the company was "constrained by the decentralized organizational structure and culture of substantial deference to the business unit" (Shearman and Sterling LLP, 2017: 2). A similar example comes from Toshiba's, where the headquarters pushed subsidiaries' managers to overstate computer sales and understate production costs to show higher profits (Beuselinck et al. 2019). Furthermore, studies in accounting also show that local managers, for example, are more likely to adopt earning management techniques to improve the subsidiary's future budget, as shown by Leone and Rock (2002).

Thus, in line with our theoretical arguments and the evidence emerging from multiple case studies of misconduct, we hypothesize:

> *Hypothesis 3. Decentralization of organizational authority positively moderates the relationship between performance pressure and organizational misconduct.*

DATA AND METHODS

Sample

We tested our hypotheses using a panel dataset of yearly firm observations for a sample of firms covered in both Compustat and evaluated on Glassdoor, to which we subsequently added the variables gathered from Good Jobs First.

The variables measuring organizational misconduct were gathered from Good Jobs First and, specifically, by the "Violation Tracker" dataset, which covers 71 types of legal and regulatory violations addressed by more than 300 federal regulatory agencies, including 412,000 civil and criminal cases with total penalties of $616 billion. In addition, we restricted our sample to publicly traded companies with matched CIK codes in Compustat, resulting in 1,293 companies affected by penalties for 34,203 violations.

We used Glassdoor employee reviews to construct our measures of performance pressure, formalization, and decentralization. Glassdoor aggregates millions of reviews and company ratings, CEO approvals, salary and benefits reports, and interview reviews. The service counts more than 70 million reviews and covers 250 thousand companies only in the U.S. We provide an example of a Glassdoor employee review in Figure 1. The initial sample included 2.6 million reviews of 3,423 companies with performance data on Compustat. Companies were matched through a Python fuzzy name-matching algorithm (i.e., *fuzzywuzzy* package*)*. This algorithm uses Levenshtein distance, which measures the distance between two string sequences (Levenshtein 1965).

Finally, we used Compustat as the source of corporate financial information and as the starting point for the matching process of both Glassdoor and Good Job First datasets.

Matching the three datasets resulted in an initial sample of 3,688 companies. Then, following recent literature using Glassdoor data (i.e., Corritore et al., 2019) and using a similar filtering approach, we excluded all observations with less than 100 reviews per year, resulting in a sample of 925 firms, between 2008 and 2019, yielding an unbalanced panel dataset of 4,296 firm-year observations.

Dependent Variable

We operationalized *organizational misconduct* using official resolutions from U.S. courts provided by the "Violation Tracker" service of Good Jobs First. Violation Tracker covers workplace safety, environmental, labor relations, consumer and investor protection, employment discrimination, banking, tax, fraud, bribery, and other cases since 2000 (Good Job First, 2020). Also, agencies' data is also complemented by information collected in

official press releases. Violation Tracker removes violations where the penalty or settlement is lower than $5,000. We extract all 26,934 violation cases committed by public U.S. firms throughout 2008 and 2019 on Violation Tracker.

FIGURE 1

Example of a Glassdoor Review

Due to the nature of these data, our examination is limited to cases of misconduct discovered by official agencies. Nevertheless, our data cover a broader spectrum of illegal activities, and are more accurate than data from media coverage, which tends to be focused only on the largest cases of misconduct. For each firm-year observation, we calculated the total dollar *amount of penalties* (in millions).

Independent Variables

The dataset includes all employer reviews written by employees in the United States from 2008 to 2019 on the website Glassdoor.com. Glassdoor reviews are divided into two sections: a quantitative section where users are asked to rate their firms on some attributes, and a

qualitative open textual section divided into two sentiment-coded categories: *pros* (i.e., positive aspects of the company), and *cons* (i.e., negative aspects of the company), and an additional text section (optional) in which employees can submit suggestions regarding how to improve the company (*advices to management*). Since our analysis focuses on the negative perception of the performance orientation norm, we focused the variable construction on the *cons* section of the reviews.

To grasp the specific dimension that might refer to the performance orientation norm in a wide sample of reviews, we used NLP tools and, specifically, unsupervised topic modeling (LDA; Blei, Ng, and Jordan 2003). Our model was based on 26 topics which resulted from coherence score metrics (Newman et al. 2010). For technical details on the number of topics and the methodology, see Appendix A. Prior studies in management research used topic modelling in multiple areas. For example, Kaplan and Vakili (2015) applied LDA on patent text to identify inventions that originated new topics in the body of knowledge, Corritore, Goldberg, and Srivastava (2020) used topic modelling on Glassdoor reviews to create measures of cultural heterogeneity, and, Di Maggio et al. (2013) used this methodology to study the evolution of press coverage regarding public funding of the arts.

Following Giorgi and Weber (2015), we assigned unique labels to the topics resulting from the LDA process to contextualize them better, as shown in Table 1. Topic 1 is the topic under study, defined by words that connote a negative perception of the company's pressure on performance (i.e., *sale, goal, number, expectation, pressure, commission).*

The final stage of the textual analysis involved inferring a score representing the standardized probability from 0 to 100 for every topic discussed across the entire corpus of data. Thus, the higher the score, the higher the probability of the topic being discussed in an employee's review. Finally, we aggregated all firm-year observations and treated *performance pressure* in our analyses as continuous. In our sample, the performance pressure topic is present, on average, in 3.1 percent of reviews with a maximum of 14 percent. Performance pressure is the most prevalent topic in approximately 2.5 percent of the firm-year observations and scores the highest average in the finance (5.1 percent) and retail (4.7 percent) industries while the lowest in the services industry (1.7 percent).

TABLE 1

LDA Analysis of Glassdoor Reviews – Main Topics

The following table shows the keywords, and labels, for the topic modelling analysis on Glassdoor reviews. To generate the topics, we started from our complete sample of Glassdoor reviews (2.6 millions) and selected a random 20% of the reviews (CONS section) for the LDA analysis. Please see Appendix A for more details on the method.

Topic	Topic label	Top topic words
1	Performance pressure	sale, goal, number, expectation, push, pressure, meet, set, commission
2	Senior management	manager, store, department, supervisor, depend, manage, associate
3	Corporate strategy	change, make_things_right, decision, policy, direction
4	Type of position	job, worker, full_time, position
5	Leadership	culture, leadership, corporate, communication
6	Teamwork	team, lead, leader, performance, individual, role
7	Work hours	work, day, hour, schedule, shift, family, holiday
8	Details of the position	year, month, first, end
9	Respectful treatment of employees	employee, treat, respect, value, good, better, fair
10	Job opportunities	opportunity, growth, grow, advancement, career, promotion, advance, limited
11	Work hours	hour, long, pay, time, horrible, terrible
12	Pay and benefits	pay, benefit, salary, raise, increase, bonus, compensation
13	Open communications	communication, open, idea, meeting, bring, information
14	Technology	system, issue, technology, old, back, side, tech, software
15	N.D.	sell, follow, break, rule
16	Listen to employees	employee, listen, talk, feedback, concern, review, hear, speak
17	Career opportunities	hire, care, people, promote, experience, talent, position, attention
18	Training	training, staff, need, train, learn, support, provide, improve, better,
19	Customer relationship	customer, time, help, deal, call, ask, rude, task
20	Stressful work conditions	environment, anything, stressful, negative, create, stress
21	Product/service quality	focus, product, quality, market, service, customer, long_term, build, profit
22	Employee turnover	people, stop, leave, let, start, fire, stay, look, quit, rid
23	Company characteristics	company, big, large, lose, layoff, location, due, industry, future, go
24	Work-life balance	work, life_balance, place, none, life, appreciate, time, home, load
25	Management	management, level, upper, senior, middle, advice, need, top, executive
26	Work processes	process, project, lot, organization, move, bit, engineer, internal, time

Organizational Structure

Researchers have studied organizational structure primarily by analyzing proprietary data (Guadalupe and Wulf 2010), interview and observational data (Soderstrom and Weber 2020), or survey data (i.e., World Management Survey [WMS]; Bloom and Van Reenen, 2008). In this study, we measured formalization and decentralization through an unobtrusive NLP technique: linear text classification of words in employee discourse (i.e., company reviews on Glassdoor.com). To do so, we used word embedding and FastText as a pre-trained dictionary (see Appendix B for details on the method). This pre-trained dictionary enabled us to classify every review word into a semantic space and identify word similarities between *target vectors* (i.e., words related to formalization and decentralization) in our dataset. In addition, FastText enable us to identify and analyze less common and more specific topics that would not appear as often and were discarded by our topic modeling analysis. Our use of this tool is similar to Cao, Koning, and Nanda (2020), who studied biased sampling of early users in entrepreneurial experiments and used FastText to train a sematic model to measure product's focus on female customers on a large sample of products descriptions.

We derived our target vectors through *additive compositionality* (Gittens, Achlioptas, and Mahoney 2017), whereby arithmetic operations are applied to vectors to refine their word compositions. For example, the nearest vector to the word "king" can be identified via an arithmetic operation (Mikolov et al. 2013):

$$v_{man} + v_{royal} = v_{king},$$

with *v* representing the vector with the related word. In the same way, the *target vectors* used in our study for formalization and decentralization, respectively, are represented by:

$$v_{target-formalization} = v_{bureaucratic} + v_{formalization} + v_{red-tape}; \text{ and}$$

$$v_{target-decentralization} = v_{decentralization} + v_{decentralized} - v_{centralization}.$$

Table 2 shows the list of words most similar to our target vectors. Finally, we calculated cosine similarity between our target vectors and every word of each review, and retained the maximum score for each vector. Thus, for every review, we obtained two scores

(from -1 to 1) representing the maximum similarity of the review to our target vectors for formalization and decentralization.

We considered only the *cons* section of each review to measure the *high formalization* variable as the words in the target vector related to formalization tend to have negative connotations and thus are less likely to appear in the *pros* section of the review. For every year in our sample, we treated high formalization as a binary variable, assigning a value of 1 when the value of formalization for the company exceeded the industry (by two-digits SIC) median and 0 otherwise. We analyzed both the *pros* and *cons* sections of each review to measure the *decentralization* variable, as the words in the target vector are neutral. We treated high decentralization as a binary variable, assigning a value of 1 if the value of decentralization exceeded the median for our sample, 0 otherwise. Decentralization does not include industry as we expect decentralized structures to be more concentrated in some industries (i.e., manufacturing) rather than others (i.e., mining).

Control Variables

We included several control variables in our analysis. First, to avoid any bias in our independent variable, we control for the positive perception of performance pressure by replicating the semantic analyses on the Pros section of the reviews - *Performance pressure (PROS)*. In this way, we are following the idea that performance pressure can act as a double-edged sword whether its perception is positive or negative (Gardner, 2012; Mitchell et al., 2019) and avoiding any confounding explanation from our model related to the performance pressure variable. Second, as described in Appendix A, a visual mapping of the topic model showed that two topics (*pay and benefits* and *stressful working conditions*) were semantically related to the topic under study. As such, we decided to include these two topics as controls in the analyses. Third, we controlled for the *number of reviews* in the focal year (in logarithmic form). Fourth, we operationalized firm size as the *number of employees* reported in Compustat for the focal year, using natural logarithm values. Fifth, we included *sales growth* (%) and *ROA* (both winsorized at the 1% and 99% level) to account for firm performance in the focal year as a possible explanation that could increase performance

TABLE 2

Target vectors' most similar words (FastText)

Target: formalization	Similarity[2]	Target: decentralization	Similarity[3]
bureaucratic	0.8804816	decentralized	0.8884735
bureaucracy	0.80162853	decentralised	0.7864013
bureacratic	0.78376913	de-centralized	0.6914408
beaurocratic	0.77073193	decentralization	0.6866374
redtape	0.73887277	Decentralized	0.6521732
bureacracy	0.73699331	decentral	0.6317272
beauracracy	0.72877342	non-centralized	0.6103989
beurocratic	0.71758479	decentralizing	0.6012831
red-tapism	0.71712649	decentralize	0.5883033
beauracratic	0.71091759	de-centralised	0.5882939
beauracracy	0.67835552	decentralizes	0.5851191
beurocracy	0.6729213	Decentralization	0.5676084
burocratic	0.66317499	decentralisation	0.5537003
burocracy	0.64025646	Decentralizing	0.5480962
Bureaucratic	0.64011562	nonhierarchical	0.5362982
bureaucracies	0.63829845	Decentralised	0.5333222
hoop-jumping	0.60826135	self-organizing	0.5269514
bureacracies	0.60292083	non-hierarchical	0.5261458
tapism	0.59983265	self-organized	0.5193331
paper-pushing	0.58549082	decentralism	0.5161116
bureaucratically	0.58070523	censorship-resistant	0.5156702
Bureaucracy	0.56742257	self-governed	0.5148664
bureaucratization	0.56587136	self-organised	0.511211
bureaucratism	0.56382871	bottom-up	0.5067362
paper-work	0.55870563	participatory	0.5027277
inefficiency	0.55810237	Decentral	0.502153
over-regulation	0.55697292	decentralise	0.4997308
paper-shuffling	0.55400884	decentralising	0.499221
bureaucratisation	0.55029672	centrally-controlled	0.4977726
bureaucratized	0.54976827	peer-production	0.4971926
overregulation	0.54810959	decentralist	0.4971693
formalization	0.54752803	citizen-centered	0.4952511
rigmarole	0.54262245	self-organising	0.4930755
bureaucrats	0.54181415	participative	0.4858297
micro-management	0.53989881	micro-grids	0.4832599
bureaucratese	0.5398289	community-driven	0.4828814
bureacrats	0.53723311	non-authoritarian	0.4798779

[2] Refers to cosine similarity with our target vector.
[3] Refers to cosine similarity with our target vector.

pressure on employees. Sixth, we measured *market competition* as the Hirschman-Herfindahl index representing the distribution of sales among firms in a given industry (based on 2-digit SIC code), as a higher concentration of sales could lead to misconduct whether the thread represented by competition brings to a decline in status for lower-performing firms (Wilmot and Hocker 2001), or to lose customers to competitors (Bennett et al. 2013). Finally, we controlled for other quantitative variables measured in the reviews on Glassdoor. We controlled for *CEO approval*, *senior management approval, and compensation and benefits* using average employee ratings for each firm-year observation to a 1-to-5 scale. In the case of CEO approval, the initial value ranged from -1 (negative) to 1 (positive) and was rescaled from 1 to 5 to match the other variables.

Estimation techniques

Because the dependent variable is penalties incurred for organizational misconduct, we calculated all independent and control variables using values from the end of the prior year.

We used fixed-effects linear regression analysis for the *amount of penalties*. We specified fixed effects on both company, industry (2-digit SIC code) and year. For all of the models, we winsorized the dependent variable at the 1st and 99th percentiles of the distribution to eliminate the potential for coefficients to be influenced by a small group of observations. Also, we clustered standard errors by organization to control for potential heteroscedasticity and provide a more conservative test of the hypotheses (White and White, 1980).

To test Hypotheses 2 and 3, we ran two separate analyses, interactions and split samples. First, we provide a fully interacted model to include an interaction of all the control variables with decentralization and formalization. Since formalization and centralization represent fundamental aspects of an organization's design and as such are likely to shape all aspects of an organization's function, we provide regression results where we interact the variable of interest, either formalization or decentralization, with all the variables, including the firm fixed effects.[4] This also allows us to control not just confounding effects for the explanatory variable, but also potential

[4] This implies that the main effects of formalization in Table 5 and decentralization in Table 6 are subsumed in the interactions with the firm fixed effects and as such cannot be estimated separately.

confounding effects for the interaction and as such represent more conservative tests of the hypotheses. Due to the large number of variables now involved, we have subsumed the additional interactions under the identifier "Other Interactions."

Second, we provide a split sample model dividing the sample by *high/low formalization* and *high/low decentralization.* By using different subsets in our models, we described formalization and decentralization (whether high or low) as different environments, therefore assuming that the effect of performance pressure would differ among them. As Venkatraman (1989) put it, these types of analyses reflect the *strength of moderation*. A test of differences confirmed that subgroup analysis is appropriate, as the two groups are significantly different for all the variables under study. Finally, we ran collinearity diagnostics to check for the presence of multicollinearity in our models, and all values were below the threshold of 30 (Bollinger et al. 1981).

RESULTS

Table 3 provides pairwise correlations and descriptive statistics for each of the variables in our study. The predicted likelihood of receiving a penalty for misconduct of $5000 or more is 28.6 percent for our sample for an average penalty of approximately 3 million dollars. The probability of receiving a penalty with a dollar amount over the mean is 8.6 percent; this likelihood is similar to that reported in other studies on corporate misconduct (e.g., 15 percent in Mishina et al., 2010). As shown in Table 3, the correlation between performance pressure and the dependent variable is positive and not very strong. At the same time, the control variable, which uses the same topic model on the *pros* section, shows an opposite direction in the correlation.

The regressions in Table 4 show that performance pressure amplifies the amount of the penalty received by the company in the subsequent year (Model 1). The result for performance pressure holds adding controls related to the number of reviews and similar topics (Model 2), financial controls (Model 3), and the quantitative measures of the reviews (Model 4), supporting Hypothesis 1. Thus, performance pressure is positively related to organizational misconduct by increasing the company's amount in penalty the subsequent year (b= 72.67; p=0.045).

Hypothesis 2 predicted that formalization would negatively moderate the effects of performance pressure on organizational misconduct. The hypothesis was weakly supported.

TABLE 3

Descriptive Statistics and Correlation Table

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Organizational Misconduct: Penalty ($)	3.044	12.126	-													
2.Performance pressure n-1	0.031	0.016	0.020	-												
3.Performance pressure (PROS) n-1	0.020	0.008	-0.017	-0.013	-											
4.Formalized n-1	0.459	0.498	0.014	-0.011	0.006	-										
5.Decentralized n-1	0.548	0.498	0.062	-0.090	0.009	0.196	-									
6.Pay and benefits n-1	0.065	0.025	-0.020	-0.050	0.005	-0.082	-0.095	-								
7.Stressful working conditions n-1	0.026	0.006	0.001	-0.007	0.004	-0.049	-0.070	-0.222	-							
8.Number of reviews (log) n-1	5.586	0.834	0.163	0.083	-0.007	-0.037	-0.188	0.011	0.080	-						
9.Number of employees (log) n-1	3.442	1.467	0.217	-0.052	0.005	-0.044	-0.129	0.018	-0.010	0.441	-					
10.ROA n-1	0.135	0.098	-0.069	0.013	-0.021	-0.070	-0.117	-0.007	-0.017	0.102	0.198	-				
11.Sales growth n-1	0.063	0.187	-0.037	0.013	-0.028	-0.041	0.008	0.004	0.099	-0.049	-0.122	-0.066	-			
12.Market Competitionn-1	0.102	0.095	0.001	0.115	-0.012	-0.044	-0.251	0.026	-0.027	0.167	0.156	0.054	-0.026	-		
13.Sen. MGMT Approval n-1	3.026	0.583	0.062	-0.048	-0.054	-0.175	0.274	-0.103	0.079	-0.014	0.093	0.004	0.132	0.021	-	
14.Compensation & Benefitsn-1	3.298	0.486	0.091	-0.089	-0.031	-0.048	0.317	-0.504	0.260	0.031	0.024	-0.102	0.095	-0.248	0.460	-
15.CEO Approval n-1	3.845	0.441	0.012	-0.032	-0.064	-0.215	0.143	-0.091	0.250	0.136	-0.011	0.010	0.204	-0.092	0.559	0.616

The full interaction analysis of Model 1 in Table 5 shows that the interaction between formalization and performance pressure is weakly significant (b= -124.4; p=0.94). The sub-sample analyses of Models 2 and 3 in Table 5 supports the idea that performance pressure is more dangerous in companies with low formalization (b= 139.4; p=0.01); however, the effect is weakly significant in the full model (b= 107.2; p=0.058), while not significant in the subsample of high formalization organizations.

Finally, Hypothesis 3 predicts that the adverse effects of performance pressure would have been more substantial in organizations that adopt a decentralized structure. The hypothesis was supported. The results for Models 1, 4, and 5 in Table 6 show that increasing performance pressure, especially in highly decentralized environments, can lead to harmful consequences for the organization. The full interaction of Model 1 shows that the effect is marginally significant (b= 143.4; p= 0.081). We do not find significant effects of performance pressure in Model 2 and 3, which comprises organizations that are not described as decentralized. The same is not true for the subsample analyses of Models 4 and 5 regarding the sample of decentralized organizations, which show that performance pressure is significant both in the model with no covariates (b= 124.3; p=0.033) and in the full model (b= 146.7; p=0.034).

Overall, these results suggest that performance pressure positively correlates with organizational misconduct by increasing the amount that organizations receive in penalties the following year. Furthermore, when dividing the companies by structure, the results hold for both companies perceived as lowly formalized (though moderately) and decentralized.

Negative ESG Media Coverage

Our organizational misconduct variable measured illegal corporate actions identified and sanctioned by the relevant authorities. This is a well-understood limitation in studies on organizational misconduct and is not unique to this paper (Vaughan, 1999; Campbell and Shank, 2021). To test whether performance pressure might affect broader misconduct measures, we replicated our analyses using negative media coverage on environmental,

TABLE 4

Regressions on Penalties (in Dollars)

Variable	Amount of penalties			
	(1)	(2)	(3)	(4)
Performance pressure $_{n-1}$	103.9**	96.79*	70.94*	72.67*
	(36.28)	(38.19)	(35.42)	(36.16)
Performance pressure (PROS) $_{n-1}$		16.59	5.673	8.507
		(70.12)	(68.59)	(68.98)
Formalized $_{n-1}$		0.0228	0.109	0.183
		(0.691)	(0.686)	(0.653)
Decentralized $_{n-1}$		-0.450	-0.656	-0.816
		(0.923)	(0.954)	(0.953)
Pay and benefits $_{n-1}$		-38.84+	-40.87*	-15.41
		(20.27)	(20.59)	(22.25)
Stressful working conditions $_{n-1}$		-87.17	-84.82	-85.98
		(54.38)	(55.83)	(57.90)
Number of reviews (log)$_{n-1}$		1.293	1.494	1.368
		(0.932)	(0.928)	(0.915)
Number of employees (log)$_{n-1}$		1.641	2.242+	2.163+
		(1.208)	(1.241)	(1.253)
ROA $_{n-1}$			-0.942	0.0516
			(6.404)	(6.297)
Sales growth $_{n-1}$			-2.045	-1.873
			(2.616)	(2.634)
Market competition$_{n-1}$			-16.84	-16.42
			(14.00)	(13.79)
Senior management approval $_{n-1}$				-0.985
				(1.256)
Compensation and benefits $_{n-1}$				6.026**
				(2.287)
CEO approval $_{n-1}$				-2.117+
				(1.236)
Constant	1.867+	-6.095	-6.557	-16.16+
	(1.122)	(6.445)	(6.711)	(8.487)
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Observations	3,144	2,980	2,872	2,871
Number of Firms	668	638	612	612
R-squared	0.463	0.466	0.426	0.428

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

TABLE 5

Regressions on Penalties by Type of Organizational Structure (Formalization)

Variable	Amount of penalties				
	Full Interaction	*Low Formalization*		*High Formalization*	
	(1)	(2)	(3)	(4)	(5)
Performance pressure $_{n-1}$	114.9*	139.4**	107.2+	12.88	3.071
	(56.83)	(53.83)	(56.46)	(46.29)	(52.66)
Performance pressure $_{n-1}$ * *Formalized* $_{n-1}$	-124.4+		-		-
	(74.09)		(-)		(-)
Formalized $_{n-1}$	-		-		-
	(-)		(-)		(-)
Performance pressure (PROS) $_{n-1}$	64.77		68.22		-66.38
	(113.8)		(115.4)		(90.4)
Decentralized $_{n-1}$	-2.027		-1.621		-1.063
	(1.364)		(1.402)		(1.342)
Pay and benefits $_{n-1}$	-7.584		-9.49		-74.8
	(61.47)		(59.85)		(60.05)
Stressful working conditions $_{n-1}$	-73.42		-94.14		-44.6
	(81.58)		(84.58)		(105.1)
Number of reviews (log) $_{n-1}$	0.55		-0.472		2.07
	(0.992)		(1.207)		(1.552)
Number of employees (log) $_{n-1}$	5.277**		5.087**		-0.737
	(1.748)		(1.673)		(2.269)
ROA $_{n-1}$	3.881		5.214		-8.391
	(9.291)		(9.065)		(10.05)
Sales growth $_{n-1}$	-4.883		-4.263		3.564
	(2.974)		(3.058)		(5.229)
Market competition $_{n-1}$	-23.37		-21.4		-22.72
	(20.95)		(20.87)		(18.9)
Senior management approval $_{n-1}$	0.985		1.705		-5.377*
	(1.445)		(1.516)		(2.105)
Compensation and benefits $_{n-1}$	7.099*		6.748*		6.668*
	(2.818)		(2.886)		(3.38)
CEO approval $_{n-1}$	-1.299		-2.231		-1.602
	(1.868)		(1.875)		(1.853)
Constant	-14.74	0.672	-29.31*	5.134***	4.873
	(8.952)	(1.704)	(12.48)	(1.412)	(13.35)
Other Interactions	YES	NO	NO	NO	NO
Industry FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Observations	2,635	1,562	1,433	1,312	1,202
Number of Firms	573	396	364	366	336
R-squared	0.472	0.492	0.465	0.522	0.487

Robust standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

TABLE 6

Regressions on Penalties by Type of Organizational Structure (Decentralization)

Variable	Amount of penalties				
	Full Interaction	*Low Decentralization*		*High Decentralization*	
	(1)	(2)	(3)	(4)	(5)
Performance pressure $_{n-1}$	-2.491	63.46	-3.912	124.3*	146.7*
	(50.01)	(77.29)	(50.82)	(58.05)	(68.89)
Performance pressure $_{n-1}$ * *Decentralized* $_{n-1}$	143.4+		-		-
	(82.16)		(-)		(-)
Decentralized $_{n-1}$	-		-		-
	(-)		(-)		(-)
Performance pressure (PROS) $_{n-1}$	-104.9		-101.9		98.60
	(76.5)		(77.58)		(128.2)
Formalized $_{n-1}$	-1.355		-1.437		0.587
	(1.044)		(1.077)		(0.965)
Pay and benefits $_{n-1}$	-35.37		-20.76		-80.44
	(35.69)		(36.10)		(89.73)
Stressful working conditions $_{n-1}$	-132.8		-147.0		6.057
	(90.27)		(94.12)		(86.88)
Number of reviews (log) $_{n-1}$	2.343*		1.560		2.090+
	(1.127)		(1.710)		(1.139)
Number of employees (log) $_{n-1}$	-0.00313		0.278		6.678**
	(1.88)		(1.878)		(2.395)
ROA $_{n-1}$	-17.35+		-16.32+		14.29
	(9.388)		(9.573)		(9.671)
Sales growth $_{n-1}$	1.13		1.518		-1.811
	(4.343)		(4.345)		(4.544)
Market competition $_{n-1}$	6.83		0.868		-48.02
	(17.81)		(16.44)		(30.36)
Senior management approval $_{n-1}$	0.927		1.868		-0.292
	(1.837)		(2.038)		(2.015)
Compensation and benefits $_{n-1}$	4.451		4.600		7.318*
	(3.114)		(3.174)		(3.081)
CEO approval $_{n-1}$	0.206		-0.667		-5.990**
	(1.939)		(2.140)		(2.074)
Constant	-22.82*	2.263	-13.25	2.360	-31.45*
	(9.607)	(2.511)	(13.61)	(1.719)	(14.75)
Other Interactions	YES	NO	NO	NO	NO
Industry FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Observations	2,676	1,318	1,253	1,604	1,423
Number of Firms	578	340	322	403	353
R-squared	0.466	0.478	0.504	0.438	0.455

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

social, and governance (ESG) issues as our dependent variable. We measure this variable with RepRisk, a data provider that collects news articles from various national and local sources criticizing organizations on ESG issues (see appendix C for details). Overall, the results for the analyses on negative ESG media coverage show that the effect of performance pressure is consistent with our theory.

DISCUSSION

In this study, we reconceptualized Merton's strain theory at the organizational level and theorized that organizations with cultures defined by performance pressure are prone to engage in misconduct. Furthermore, in line with prior research on the contingency effects of organizational structure on misconduct (Hill et al. 1992; McKendall and Wagner 1997), we argued that formalization and decentralization, two key structural features of organizations, can dampen or amplify this effect by reducing the effectiveness of control systems. Unlike other studies in which researchers measured culture through surveys (e.g., McKendall and Wagner 1997; Bloom, Sadun, and Van Reenen 2010), we used machine learning and NLP tools to measure employees' perceptions of the culture (i.e., performance pressure) and structure (formalization and decentralization) of each organization in our sample.

Results from our empirical analysis generally support our hypotheses. Performance pressure shows a positive relationship with the amount of dollars (in millions) the organization pays in fines the subsequent year. In subsequent analyses, we found that this effect is robust across different misconduct measures (see Appendix C regarding the negative ESG media coverage related to the organization). Interestingly, while having no significant effect on monetary penalties, we find that the positive perception of performance pressure significantly reduces ESG negative media coverage related to the firm in the decentralized and high formalization samples. This result extends the work by Gardner (2012), which theorized that performance pressure could act as a double-edged sword depending on employees' perceptions.

The relationship between formalization and performance pressure provides limited support for our hypotheses. Our results confirm that performance pressure affects the dollar amount for the violations for companies with low formalization, though the effect is weakly significant, and we do not find a significant negative effect on the subset with high formalization.

The results on decentralization, in contrast, strongly support our hypotheses. Consistent with the idea that the delegation of responsibilities in decentralized organizations leads to less stringent control, we found that decentralized organizations are more likely to misconduct when performance pressure is present, paying more in fines for the violations. Taken together, our results show that a decentralized organizational structure can create conditions that enable the development of a toxic culture, with negative consequences for the organization. This result extends McKendall and Warner's (1997) findings that an ethical climate negatively mediates the effects of decentralization on environmental misconduct by demonstrating that performance oriented cultures could create conditions that increase the negative impact of misconduct.

Limitations

Given the nature of the data we analyzed, this study has some limitations that present opportunities for future research. Our measures of organizational culture and structure were based on employee reviews. Although our method enabled us to measure performance pressure, formalization and decentralization, using a corpus of data consisting entirely of employee reviews might have biased our results in ways we could not fully control. For instance, performance pressure is much more salient than an organization's structural features when writing a review as an employee. Thus, our approach might have led to oversampling the former and under sampling the latter. Nevertheless, we would expect these effects to hold across types of companies and industries. In the case of organizational decentralization, we confirmed our measure in a random sample of companies via a media search of newspaper articles describing the companies' organizational structures (not shown here). However, the broader range of terms and sentiments associated with formalization makes it difficult to confirm these data similarly. In future studies, scholars could validate these measures

through, for example, surveys or interviews. Despite these limitations, our method could help researchers revive empirical research on organizational structure, a key concept for organization theorists that has been difficult to study empirically. For instance, drawing on Adler and Borys's (1996) conceptualization of formalization as coercive or enabling, researchers could explore the difference between these two concepts empirically in a large sample of organizations, thereby advancing our understanding of their antecedents and consequences.

Another limitation of our paper stems from two types of selection bias inherent in our data. First, like other studies that build on voluntary employee reviews (e.g., Corritore et al., 2020), our results might have been affected by the different propensities of employees from different firms to contribute reviews. To address this limitation, researchers could apply the same NLP methods to executive discourse (i.e., quarterly earnings calls) to identify references to organizational decision-making processes and control mechanisms. Second, because we studied official legal penalties, we did not observe any misconduct cases that official agencies did not discover. This is a common limitation in organizational misconduct research (Vaughan 1999). Yet, given the scope of our data (which includes many different types of violations) and our methods, we are confident that our study offers what we believe to be the first empirical evidence of links between performance pressure, structure, and misconduct over a large sample of organizations.

Contributions

Our study makes several contributions to the literature on antecedents of organizational misconduct (e.g., Greve, Palmer, and Pozner 2010; Agnew 1992; Vaughan 1999b). First, from a theoretical point of view, we contribute to the operationalization of strain theory at the organizational level and suggest that the strain generated by aggressive performance cultures can be dampened or amplified by structural features of the organization. Second, from an empirical point of view, whereas it is not novel to point to culture as an antecedent of misconduct (Vaughan, 1999), we contribute to recent studies that started to empirically decipher the effects of organizational culture on misconduct. Similar to Corritore et al.'s (2020) approach, we collected data on organizational culture—specifically, performance

pressure—by analyzing employee discourse. This approach enabled us to measure culture in a large sample of organizations and control for a wide range of potential confounders. Finally, whereas in prior studies, researchers focused on strain or performance expectations for top managers (e.g., Harris and Bromiley 2007; Mishina et al. 2010), we studied performance pressure as experienced by employees.

This study also contributes to research in organizational psychology on the dark side of goal setting (Ordóñez et al. 2009a; Ordóñez and Welsh 2015) and on the relationship between goal setting and organizational culture (Ordóñez et al. 2009b). Beyond the existing evidence on the dark side of goal setting (Ordóñez et al. 2009a; Ordóñez and Welsh 2015), our results suggest that aggressive and ambitious targets can translate into durable characteristics of organizational culture. Although goal-setting strategies can be easily adjustable, organizational culture as a socially constructed reality (Berger and Luckmann 1967) is resistant to change. Cultural change can be a slow-moving process (Meyerson and Martin 1987), and toxic norms may persist many years after incentives have changed, as demonstrated lately by the process of culture change at Wells Fargo after the cross-selling scandal (Flitter and Cowley, 2019).

Finally, we hope our study contributes to a revival of research on culture and organizational structure from a methodological perspective. By studying formalization and decentralization through unobtrusive observation and measurement of employee discourse (via NLP), we suggest a novel approach (and methods) to identify structural properties of organizations for larger samples of companies. Our methodological approach could also be fruitfully employed by practitioners to predict the risk of organizational misconduct, either from the inside (e.g., compliance officers, internal auditors) or from the outside (e.g., auditors, investors, media members, regulators, and law enforcement officers).

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CHAPTER 2

ORGANIZATIONAL PURPOSE, IDEOLOGY, AND CARBON EMISSIONS

INTRODUCTION

Greenhouse gas (GHG) emissions are the leading cause of climate change. Greenhouse gases trap heat and make the planet warmer, and human activities are responsible for almost all of the increase in greenhouse gases in the atmosphere over the last 150 years (C2ES, 2015). To avoid potentially dangerous climate change, global warming needs to be limited to 2°C above preindustrial levels (Paris Agreement - C2ES, 2015).

The largest source of greenhouse gas emissions from human activities in the United States comes from burning fossil fuel for electricity, heat, and transportation (Boden, Andres, and Marland 2015). Corporate activity, thus, is the main contributor to GHG emissions: a report from the Carbon Disclosure Project (CDP) shows that only 100 companies were responsible for more than 70% of the world's greenhouse gas emissions in the period 1988-2015 (Griffin 2017). As a consequence, any attempt to achieve the 2% target will require most corporations to reduce their emissions to zero over the next two decades.

The innovations that are going to be required for net-zero carbon emissions will be challenging for organizations as drastic changes to practices and routines will be inescapable. Prior qualitative research found that organizational responses toward sustainability resulted from both individual concerns and organizational values: individual concerns regarding climate change needed to be congruent with organizational values to become strategic for the company and facilitate action (Bansal 2003; Bansal and Roth 2000b). In this context, recent studies proposed that organizational purpose can be key in facilitating this ecological transition (Henderson and Serafeim 2020; Gartenberg 2021). The concept of purpose, which is generally understood as a set of beliefs about the meaning of the firm beyond profit maximization (Henderson and Steen 2015; Gartenberg, Prat, and Serafeim 2019), has been used in the management literature since Barnard's "Functions of the Executive" (1938) who

described purpose as the basis for any cooperative system. However, the concept was relatively dormant for decades but has experienced a resurgence in recent years (Gartenberg 2021). Shared purpose is assumed to facilitate alignment between the firm and its employees by improving organizational reputation and identification (Henderson and Steen 2015). The scant empirical literature on the topic, so far, has found a positive association between purpose and higher financial performance (Gartenberg, Prat, and Serafeim 2019). Nevertheless, while the relationship between organizational purpose and corporate sustainability is central in the definition of the concept, it remains undertheorized: why would purpose lead to to enhancing corporate sustainable performance? Under which conditions?

In this paper, I build on the literature on issue selling (Dutton and Ashford 1993; Dutton et al. 2001) and organizational political ideology (Gupta, Briscoe, and Hambrick 2017; Gupta and Briscoe 2019) to contrast the idea that purpose can act as a sufficient condition towards higher sustainability and theorize that the effectiveness of purpose is contingent on the values of the organizational members. More specifically, I argue that given that some issues might have a politically polarizing potential, organizational members' ideological and political leanings might affect how they interpret purpose statements and translate them into specific policies, practices, and actions. Climate change and decarbonization, for example, are far from being a bipartisan accepted problem (Egan and Mullin 2017), and the differences in views between conservatives and liberals on the topic have been more divisive than ever (Dunlap and McCright 2008; McCright and Dunlap 2011a), as shown in Figure 1. Moreover, values and political ideologies can interact with decision-making (Gromet, Kunreuther, and Larrick 2013) as found in the context of corporate social responsibility action (Gupta, Briscoe, and Hambrick 2017; Chin, Hambrick, and Treviño 2013), or openness to social activism (Gupta and Briscoe 2019). Therefore, I develop the hypothesis that organizations with a strong sense of purpose will show lower carbon emissions only contingently on the political ideology of their employees. I also expect this relationship to be stronger in industries where carbon emissions are more intensive (i.e., energy production, transportation, or manufacturing). Finally, I draw on the open polities literature (K. Weber and Waeger 2017) to posit that the relationship between organizational purpose and ideology towards sustainability will also depend on the local community beliefs on climate change. Recent research on corporate sustainability already showed that higher community level climate

change concerns lead to reductions in emissions in the facilities located in the community (Dowell, Lyon, and Pickens, 2021). Building on these results, and considering that corporation action can be facilitated or inihibited by the local values, I hypothesize that polarization of beliefs regarding climate change at the community level will thwart the effect of purpose and liberalism in reducing carbon emissions.

FIGURE 1

Republican, Independents, and Democratic Beliefs on Climate Change.

Source – Gallup polls (Saad 2021)

I test these hypotheses using data from a panel of 813 firms in the United States between 2008 and 2019. First, I gathered data on the organizations' carbon footprint using Trucost, a service provider that collects CO_2 emissions data divided by scope (1, 2, and 3). Second, to measure organizational purpose, I propose using natural language processing (NLP) and word embedding (Mikolov et al. 2013) from 2.2 million employer reviews gathered from Glassdoor.com, which I used to measure employees' perceptions about the purpose of the organization. Third, I follow prior literature on organizational political ideology (Gupta, Briscoe, and Hambrick 2017) and measure organizational liberalism, which looks at the prevailing beliefs of organizational members by treating individual contributions to the Democratic (Republican) party as reflective of liberal (conservative) beliefs. The measure of liberalism is based on the scores created from a total of 1.4 million matched donations to political parties from the Federal Election Commission (FEC). Finally, to investigate the level of polarization regarding climate change, I adopted the Yale Climate Opinion Survey (Howe et al. 2015), which estimates opinions across U.S. counties regarding climate change issues.

This article makes three contributions. First, it provides some empirical evidence of the relationship between organizational purpose and sustainability. Second, it suggests a crucial mediating role for organizational political ideology, without which the effects of purpose towards sustainability seems to disappear. Third, and more broadly, it presents a framework which includes values at both the individual, organizational, and community level to understand organizational decision-making regarding sustainability actions.

THEORETICAL FRAMEWORK

Organizational Purpose and Sustainability

Organizational purpose is generally understood as the company's prosocial reason for being beyond financial profitability. In this paper, I follow Gartenberg, Prat, and Serafeim's (2019:3) definition that purpose is "a set of beliefs about the meaning of a firm's work beyond quantitative measures of financial performance."

The concept of purpose is certainly not new and dates back to Barnard's "Functions of the Executive" (1938), who described purpose as a key condition for the persistence of cooperation. Barnard presents two conditions upon which cooperative systems endure: effectiveness and efficiency. “Effectiveness relates to the accomplishment of the cooperative purpose, which is social and non-personal in character. Efficiency relates to the satisfaction of individual motives, and is personal in character.” (Barnard 1938, 60). In Barnard's view, the alignment of goals between individuals and group is critical for an organization's survival, and any misalignment between goals would endanger the cooperative system of the organization and put it at risk of survival. Of course, this conceptualization of purpose did not specifically emphasize the pro-social nature of purpose. Bartlett and Ghoshal, instead, clarified that purpose is "the statement of a company's moral response to its broadly defined responsibilities, not an amoral plan for exploiting commercial opportunity" (Bartlett and Ghoshal, 1994:88), and an essential precursor to effective strategic management. In their view. senior managers should aim to instill a sense of purpose in their employees to create “ an organization with which members can identify, in which they share a sense of pride, and to which they are willing to commit.” (Bartlett and Ghoshal 1994:81).

Since this call, interest in the concept of purpose in management research faded away and only in recent years academic interest started to flourish again (i.e., Gartenberg 2021; Podolny, Khurana, and Hill-Popper 2004). Like many other intangible aspects of organizations, empirical considerations on the role of purpose is scant given the measurement challenges it poses (i.e., Gartenberg et al., 2019; Gartenberg and Serafeim, 2019; Gartenberg and Yiu, 2021). Scholarly attention focused mainly on the relationship between purpose and performance, building on the idea that companies that are able to inject a sense of purpose to employees can obtain higher performances (Henderson and Steen 2015). When perceived as credible, prosocial purpose can act as a gateway to strengthen employee’s reputation and identity, resulting in higher effort and lower wages (2015:229). In line with this mechanism, Gartenberg, Prat, and Serafeim (2019) used employees' perception of purpose and clarity from the Great Place To Work survey and found a positive relationship with future financial performances, especially when the positive perceptions came from the middle- and lower-ranked employees. This study helped revive this concept; however, the effects of purpose on

non-financial performance and the conditions through which it should work have not yet been clarified.

Tackling climate change will require organizations to engage in drastic technological, business, and operational changes with the aim of reducing GHG emissions to zero by 2050. These changes will inevitably involve disrupting established routines and will likely find resistance inside organizations. In this case, scholars are proposing social purpose as a significant factor leading to a more effective decarbonization process. Gartenberg (2021) proposed a mutually reinforcing link between purpose and sustainability. In her view, purpose might influence sustainability through meaning endowment and by providing a framework to evaluate sustainability initiatives. Sustainability efforts, consequently, would reinforce purpose with credibility and measurement transparency. At the same time, as hiring involves a process of cultural matching between employers and job candidates (Rivera 2012a), purpose-driven companies will also be more likely to look for employees who have prosocial preferences aligned with the organizational values (Henderson and Serafeim 2020; Henderson and Steen 2015).

However, although these articles helped spark interest in the possible effects of purpose on sustainability, theories on this link are still underdeveloped and lack mechanisms that relate the two concepts. Notably, Bansal's (2003) qualitative analysis of the adoption of sustainable policies inside organizations shed light on how successful issue selling, as a bottom-up process, resulted from individual concerns regarding the topic and its match with organizational values. The literature on issue selling is based on the idea that the time and attention of decision-makers in organizations are limited; therefore, the seller, process, and context related to any issue are fundamental in influencing organizational responses (Dutton and Ashford 1993; Dutton et al. 2001). Following this literature, therefore, a top-down statement of purpose would not be sufficient to explain differences in organizational actions toward sustainability. To further our understanding of organizational purpose, I propose that one possible mechanism that can unveil the effects of purpose on sustainability is a deep analysis of the prevailing beliefs in the body politic of the firm, namely the organizational political ideology.

The Effects of Ideology on the Purpose-Sustainability link

While purpose-driven companies can be more efficient in aligning their strategy amongst employees toward sustainability goals, prior research on the internal drivers of sustainability has shown that corporate social responsibility (CSR), for example, can be ideologically motivated and that such initiatives might reflect the ideological slant of the entire company (Gupta, Briscoe, and Hambrick 2017). Building on this literature, I argue that the effectiveness of purpose on sustainability can be contingent on the ideological values and beliefs of the organization.

Organizational political ideology is defined as the prevailing beliefs among organizational members about how the social world operates, including convictions about desirable outcomes and how they should be achieved (Simons and Ingram, 1997). For organizational members, ideology can serve as a "guide for action" grounded in some corresponding value system in the broader society.

Climate change and many other social issues have been subject to a process of political polarization through the years (Dunlap and McCright 2008). Before the early 1980s, the differences in views between liberals and conservatives in the U.S. had been nonpartisan. However, differences in support related to climate change became more polarized after the Reagan presidency. Reagan's administration labeled environmental regulations as a burden on the economy, and his framing of the government as the "problem" rather than the "solution" provided the basis for the later successes of the Republican Party. Since then, the division of views between liberals and conservatives on climate-change and environmentalism topics has been clearly marked. These differences of opinion are part of elites and media discourse about climate change and were also shown by polls on the general public (i.e., Gallup polls from 2001 to 2011 on climate-change denial - Mccright and Dunlap 2011).

Literature in organizational theory on political ideology studied how companies' proneness to engage in CSR activism depends on their executives and organizational ideology. Chin et al. (2013) showed that firms headed by ideologically liberal CEOs were more likely to advance the company's CSR than ideologically conservative CEOs, while

Gupta et al. (2017) found that political ideology at the organizational level had more explanatory power toward CSR advancements, compared to CEO ideology. However, studies on CSR use an average of multiple categories, which provides little consideration to specific factors that might be more impactful for sustainability leading to the risk of an aggregate value that is disconnected from real impact (Porter, Serafeim, and Kramer, 2019). Indeed, only a small section of these measures relates to environmental issues leaving the question between ideology and ecological sustainability still open.

By proposing ideology as a contextual condition for the purpose-sustainability link, I am following ethnographic studies that suggest organizational actions towards sustainability due to the congruence between individual and organizational values (Bansal 2003) and individual concerns with specific issues (Bansal and Roth 2000a). Sodertrom and Weber (2020) also illustrated that internal advocates' interests, commitments, and identities could become the engine behind structuring organizational sustainability efforts. In other words, I argue that the contrasting beliefs about climate change indicate that firms with a majority of liberal-leaning employees, relative to companies with more conservative-leaning members, will tend to be more open to environmental and social issues, leading to a higher awareness of the firm's consequences on the natural environment. At the same time, purpose-driven organizations will be more efficient in adapting to the drastic changes needed to fulfill the transition towards carbon neutrality. Thus, building on these arguments, I expect:

> *Hypothesis 1a. The greater the liberalism of the organization, the stronger the negative association between purpose and carbon emissions.*

Of course, CO2 emissions at the organizational level depend on the nature of the corporation's products and services; thus, there will be significant heterogeneity across organizations in different industries. For example, the Environmental Protection Agency (EPA) reported that the transportation, energy, and agriculture economic sector accounted for 64% of the U.S. overall production of CO2 in 2019. Therefore, some industries are far more responsible for the levels of CO2 in the atmosphere than others, and they might come under more intense pressure to decarbonize, even if this might be more difficult for them. Decarbonization would thus be a more strategic decision in these industries.

At the organizational level, Bolton and Kacperczyk (2021b) not surprisingly found that low-emission companies were more prone to ambitious commitments to reduce emissions but found greater resistance in high-emissions companies. Applying the same rationale, I expect more polluting industries to show the same behavior at the aggregate level. As the costs and organizational changes associated with decarbonization in carbon-intensive industries will be the highest, the proposed effect between organizational purpose and ideology towards sustainability will be especially relevant.

Gupta, Briscoe, and Hambrick's work on corporate social responsibility and organizational liberalism (2017) found that advances in CRS could also stem from reversed mimetic processes such that liberal companies would be more prone to sustainable initiatives practices when these were not common in their industry. This process describes how, when some norms are absent inside one industry, the possibility to follow others' behavior becomes lower, while managerial discretion or organizational beliefs and values become more prominent (Hambrick et al. 2004). In the context of industries in which the emission of CO2 is strictly relevant to the production of goods or services, the costs related to switching to more sustainable processes are the highest. In this scenario, I propose that the relative influence of organizational purpose and liberalism will be higher in industries that are more sensitive to carbon emissions and their repercussions. And therefore:

> *Hypothesis 1b. The effect of organizational purpose and liberalism towards reducing carbon emissions will be more substantial in carbon-intensive industries.*

The Mediating Influence of Local Beliefs and Polarization on Climate Change

Organizational actions toward sustainability are also inevitably entrenched in the communities in which they operate (Marquis et al., 2007). Especially relevant to contentious practices, understanding the values and norms at the community level can explain whether specific organizational actions are more salient than others. With similar data to this study, Dowell et al. (2021) investigated the effect of local community beliefs regarding climate change on the emissions at the facility level. Their results showed that plants located in

communities with deeper concerns regarding climate change would emit lower CO2 emissions than facilities in counties less concerned with it. Building on these results, in this second hypothesis, I explore the effect of polarized beliefs at the community level on the relationship between organizational purpose and ideology towards higher sustainability.

Polarization is defined as "the extent to which opinions on an issue are opposed in relation to some theoretical maximum" (DiMaggio, Evans, and Bryson 1996, 693). It has been the subject of various studies in political science and sociology, from studies on the evolution of mass polarization in the U.S. (Fiorina and Abrams 2008), the influence of media (Prior 2013), or social network analyses of opinion polarization on Twitter (Conover et al. 2011). However, it has attracted less interest from management scholars, except for a recent study of how polarized belief on Covid-19 affected corporate disclosure (Benton, Cobb, and Werner 2022).

The literature examining how community norms influence organizational action falls into the open-polity perspective, which aims to understand diversity in internal processes and organization–environment relationships. Following this theory, organizations are defined as collectives of groups with diverse views and goals within the constraints of formal and informal systems of authority (Weber and Waeger, 2017). Organizations are also open systems, shaped, supported, and infiltrated by their environment (Scott and Davis 2007). As political entities that interact with an equally political environment, organizational responses to their environment are consequently shaped by boundary processes and organizational coalition dynamics. Local beliefs about climate change can mediate the organizational-level responses to these external beliefs such that, in polarized communities, organizations will be more careful in advancing practices that could put the legitimacy of the organization at risk.

As described before, climate change is not a bipartisan issue in the United States. Studying how local communities' polarization about climate change interacts with the effects of organizational purpose and ideology would give a more comprehensive picture of the processes towards corporate sustainability: from individual concerns and organizational values to community beliefs. Whether purpose and ideology would lead to more consistent actions toward sustainability, these practices would be viewed as contentious in communities with polarized views about climate change. Thus, the lack of widespread acceptance inside

their community would bring more uncertainty to the organization and slow the process of adoption. In other words, I argue that as higher community consensus about specific corporate social action can shape sustainable practices (Marquis, Glynn, and Davis 2007), higher polarization at the community level can build conditions that weaken organizational actions towards sustainability compared to non-polarized communities. Thus:

> *Hypothesis 2. The relationship between purpose and organizational liberalism towards reducing carbon emissions will be weaker in communities with polarized views about climate change.*

DATA AND METHODS

Sample

I tested the hypotheses using a panel dataset of yearly firm observations for a sample of firms evaluated on Glassdoor, contributed to political parties, and covered on Trucost and Compustat from 2008 to 2019. After exclusions due to missing data, the final sample included 575 distinct firms. For every company, I obtained the dependent variable to test hypotheses 1a and 1b between 2008 and 2019, yielding a pooled time series of 2,640 firm years. Hypothesis 2 adopts data from the Yale Climate Opinion Survey, which started only in 2013, reducing the sample to 2,244 firm years.

Dependent Variable

I gathered data on GHG emissions using Trucost, a commercial provider of corporate carbon emission data and other sustainability measures. Trucost is a widely used source for firm carbon emission data and covers a broad cross-section of firms worldwide. The dataset offers data that is either publicly available (through different sources) or estimated by Trucost through environmental profiling of the organization when the data is not available. The profiling process calculates sustainability scores through information regarding the primary

business activities, revenues, direct and supply chain, annual reports, websites, or expenditures data.

Greenhouse gas emissions are divided into three groups (or scopes) which allows stakeholders to identify the true causes of emissions for the organization. *Scope 1* covers direct emissions from owned or controlled sources. *Scope 2* covers indirect emissions from the generation of purchased electricity, steam, heating, and cooling consumed by the reporting company. Finally, s*cope 3* includes all other indirect emissions in a company's value chain. Following prior literature on carbon emissions at the organizational level (i.e., Azar et al. 2020), I measure a firm's annual carbon emission (*total GHG emissions*) as the logarithm of the sum between the organization's different emissions divided by scopes and measured in equivalents of metric tons of CO_2. I also calculated the logarithm of the emissions divided by separated scopes to measure the effects regarding scope 1, 2, and 3 emissions.

Independent Variables

Organizational Purpose

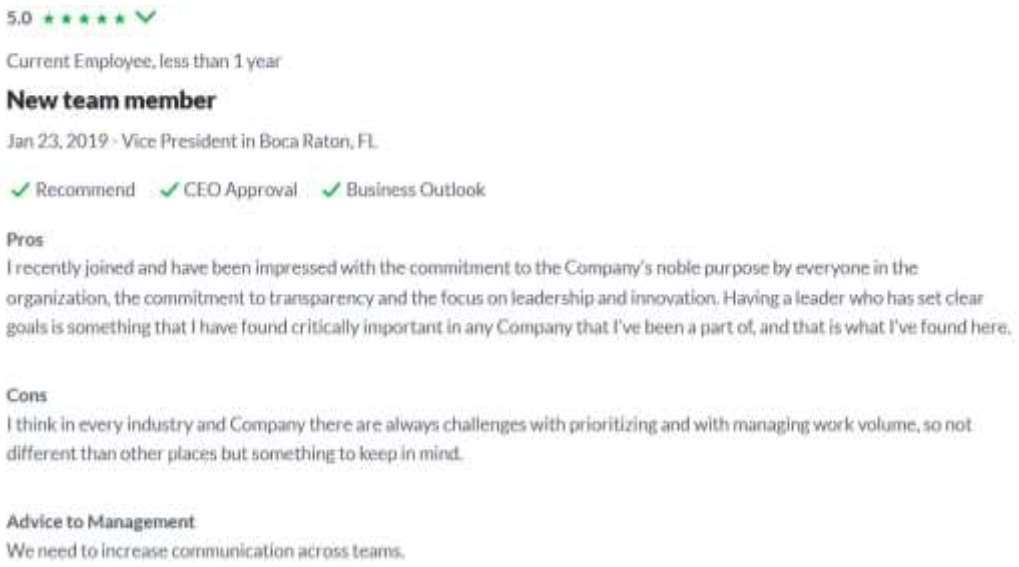
The variables measuring organizational purpose were gathered from Glassdoor. Glassdoor aggregates millions of reviews and company ratings, CEO approvals, salary and benefits reports, and interview reviews. The service counts more than 70 million reviews and covers 250 thousand companies only in the U.S. Figure 2 provides an example of a Glassdoor review. The initial sample included 2.6 million reviews of 3,423 companies with performance data on Compustat.

I consider firms with a corporate purpose to be those in which employees hold strong beliefs on the meaning and impact of their work. Unlike recent studies that used survey data (i.e., Great Place to Work - Gartenberg et al. 2019), I constructed the measure of organizational purpose, starting from textual data collected from employer reviews written by employees in the United States from 2008 to 2019 on the website Glassdoor.com. I captured employees' comments about their current or former firms, focusing mainly on

employees' words to describe the pros (i.e., positive aspects of the company) and cons (i.e., negative aspects of the company).

FIGURE 2

Example of a Glassdoor Review


5.0 ★★★★★

Current Employee, less than 1 year

New team member

Jan 23, 2019 - Vice President in Boca Raton, FL

✓ Recommend ✓ CEO Approval ✓ Business Outlook

Pros

I recently joined and have been impressed with the commitment to the Company's noble purpose by everyone in the organization, the commitment to transparency and the focus on leadership and innovation. Having a leader who has set clear goals is something that I have found critically important in any Company that I've been a part of, and that is what I've found here.

Cons

I think in every industry and Company there are always challenges with prioritizing and with managing work volume, so not different than other places but something to keep in mind.

Advice to Management

We need to increase communication across teams.

I measured purpose using natural language processing (NLP) and linear text classification, a technique used for supervised machine learning. In the context of NLP, the goal of text classification is to use an object's characteristics to identify which class (or group) it belongs to. To do so, I used word embedding and FastText as a pre-trained dictionary (see Appendix D for details on the methods). This pre-trained dictionary enabled me to classify every review word into a semantic space and identify word similarities between target vectors (i.e., words related to purpose, clarity, and mission) in my dataset. In addition, FastText enables identifying and analyzing less common and more specific topics that would not appear as often. My use of this tool is similar to Cao, Koning, and Nanda (2020). They studied the biased sampling of early users in entrepreneurial experiments and used FastText to train a semantic model to measure a product's focus on females customers on extensive sample descriptions of new technology products.

I derived my target vectors through additive compositionality (Gittens, Achlioptas, and Mahoney, 2017), whereby arithmetic operations are applied to vectors to refine their word

compositions. For example, the nearest vector to the word "Paris" can be identified via an arithmetic operation (Mikolov et al., 2013):

$$v_{France} + v_{capital} = v_{Paris},$$

with v representing the vector with the related word. In the same way, the target vectors used in my measure of organizational purpose are represented by:

$$v_{target-purpose} = v_{purpose} + v_{clarity} + v_{mission};$$

these three concepts were selected following prior research that used surveys to measure organizational purpose and clarity (Gartenberg, Prat, and Serafeim 2019; Gartenberg and Yiu 2021), to which I added a special consideration regarding "mission," which is a common synonym for the concept of organizational purpose. Table 1a shows the list of words most similar to the target vectors. Finally, I calculated cosine similarity between our target vectors and every word of each review and retained the maximum score for each vector.

Thus, for every review, I obtained two scores (from -1 to 1), representing the maximum similarity of the review to our target vectors for purpose, clarity, and mission. Table 1b presents a sample of Glassdoor reviews and the singular scores for purpose, clarity, and mission (Pros) as calculated in the final dataset.

I considered both the pros and cons section of each review, treated as two separate variables. *Purpose, Clarity, Mission (Pros)* and *Purpose, Clarity, Mission (Cons)* are two continuous variables, representing the yearly average of employees' perceptions about purpose, clarity, and mission, whether positive or negative. Finally, to avoid biases in the analyses related to the number of reviews per year that can inflate some scores, I followed recent literature that adopted Glassdoor data (i.e., Corritore, Goldberg, and Srivastava 2020) and considered only firm-year observations with at least 100 reviews.

Organizational Liberalism

To measure organizational liberalism, I gathered and coded publicly archived data on the political donations made by each firm's employees for two complete political cycles in the United States, from 2008 to 2019. Individual contributions to political parties reflect personal beliefs rather than an effort to obtain favors or influence (Ansolabehere, De Figueiredo, and Snyder 2003).

The political separation in the U.S. through two major parties led to analyses of ideology through a conservative-liberal axis (Poole and Rosenthal 1984). In doing so, I am following research on organizational liberalism (Gupta, Briscoe, and Hambrick 2017; Gupta and Briscoe 2019), which treated Republican recipients as conservative-leaning while those to the Democratic recipients as liberal-leaning.

The Federal Election Commission (FEC) requires information for any political gift of 200 dollars or more, which the FEC stores and makes publicly available to researchers. The donor's employer and job title is among the required information and key to my research (if any). I gathered all the available data on the FEC webpage to identify all contributions to the two major parties, their candidates, campaign committees, and associated political action committees (PAC). I then matched individual donors who indicated any company comprised in my dataset through fuzzy name-matching process in Python with subsequent manual examination for integrity. As a result, I gathered an average of 75,000 political donation records per year over the study window from 7,371 unique employee donors for firms in the sample.

Following Gupta, Briscoe, and Hambrick (2017), I operationalized ideology as the following: I measured organizational liberalism (lower values represent conservatism) using four items coded from employee donations: first, the dollar amount donated to the Democratic Party divided by the total amount donated to both parties, second, the count of contributions to the Democratic Party divided by the count of donations to both parties, third, the count of unique employee donors to the Democratic Party divided by the count of donors to both parties, and finally, the count of unique Democratic donation recipients divided by the count of all recipients. These items had similar means and dispersions, so I averaged them to create a composite index of *organizational liberalism*, with lower values representing conservatism.

TABLE 1a

Target vectors' most similar words (FastText)

Target: purpose, clarity, mission	Similarity[5]	Target: purpose, clarity, mission	Similarity[1]
purpose	0.92919	puropse	0.45920
pupose	0.66602	ostensible	0.45666
prupose	0.62030	impetus	0.45547
purposes	0.62016	aims	0.45366
mission	0.61146	puposes	0.45344
intention	0.60871	essence	0.45278
purposed	0.59400	vision	0.45121
intent	0.59325	intentions	0.44874
objective	0.57496	furthers	0.44859
clarity	0.56434	furthering	0.44735
aim	0.55748	sole	0.44508
objectives	0.50681	motivation	0.44403
purpuse	0.50598	purposing	0.44376
twofold	0.50396	necessity	0.44367
two-fold	0.49656	intension	0.44198
reason	0.49321	rationale	0.44033
overarching	0.49223	clarify	0.43929
sake	0.48310	principle	0.43754
usefulness	0.48263	porpose	0.43630
sense	0.48073	justification	0.43562
purpouse	0.48049	convey	0.43388
furtherance	0.47953	implication	0.43324
clairty	0.47780	focus	0.43317
goal	0.46720	perpose	0.43201
motive	0.45952	pertinence	0.43043

[5] Refers to cosine similarity with my target vector.

TABLE 1b

Examples of Reviews with High/Low Purpose, Clarity, Mission Scores

Text	Purpose, Clarity, Mission (Pros)
serve customers well. this is our purpose.	0.853981
good company with a purpose. doctor's really care about their patients.	0.853981
great people and culture top management is focused on innovation and next generation technologies sustainable growth and focus with purpose…	0.853981
…	
great place to work fast pace, hard work worth the work mission driven great people	0.679287
this is the best place i have ever, and probably will ever work. you have autonomy and every resource to drive your own success, business impact, and career growth. most companies have a mission; some say they follow it, and extremely few are actually mission led.	0.679287
you're furthering a mission that's actually worth something positive for the world. the technology can be very forward leaning, depending on the group you're working with. nice office space and generally smart co-workers.	0.679287
…	
… communication and clarity from higher ups of what is happening with the company through major changes the company is going through…	0.650123
* employee friendly policies * learning opportunities * individual attention and focus on growth * clarity on strategies	0.650123
brilliant people, road map clarity , good pay	0.650123
…	
super friendly staff and customers.	0.175006
staff feels like family great food	0.175006
there aren't any. there simply aren't any! well some of the staff are nice.	0.175006
…	
promotions are easy to come by	0.075205
promotions at offshore is good	0.075205
promotions were very hard to come by.	0.075205

Carbon-Intensive Industries

To measure the most polluting industries, I measured the average per 2-digits SIC code of the total carbon emissions. As presented in Table 2, the most polluting industries in the sample are represented by petroleum refining and products using coal and petroleum (29), electric, gas, and sanitary services (49), and air transportation (45). The variable representing the top polluting industries will take the value of 1 in the case in which the industry is part of the *top 10* most polluting industries in the sample, 0 otherwise.

Community Polarization on Climate Change

The data comes from the Yale Climate Opinion Survey, provided by the Yale Program on Climate Change Communication, which collected U.S. climate change beliefs, risk perceptions, and policy preferences at the national, state, and local levels. The estimates are derived from a large national survey dataset of more than 28,000 respondents with demographic and geographic characteristics (Howe et al., 2015). The survey started collecting answers regarding climate change in late 2013 (coded as 2014). However, the data for 2013, 2015 and 2017 were not collected as the survey was initially thought to be biannual, therefore creating a hole in the panel. To mitigate this limitation, I decided to replicate the values of the missing year using the copy of the following year as the standard deviation between years inside the same community does not drastically change from one year to another. For every statement in the survey, the dataset provides the percentages, at the county level, that believe, or disbelieve, the statement regarding different aspects of climate change. In this paper, I focus on the set of questions regarding beliefs and risk perceptions (see Appendix E for the list of questions used for the research). For every question, the responses are then unbundled into two separate variables: one representing the positive answers to the statement. For example, for the question: “How worried are you about global warming?” the dataset will record one variable as the percentage of respondents that answered between "very worried" and "somewhat worried." Likewise, "Not very worried" and "Not at all worried" were combined into another variable representing the opposition to such statement.

TABLE 2

Highest Polluting Industries (Averages in Tons CO2e)

SIC-2	Scope 1 GHG Emissions	Scope 2 GHG Emissions	Scope 3 GHG Emissions	Total GHG Emissions
99	1570230	634612.1	4029209	6234052
1	760597.9	410407.2	5493295	6664300
40	5482574	193003.9	1242421	6917998
21	258474.3	278976.7	6683601	7221052
53	728231.1	2091126	4572861	7392218
20	850956.4	478701.5	8496279	9825937
33	5442317	917530.4	3715985.0	10100000.0
45	15700000.0	223489.9	2593236.0	18500000.0
49	18000000.0	468946.0	1749439.0	20200000.0
29	25500000.0	2925446.0	32200000.0	60600000.0

To measure polarization, I calculated the difference between the positive and negative beliefs so that values close to zero will match situations of polarization regarding the topic. Finally, I created a binary variable that takes the value of 1 when the value for the resulting difference is lower or equal to the 10^{th} percentile of the distribution. This value is arbitrary and was specifically chosen to represent the distribution's lowest values (i.e., polarization at the county level on climate change). Finally, I assigned the variables to every observation depending on the firm's headquarters location. To do so, I gathered information on the firm's headquarters from Compustat, starting from the ZIP code. I then mapped every ZIP code into a county using public data. The resulting variable was the key to matching both datasets.

Control Variables

I included several control variables in the analyses. First, I controlled for the *number of reviews* in the focal year (in logarithmic form). Second, I operationalized firm size using two variables: by considering total assets (*size)* and plant, property & equipment (*ppe*) for the focal year (both in logarithmic form). Third, I included organizational *sales* (using the natural logarithm), *ROA* (winsorized at the 2.5% and 97.5% level) to account for firm performance in the focal year as a possible explanation that could increase organizational CO_2 emissions. Furthermore, I followed the results of Bolton and Kacperczyk (2021) in adding variables known to predict emissions, such as the CAPEX divided by the book value of assets (*INVEST/A*), the *leverage* represented by the amount of debt divided by total assets, the book-to-market value (*B/M*). All these variables were winsorized at the 2.5% and 97.5% levels. Also, I have added a control regarding the *market competition* by calculating the Herfindahl sales index in the business segment (2-digits SIC code). Fourth, to account for possible influences of institutional investors in decisions regarding sustainability (i.e., Serafeim 2018), I obtained data on institutional ownership from the Thomson Router Institutional (13F) database. FactSet gathers institutional ownership for U.S. equities from mandatory filings with the Security Exchange Commission (SEC). To better represent the context in which the investor operates, I divided the institutional investors in 5 categories: *banks, insurance companies, investment companies, independent investment advisors, and others* (represented mainly by endowment funds). Finally, I controlled for other quantitative variables measured in Glassdoor reviews. Specifically, I controlled for the firm's *overall evaluation, senior management approval,* and *CEO approval* using average employee ratings on a 1 to 5 scale for each firm-year observation. In the case of CEO approval, the initial value ranged from -1 (negative) to 1 (positive) and was rescaled from 1 to 5 to match the other variables.

Estimation techniques

Given that the setting does not provide an exogenous shock to purpose that is otherwise unrelated to organizational carbon emissions, I cannot establish causality. The research

design implemented for the study includes fixed effects for both firm, year, and industry (2-digit SIC code) to test hypotheses 1a and 2; hypothesis 1b regarding the highest polluting industries includes year fixed effects only. For every analysis, I included clustered standard errors by firm to control potential heteroscedasticity and provide a more conservative test of the hypotheses.

RESULTS

Table 3 provides descriptive statistics and correlations among variables. The positive perception of organizational purpose is negatively correlated with GHG emissions, and the same is true for the negative perception of organizational purpose, even though in lower terms. The similar correlation, mean, and standard deviation between the two variables can be explained by taking into consideration that most of the reviews in my sample do not contain words related to purpose, clarity, or mission and, therefore, the mean, standard deviation, and correlation will be driven mainly by reviews with low scores for the target vector. Organizational liberalism is negatively correlated with the four variables reflecting carbon emissions at the organizational level, and polarization at the county level is positively correlated with emissions even though very close to zero.

Table 4A presents regression results for the effects of organizational purpose on total GHG emissions. All three baseline models test the effect of the perception of purpose on carbon emissions. However, none of the models present significant effects for both purpose and organizational liberalism. Table 4B presents the same model with different dependent variables representing the scopes' particular emissions. The results confirm that the sense of purpose, or organizational liberalism alone does not explain differences in carbon emissions.

Table 5A presents regression results to test the hypothesis regarding the impact of organizational purpose and ideology on carbon emissions. Model 1 shows support for the purpose-sustainability link contingent to liberal-leaning firms (b=-2.785, p= .039). Model 2 does not support the opposite effect regarding scope 1 emissions. The contingency effect of organizational liberalism on the purpose-sustainability link is confirmed regarding scope 2

emissions of Model 3 (b= -4.577; p=.065), providing evidence that scope 2 emissions drive the impact of the interaction between liberalism and purpose. The coefficients are not statistically significant regarding scopes 1 (Model 1) and 3 (Model 4). Figure 3 provides visual evidence consistent with these findings. For the significant interaction result (Figures 3.1 and 3.3), companies with a high positive sense of purpose with liberal ideologies explain lower emissions of CO2 compared with both companies with a lower sense of purpose and conservative firms.

Table 5B shows the results to test Hypothesis 1b regarding the triple interaction between organizational purpose and liberalism in the highest polluting industries. Model 1 confirms that the interaction between purpose and liberalism towards reducing carbon emission is especially relevant in highly polluting industries (b= -35.85; p= 0.01). In Model 2, the hypothesis is also confirmed regarding scope 1 emissions (b= -74.72; p= 0.04). The same is not true regarding scopes 2 (Model 3) and 3 emissions (Model 4).

Finally, Table 6 tests hypothesis 2 regarding the weaker effect of the interaction between organizational purpose and liberalism in cases of polarized beliefs regarding climate change in the community where the organization has its headquarters. Model 1 of Table 6

confirms that polarized beliefs on global warming reduce the effects of liberalism and purpose on reducing emissions. The result is marginally significative and positive (b= 3.680; p=0.019). I do not find significant results when dividing the emissions by scope. In Model 2, I find a negative and weak effect of polarization on scope 1 emissions; in Models 3 and 4, the results take a positive direction.

TABLE 3

Descriptive Statistics and Correlation Table

	Variables	Mean	S.D.	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	*Total GHG Emissions (log)*	14.09	1.81	-																							
2	*Scope 1 GHG Emissions (log)*	11.26	2.29	0.85	-																						
3	*Scope 2 GHG Emissions (log)*	12.07	1.81	0.86	0.72	-																					
4	*Scope 3 GHG Emissions (log)*	13.66	1.76	0.97	0.74	0.84	-																				
5	*Purpose, Clarity, Mission (Pros)*	0.28	0.02	-0.28	-0.29	-0.32	-0.26	-																			
6	*Purpose, Clarity, Mission (Cons)*	0.28	0.02	-0.26	-0.23	-0.25	-0.25	0.57	-																		
7	*Organizational Liberalism*	0.57	0.26	-0.23	-0.27	-0.17	-0.21	0.18	0.14	-																	
8	*CC Polarization*	0.28	0.45	0.08	0.10	0.12	0.07	0.04	0.16	-0.11	-																
9	*Number of reviews (log)*	5.64	0.85	0.38	0.24	0.50	0.41	-0.22	-0.26	0.00	-0.08	-															
10	*Total Assets (log)*	9.80	1.87	0.76	0.51	0.67	0.78	-0.08	-0.14	-0.15	0.01	0.43	-														
11	*ROA*	0.13	0.09	0.24	0.19	0.26	0.24	-0.16	-0.17	-0.09	0.07	0.15	0.03	-													
12	*Sales (log)*	9.31	1.49	0.87	0.62	0.80	0.90	-0.21	-0.20	-0.18	0.03	0.53	0.88	0.20	-												
13	*Leverage*	1.11	1.95	0.12	0.11	0.08	0.11	-0.03	0.02	-0.03	-0.04	0.04	0.18	-0.11	0.12	-											
14	*B/M*	1527.94	1641.94	0.40	0.24	0.37	0.43	0.11	-0.05	0.05	0.01	0.32	0.54	0.13	0.48	0.38	-										
15	*INVEST/A*	53.39	65.75	0.57	0.48	0.50	0.54	-0.09	-0.14	-0.03	0.03	0.38	0.57	0.12	0.55	0.44	0.70	-									
16	*PPE (log)*	8.31	1.81	0.87	0.73	0.81	0.84	-0.28	-0.26	-0.18	0.07	0.47	0.83	0.21	0.82	0.16	0.46	0.67	-								
17	*Market competition*	0.26	0.22	0.17	0.12	0.16	0.20	-0.16	-0.05	-0.07	0.01	0.08	0.03	0.02	0.17	0.07	-0.05	-0.01	0.09	-							
18	*II - Banks*	0.06	0.05	0.24	0.17	0.22	0.26	0.16	0.17	-0.12	0.09	0.10	0.18	0.25	0.23	-0.05	0.14	0.09	0.16	0.08	-						
19	*II - Insurance Companies*	0.01	0.01	0.08	0.09	0.10	0.09	0.08	0.08	0.01	0.06	0.02	0.01	0.12	0.05	-0.06	0.01	0.00	0.02	0.04	0.45	-					
20	*II - Investment Companies*	0.01	0.01	-0.04	-0.05	-0.02	-0.03	0.22	0.23	0.04	0.04	0.00	-0.03	0.04	-0.01	-0.04	0.03	-0.01	-0.06	0.00	0.41	0.31	-				
21	*II - Indipendent Investment Advisors*	0.16	0.12	-0.08	-0.06	-0.05	-0.09	0.30	0.37	0.04	0.08	-0.06	-0.12	0.04	-0.09	-0.08	-0.03	-0.09	-0.14	0.00	0.59	0.38	0.46	-			
22	*II - Others*	0.34	0.26	-0.12	-0.08	-0.09	-0.12	0.14	0.26	-0.07	0.03	-0.08	-0.17	0.07	-0.14	-0.05	-0.15	-0.14	-0.17	0.02	0.63	0.37	0.42	0.65	-		
23	*Overall Evaluation*	3.37	0.41	0.08	0.00	0.01	0.09	0.35	-0.33	0.10	-0.15	0.03	0.19	0.02	0.10	-0.04	0.31	0.17	0.10	-0.13	-0.03	-0.04	-0.01	-0.11	-0.19	-	
24	*CEO Approval*	3.90	0.43	-0.01	-0.09	-0.08	0.01	0.35	-0.22	0.06	-0.13	0.02	0.16	-0.03	0.07	-0.02	0.27	0.11	0.02	-0.11	-0.04	-0.10	-0.01	-0.10	-0.15	0.82	-
25	*Sen. MGMT Approval*	3.06	0.58	-0.06	-0.10	-0.12	-0.05	0.41	-0.28	0.09	-0.14	-0.03	0.05	-0.02	-0.03	-0.05	0.21	0.07	-0.05	-0.12	-0.07	-0.05	-0.01	-0.10	-0.16	0.94	0.84

TABLE 4A

Regressions on GHG Total Emissions

VARIABLES	(1) **Total GHG Emissions**	(2) **Total GHG Emissions**	(3) **Total GHG Emissions**
Purpose, Clarity, Mission (Pros)	-0.349	-0.362	-0.132
	(0.688)	(0.697)	(0.651)
Purpose, Clarity, Mission (Cons)	1.337	1.392	1.055
	(0.975)	(0.995)	(0.936)
Organizational Liberalism	-0.00821	-0.00970	-0.00837
	(0.0228)	(0.0224)	(0.0231)
Number of reviews (log)	0.0584	0.0582	0.0649
	(0.0514)	(0.0510)	(0.0547)
Total Assets (log)	0.0293	0.0311	0.0305
	(0.0326)	(0.0339)	(0.0339)
ROA	-0.358**	-0.355**	-0.365**
	(0.129)	(0.130)	(0.129)
Sales (log)	0.841***	0.837***	0.834***
	(0.0587)	(0.0602)	(0.0611)
Leverage	-0.0149*	-0.0149*	-0.0143*
	(0.00609)	(0.00611)	(0.00600)
B/M	2.39e-05*	2.42e-05*	2.31e-05*
	(1.04e-05)	(1.04e-05)	(1.04e-05)
INVEST/A	7.69e-05	7.74e-05	5.75e-05
	(0.000196)	(0.000194)	(0.000202)
PPE (log)	0.0730*	0.0723*	0.0731*
	(0.0306)	(0.0327)	(0.0324)
Market competition	-0.124	-0.119	-0.115
	(0.110)	(0.111)	(0.112)
Institutional Investors (%)		0.0546	0.00681
Banks		(0.209)	(0.210)
Institutional Investors (%)		0.706	0.702
Insurance Companies		(0.539)	(0.521)
Institutional Investors (%)		0.635	0.467
Investment Companies		(0.537)	(0.521)
Institutional Investors (%)		-0.0655	-0.0677
Independent Investment Advisors		(0.107)	(0.110)
Institutional Investors (%)		-0.0512	-0.0426
Others		(0.0732)	(0.0714)

Overall Evaluation			-0.102
			(0.0690)
CEO Approval			0.0674
			(0.0506)
Sen. MGMT Approval			0.0121
			(0.0249)
Constant	4.924***	4.952***	5.018***
	(0.464)	(0.459)	(0.501)
Observations	2,005	2,005	2,005
R-squared	0.993	0.993	0.994
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
Number of Firms	399	399	399
Within R-Squared	0.557	0.558	0.560

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

TABLE 4B

Regressions on Scope 1, 2, and 3 Emissions

	(1)	(2)	(3)
VARIABLES	**Scope 1 GHG Emissions**	**Scope 2 GHG Emissions**	**Scope 3 GHG Emissions**
Purpose, Clarity, Mission (Pros)	-3.307	0.0956	0.226
	(2.166)	(1.467)	(0.699)
Purpose, Clarity, Mission (Cons)	0.794	0.819	0.558
	(1.892)	(1.123)	(0.939)
Organizational Liberalism	0.103	-0.0280	-0.00894
	(0.0671)	(0.0457)	(0.0220)
Number of reviews (log)	0.0657	0.0631	0.0506
	(0.0792)	(0.0491)	(0.0598)
Total Assets (log)	0.0457	0.0892	-0.0268
	(0.102)	(0.0829)	(0.0326)
ROA	0.0165	-0.879*	-0.194+
	(0.378)	(0.354)	(0.110)
Sales (log)	0.735***	0.636***	0.883***
	(0.157)	(0.138)	(0.0612)
Leverage	0.00914	-0.0232*	-0.00702

	(0.0144)	(0.0109)	(0.00611)
B/M	1.95e-05	2.81e-05	2.56e-05*
	(2.88e-05)	(2.17e-05)	(1.27e-05)
INVEST/A	-0.00140	0.000296	-0.000401
	(0.000927)	(0.000471)	(0.000290)
PPE (log)	0.0526	0.198*	0.110*
	(0.136)	(0.0874)	(0.0468)
Market competition	0.343	-0.362	-0.0238
	(0.402)	(0.258)	(0.0867)
Institutional Investors (%)	-1.206	0.430	-0.273
Banks	(0.828)	(0.549)	(0.247)
Institutional Investors (%)	-0.00741	0.923	0.473
Insurance Companies	(1.188)	(0.767)	(0.547)
Institutional Investors (%)	-1.213	0.0769	0.157
Investment Companies	(1.920)	(1.664)	(0.515)
Institutional Investors (%)	-0.0827	0.347	-0.139
Independent Investment Advisors	(0.320)	(0.231)	(0.101)
Institutional Investors (%)	-0.193	0.0167	-0.00491
Others	(0.202)	(0.141)	(0.0473)
Overall Evaluation	-0.193	-0.131	-0.0641
	(0.135)	(0.109)	(0.0633)
CEO Approval	0.220*	0.159**	0.0292
	(0.0958)	(0.0589)	(0.0529)
Sen. MGMT Approval	-0.0596	-0.0332	0.0118
	(0.0802)	(0.0551)	(0.0245)
Constant	4.126**	3.151***	4.490***
	(1.336)	(0.832)	(0.474)
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
Observations	2,004	2,004	2,004
R-Squared	0.133	0.282	0.598
Number of Firms	399	399	399

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

DISCUSSION

Can purpose explain differences in corporate sustainability performance? Researchers lately pursued the idea that firms with a high sense of purpose would engage in sustainability actions more efficiently (Gartenberg 2021) as these actions would reinforce the organization's values besides profit maximization and employee identification with the firm. I advance a new perspective on the link between purpose and sustainability, adopting the literature on issue selling and political liberalism. First, organizational actions towards sustainability can result from matching individual concerns and organizational values (Bansal 2003). At the same time, individual concerns regarding polarized issues like climate change are also influenced by the ideological stance existing throughout the organization (Gupta et al., 2017). I argue that purpose can be a crucial variable explaining differences in corporate sustainability conditionally to the political views resident in the organization (i.e., the degree of liberalism). I find evidence supporting the hypothesis that the interaction between purpose and liberalism plays a key role in explaining organizational actions toward reducing carbon emissions. Furthermore, I find a stronger effect regarding more carbon-intensive industries.

TABLE 5A

Regressions on GHG Total Emissions

VARIABLES	(1) **Total GHG Emissions**	(2) **Scope 1 GHG Emissions**	(3) **Scope 2 GHG Emissions**	(4) **Scope 3 GHG Emissions**
Purpose, Clarity, Mission (Pros)	1.409	-3.471	2.557	0.546
	(0.941)	(2.445)	(1.830)	(0.970)
Organizational Liberalism	0.750*	0.0224	1.183+	0.149
	(0.376)	(0.830)	(0.672)	(0.315)
*Org. Liberalism*Purpose Pros*	-2.785*	0.296	-4.448+	-0.579
	(1.346)	(3.051)	(2.487)	(1.107)
Purpose, Clarity, Mission (Cons)	0.950	0.805	0.652	0.536
	(0.900)	(1.878)	(1.113)	(0.911)
Number of reviews (log)	0.0666	0.0655	0.0658	0.0509
	(0.0549)	(0.0795)	(0.0494)	(0.0602)
Total Assets (log)	0.0283	0.0460	0.0858	-0.0272

	(0.0340)	(0.101)	(0.0828)	(0.0327)
ROA	-0.352**	0.0151	-0.859*	-0.191+
	(0.126)	(0.379)	(0.347)	(0.110)
Sales (log)	0.832***	0.735***	0.631***	0.882***
	(0.0613)	(0.158)	(0.137)	(0.0616)
Leverage	-0.0133*	0.00903	-0.0216*	-0.00680
	(0.00607)	(0.0143)	(0.0106)	(0.00617)
B/M	2.27e-05*	1.95e-05	2.76e-05	2.55e-05*
	(1.04e-05)	(2.89e-05)	(2.15e-05)	(1.28e-05)
INVEST/A	2.16e-05	-0.00140	0.000239	-0.000408
	(0.000197)	(0.000915)	(0.000464)	(0.000289)
PPE (log)	0.0703*	0.0529	0.194*	0.110*
	(0.0318)	(0.136)	(0.0867)	(0.0473)
Market competition	-0.108	0.342	-0.350	-0.0222
	(0.109)	(0.401)	(0.261)	(0.0881)
Institutional Investors (%) Banks	-0.0199	-1.203	0.388	-0.279
	(0.211)	(0.829)	(0.543)	(0.245)
Institutional Investors (%) Insurance Companies	0.729	-0.0103	0.966	0.478
	(0.528)	(1.200)	(0.769)	(0.554)
Institutional Investors (%) Investment Companies	0.467	-1.213	0.0769	0.157
	(0.527)	(1.920)	(1.647)	(0.519)
Institutional Investors (%) Independent Investment Advisors	-0.0589	-0.0836	0.361	-0.138
	(0.109)	(0.319)	(0.231)	(0.102)
Institutional Investors (%) Others	-0.0496	-0.193	0.00562	-0.00635
	(0.0715)	(0.204)	(0.139)	(0.0472)
Overall Evaluation	-0.107	-0.193	-0.139	-0.0652
	(0.0700)	(0.135)	(0.110)	(0.0644)
CEO Approval	0.0684	0.220*	0.161**	0.0294
	(0.0506)	(0.0958)	(0.0585)	(0.0532)
Sen. MGMT Approval	0.0126	-0.0597	-0.0324	0.0119
	(0.0248)	(0.0803)	(0.0548)	(0.0246)
Constant	4.703***	4.160**	2.648**	4.424***
	(0.567)	(1.426)	(0.902)	(0.556)
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	2,004	2,004	2,004	2,004
Number of Firms	399	399	399	399
R-Squared	0.562	0.133	0.285	0.598

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

TABLE 5B

Regressions on GHG Total, Scope 1, 2, and 3 Emissions

VARIABLES	(1) **Total GHG Emissions**	(2) **Scope 1 GHG Emissions**	(3) **Scope 2 GHG Emissions**	(4) **Scope 3 GHG Emissions**
Purpose, Clarity, Mission (Pros)	0.828	3.871	-1.872	2.049
	(3.710)	(7.652)	(4.456)	(3.404)
Organizational Liberalism	0.742	1.420	1.649	0.0438
	(1.113)	(2.342)	(1.302)	(1.038)
Top 10	-4.140*	-8.508*	2.157	-2.443
	(1.986)	(4.043)	(2.462)	(2.018)
*Purpose Pros*Org. Liberalism*	-3.564	-8.011	-6.581	-0.672
	(4.139)	(8.734)	(4.810)	(3.816)
*Purpose Pros*Top 10*	18.20*	38.55*	-10.12	9.751
	(7.622)	(15.35)	(9.285)	(7.719)
*Org. Liberalism*Top 10*	9.633**	19.39**	-5.296	5.389
	(3.619)	(6.820)	(4.504)	(3.705)
*Purpose Pros*Org. Liberalism*Top 10*	-35.85**	-74.72**	22.37	-18.58
	(13.83)	(25.49)	(16.70)	(14.01)
Purpose, Clarity, Mission (Cons)	-6.306**	-9.113*	-5.482+	-7.184**
	(2.293)	(4.517)	(2.824)	(2.277)
Number of Reviews (log)	-0.306***	-0.480***	0.0890+	-0.277***
	(0.0398)	(0.0816)	(0.0532)	(0.0383)
Total Assets (log)	-0.325***	-0.805***	-0.449***	-0.266***
	(0.0429)	(0.0925)	(0.0575)	(0.0418)
ROA	-0.0819	-1.290+	-0.539	0.0741
	(0.345)	(0.697)	(0.480)	(0.355)
Sales (log)	0.943***	0.828***	0.758***	1.053***
	(0.0477)	(0.107)	(0.0840)	(0.0476)
Leverage	0.00938	0.0252	0.0117	-0.000902
	(0.0133)	(0.0303)	(0.0177)	(0.0136)
B/M	7.03e-06	-4.07e-05	5.08e-05	5.72e-05*
	(2.46e-05)	(5.21e-05)	(3.50e-05)	(2.47e-05)
INVEST/A	7.99e-05	0.00211	-0.00292**	-0.000683
	(0.000719)	(0.00165)	(0.00110)	(0.000773)
PPE (log)	0.487***	0.938***	0.656***	0.327***
	(0.0400)	(0.0833)	(0.0537)	(0.0417)
Market competition	0.0773	-0.338	0.0613	0.312*
	(0.136)	(0.243)	(0.182)	(0.152)
Institutional Investors (%)	1.337	1.500	-0.473	2.145**
Banks	(0.829)	(1.699)	(1.089)	(0.775)

Institutional Investors (%)	1.741	6.293	3.214	2.571
Insurance Companies	(2.202)	(4.053)	(3.042)	(1.969)
Institutional Investors (%)	-4.303+	-10.54+	-7.905*	-2.172
Investment Companies	(2.461)	(5.723)	(3.582)	(2.516)
Institutional Investors (%)	-0.0134	0.398	0.393	-0.474+
Independent Investment Advisors	(0.262)	(0.580)	(0.430)	(0.268)
Institutional Investors (%)	-0.385*	-0.228	-0.482+	-0.358*
Others	(0.175)	(0.391)	(0.254)	(0.167)
Overall Evaluation	0.410**	0.0722	0.0867	0.335**
	(0.130)	(0.267)	(0.178)	(0.121)
CEO Approval	-0.223*	-0.0861	-0.264*	-0.223**
	(0.0878)	(0.197)	(0.122)	(0.0853)
Sen. MGMT Approval	-0.139*	-0.00633	0.0648	-0.184**
	(0.0668)	(0.143)	(0.0748)	(0.0656)
Constant	7.673***	8.260**	6.393***	6.977***
	(1.197)	(2.500)	(1.337)	(1.115)
Firm FE	NO	NO	NO	NO
Year FE	YES	YES	YES	YES
Industry FE	NO	NO	NO	NO
Observations	2,121	2,121	2,121	2,121
R-squared	0.891	0.695	0.790	0.884
Number of Firms	516	516	516	516

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

FIGURE 3

Interaction Plots for Organizational Purpose and Liberalism

The following figures present the predicted effects of organizational purpose and liberalism on carbon emissions. Each color is associated with a different cluster of carbon emissions (in logarithmic form).

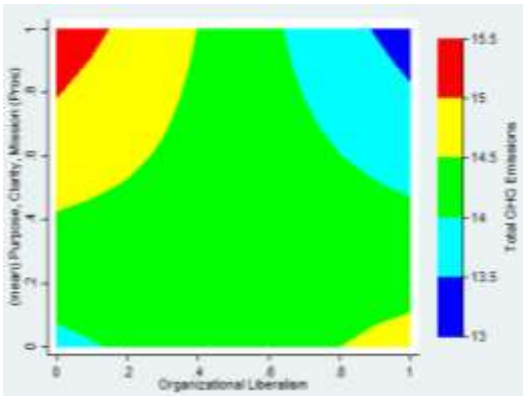
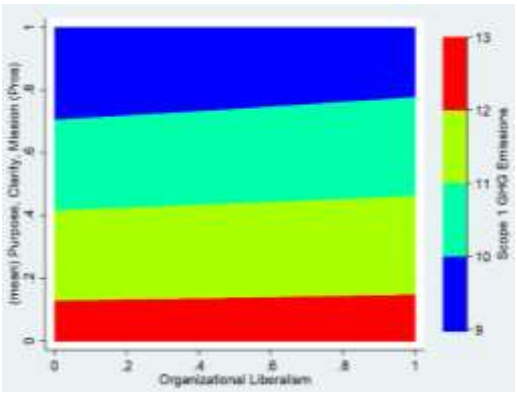
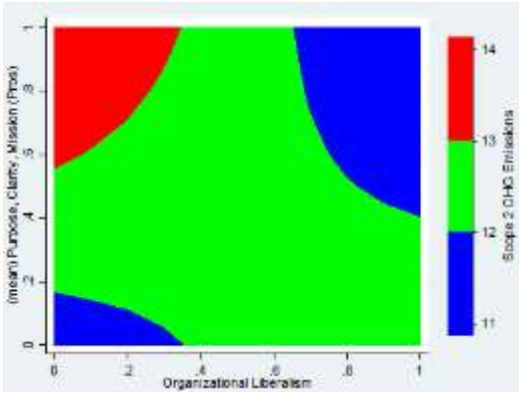
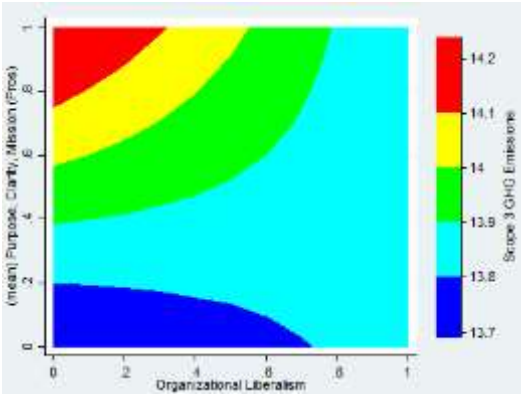
2.1 - **Total GHG Emissions**	2.2 - **Scope 1 GHG Emissions**
	
2.3 - **Scope 2 GHG Emissions**	2.4 - **Scope 3 GHG Emissions**
	

TABLE 6

Regressions on GHG Total, Scope 1, 2, and 3 Emissions

VARIABLES	(1) **Total GHG Emissions**	(2) **Scope 1 GHG Emissions**	(3) **Scope 2 GHG Emissions**	(4) **Scope 3 GHG Emissions**
Purpose, Clarity, Mission (Pros)	0.815	-3.090	1.243	0.0179
	(0.987)	(2.651)	(1.885)	(0.988)
Organizational Liberalism	0.837+	-0.414	0.549	0.303
	(0.484)	(1.117)	(0.733)	(0.351)
CC Polarization	0.797*	-0.139	0.712	0.453
	(0.346)	(0.857)	(0.790)	(0.338)
*Purpose Pros*Org. Liberalism*	-3.084+	2.140	-1.929	-1.200
	(1.752)	(4.176)	(2.763)	(1.219)

*Purpose Pros*CC Polarization*	-2.830*	0.749	-2.431	-1.655
	(1.233)	(3.271)	(2.939)	(1.176)
*Org. Liberalism*CC Polarization*	-1.037+	0.0576	-0.327	-0.412
	(0.578)	(1.321)	(1.262)	(0.473)
*Purpose Pros*Org. Liberalism*CC Polarization*	3.680+	-0.789	0.969	1.568
	(2.097)	(4.988)	(4.710)	(1.647)
Purpose, Clarity, Mission (Cons)	1.011	0.212	0.730	0.676
	(0.996)	(1.837)	(1.118)	(0.982)
Number of Reviews (log)	0.109	0.0977	0.0912	0.0899
	(0.0773)	(0.0908)	(0.0613)	(0.0861)
Total Assets (log)	0.00967	0.0485	0.0352	-0.0380
	(0.0318)	(0.0855)	(0.0773)	(0.0351)
ROA	-0.213	-0.0288	-0.250	-0.178
	(0.134)	(0.383)	(0.343)	(0.129)
Sales (log)	0.870***	0.838***	0.614***	0.901***
	(0.0651)	(0.134)	(0.137)	(0.0735)
Leverage	-0.00717	0.0208+	-0.00926	-0.00557
	(0.00605)	(0.0124)	(0.00907)	(0.00690)
B/M	1.36e-05	-4.15e-05+	1.51e-05	2.97e-05+
	(1.13e-05)	(2.15e-05)	(1.56e-05)	(1.56e-05)
INVEST/A	-2.71e-05	-0.000233	8.51e-05	-0.000572
	(0.000223)	(0.000658)	(0.000424)	(0.000367)
PPE (log)	0.0304	-0.0684	0.175*	0.115+
	(0.0308)	(0.117)	(0.0874)	(0.0637)
Market competition	-0.0112	0.265	-0.0316	0.0402
	(0.121)	(0.396)	(0.247)	(0.111)
Institutional Investors (%) Banks	0.0465	-0.923	0.279	-0.253
	(0.228)	(0.949)	(0.534)	(0.301)
Institutional Investors (%) Insurance Companies	0.912	0.192	1.666*	0.533
	(0.624)	(1.251)	(0.766)	(0.683)
Institutional Investors (%) Investment Companies	0.466	-1.123	-0.282	0.0867
	(0.580)	(2.441)	(1.806)	(0.632)
Institutional Investors (%) Independent Investment Advisors	-0.0881	-0.167	0.259	-0.142
	(0.127)	(0.360)	(0.241)	(0.113)
Institutional Investors (%) Others	-0.113	-0.330	-0.0218	-0.0341
	(0.0837)	(0.231)	(0.122)	(0.0532)
Overall Evaluation	-0.254	-0.311	-0.102	-0.200
	(0.167)	(0.204)	(0.126)	(0.175)
CEO Approval	0.0257	0.113	0.153**	-0.00460
	(0.0391)	(0.0813)	(0.0548)	(0.0411)
Sen. MGMT Approval	0.177	0.0930	-0.113	0.172
	(0.135)	(0.176)	(0.119)	(0.144)
Constant	4.915***	4.477***	3.546**	4.312***
	(0.519)	(1.297)	(1.085)	(0.478)

Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	1,697	1,697	1,697	1,697
Within R-Squared	0.461	0.117	0.208	0.496
Number of Firms	390	390	390	390

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Moreover, I expand the relationship of purpose and ideology outside firm boundaries by including community values, and specifically, I include polarization regarding climate change as a condition that would slow organizational sustainability. Recent research found that community values alone can explain differences in organizational action to tackle climate change (Dowell et al., 2021) as companies resident in more climate change concerned communities would be more prone to approve sustainable policies to appear legitimate in their eyes (Marquis, Glynn, and Davis 2007). I argue that the effect of organizational purpose and liberalism on corporate sustainability will be lower for companies in communities with polarized beliefs regarding climate change. The hypothesis is weakly confirmed but offers a new perspective on the interaction between different values at the community, organizational, and individual level.

A Model on how Beliefs at the Individual, Organizational, and Community Level Affect Sustainability

In this section, I propose a generalization of the results of this research which result in a model integrating both research on issue selling to top management (Bansal 2003) and research on how community beliefs affect decision-making (Marquis, Glynn, and Davis 2007). The aim is to present a more complete model that combines values at the individual, organizational, and community levels. Combining different analysis levels can help better explain why certain organizations are more open to sustainability than others. Figure 4 shows the final model emerging from the results of this research.

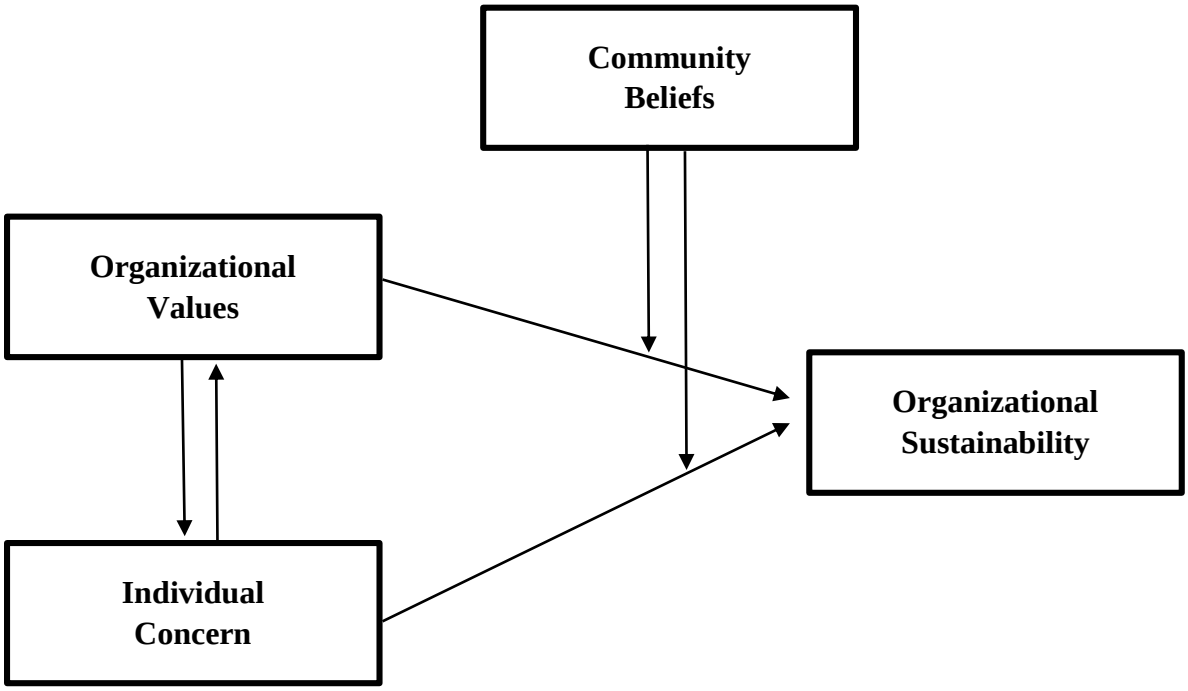
In the first part of the model, I build on the issue selling model by Bansal (2003) in recognizing the importance between organizational values and individual concern. Specific issues receive coordinated attention and organizational resources while other issues are dismissed. The difference that leads to action can be explained by matching the organization's values with the proposed issue. In this study, I propose that the general sense of purpose, as the objectives of the organization besides profit maximization, and the ideological stances of the organization can represent similar conditions regarding polarized issues, like sustainability. Purpose and ideology, in this sense, are both necessary conditions to explain sustainability actions. A high sense of purpose is needed to understand whether the organization takes certain issues as strategic and does not use impression management techniques, such as greenwashing (Christopher Marquis, Toffel, and Zhou 2016; Bansal and Clelland 2004; Gaim, Clegg, and Cunha 2021). Furthermore, specific issues take collective efforts towards their resolution and, when they do not obtain collective agreement inside the organization, will not advance to become material policies (Bansal 2003). Therefore, organizational ideology, and its interaction with organizational purpose, are key to our understanding of why some companies act on social and environmental issues (Gupta and Briscoe, 2019; Gupta et al., 2017).

The second part of the model integrates research on open polities (K. Weber and Waeger 2017) as fundamental moderator of both organizational values and individual concerns towards organizational sustainability. In this sense, organizations can appear more open or closed on certain issues depending on their geographical location (Marquis, Glynn, and Davis 2007). Community values and beliefs can serve as a barometer to understand actions towards sustainability (Dowell, Lyon, and Pickens 2021; Lee and Lounsbury 2015) as part of the organizational efforts to secure legitimacy (Bansal and Roth 2000b). Local Communities can influence organizational values and individual concerns regarding social and environmental issues. Research on social movements theory found that activists tended to receive organizational concessions when their demands rested upon organizational values (Briscoe and Gupta 2016). Moreover, local communities can affect decision-making due to a higher match with the ideologies resident within the company, as research on organizational liberalism found that organizations with liberal-leaning ideologies were more prone to concede to social movements (Gupta and Briscoe 2019). In my case, communities with

polarized beliefs explain why liberal companies with a high sense of purpose take a slower approach toward sustainability actions.

FIGURE 4

Individual, Organizational, and Community Effects in Explaining Organizational Sustainability



Contributions

This article makes several contributions to the literature on organizational purpose (Henderson and Steen 2015; Henderson 2021; Gartenberg, Prat, and Serafeim 2019), sustainability (Henderson and Serafeim 2020; Gartenberg 2021), issue selling (Dutton and Ashford 1993; Bansal 2003), as well as literature on organizational political ideology (Gupta, Briscoe, and Hambrick 2017; Gupta and Briscoe 2019).

First, I provide empirical evidence on the relationship between organizational purpose and sustainability in a large sample of organizations. Studies so far only theorized about the effects of purpose on sustainability while admitting the lack of empirical evidence and studies

on the possible mechanisms that would unveil this relationship (Gartenberg 2021). My results would not confirm this proposition. I found that a higher sense of purpose was not a sufficient condition to explain carbon reductions at the organizational level. This is because climate change is not a bipartisan concern (Egan and Mullin 2017), and thus purpose would translate into decarbonization only in organizations with liberal leaning.

Thus, from a theoretical point of view, I propose that organizational political ideology can become a crucial mechanism through which the effects of purpose can influence sustainability. Organizational actions that generate tradeoffs and need cooperation throughout the organization, like decarbonization processes, can become divisive, and ideologies can be decisive in explaining the effectiveness of these actions. These results are consistent with studies at the micro-level that found the alignment between individual and organizational values as key to sustainability issues (Bansal 2003), and this paper also contributes to this literature by offering an operationalization at the organizational level of both individual concerns (i.e., employee's ideological leaning) and organizational values (i.e., the sense of purpose).

Furthermore, this research offers a more complete framework to understand how values at the community, organizational, and individual level interact towards sustainability actions by organizations. In doing so, I present a more exhaustive model integrating the work on issue selling (Bansal 2003), organizational liberalism (Gupta, Briscoe, and Hambrick 2017; Gupta and Briscoe 2019), with research on the community level influences on corporate action (Marquis, Glynn, and Davis 2007).

Finally, in terms of practical implications, this methodological approach offers researchers new tools to revive empirical research on organizational purpose and offers practitioners a tool to measure purpose in corporations unobtrusively.

Limitations and Future Research

My study has three major limitations that provide direction for future research. First, the measure for organizational purpose was based on employees reviews. Although the method was key for measuring the employee's sense of purpose unobtrusively, using a corpus of

employee reviews can influence the results in a manner that cannot be fully controlled. Purpose can have different meanings in the context of employee reviews that might not always refer to the organization's prosocial mission. Some employees can express a positive sense of purpose, or meaningfulness, in their job without knowing, or mentioning, the broader prosocial goals of the company. In future studies, scholars could validate these measures through, for example, surveys (i.e., Best Place to Work - Gartenberg et al. 2019) or interviews.

Second, like other studies that build on voluntary employee reviews (e.g., Corritore et al. 2020), the results might have been affected by the different leanings of employees to send a review about their company. Even though this selection bias concern had been limited by adopting a filter on the number of reviews, the risk is also related to an over-inflation to certain job categories inside certain organizations. Future studies could study how purpose is perceived by looking specifically at different job categories within the same firm.

Similarly, this study builds also on employee's voluntary donations to political parties, which, while already adopted by other researchers (Gupta, Briscoe, and Hambrick 2017; Gupta and Briscoe 2019; 2020; Gupta and Wowak 2017), incurs the same selection bias concerning the misrepresentation of categories that do not contribute to political parties (or contribute under the limits for publicity).

Finally, the interaction models of Figure 3 outline a different effect of purpose depending on the liberalism of the organization. In many cases, Conservative-leaning organizations with a high sense of purpose represent organizations with the highest emissions in our sample. This pattern could relate to a different conception of organizational purpose depending on the general political ideology within the organization: conservative-leaning companies might see purpose *a la* Friedman in seeing the purpose as maximizing profits (Friedman 1970), while liberal-leaning firms would see purpose as the objective of the organization besides profits. Future research on purpose could study this avenue to understand better how employees' ideology changes the valuation of purpose itself.

This study offers an open polity framework to evaluate how values at different levels of analysis interact to influence organizational decision-making regarding sustainability.

First, I introduce the idea that a high sense of purpose, joint with a general liberal-leaning ideology inside the organization, can explain differences in carbon emissions. This relationship is found to be stronger towards the reduction of emissions in carbon-intensive industries. Second, I study how values at the community level can interact with the relationship between purpose and liberalism by considering the case of polarization regarding climate change. The results show that the relationship between purpose and liberalism is weakened in communities with a polarized view of climate change. Finally, this study proposes a new unobtrusive measure of organizational purpose based on employees' reviews, which I hope will facilitate future studies across various domains.

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CHAPTER 3

CEO AWARDS AND ORGANIZATIONAL CULTURE

INTRODUCTION

Organizational culture is traditionally seen as stemming from the values and behaviors of its leadership (Schein 1985; Selznick 1957). Leaders' values, beliefs, and actions are critical in shaping the company's culture (Barnard 1938; Simon 1947) due to their privileged position in setting up the values that the organization will promote (Smircich and Morgan 1982; Trice and Beyer 1991). In addition, CEO personal and psychological characteristics have been shown to affect the culture of their companies (Giberson et al., 2009). As the relationship between culture and the CEO is well established, in this paper, I ask whether the external social valuation of a CEO can affect the culture of the organization.

Existing approaches in organization and management studies on organizational culture view organizations as loosely coupled from their environment. Culture formation and change are generally described as internal processes developed in learning to cope with problems of external adaptation and internal integration (Schein 1985), which start from the upper-echelon values and reflect the firm's norms and routines. Cultural elements can be used as a source of sensemaking to tackle environmental changes that put the firm survival at risk (Ravasi and Schultz 2006). However, whether environmental forces outside the firm's boundaries influence how culture is perceived is still an open question and a limitation for the theory (Hatch 2011).

Although prior literature considered organizational culture as primarily static and slow to change, culture evaluation, as the collective perception that employees have about the organizational culture, is dynamic by nature. The perception of culture inside organizations can reveal both individual (Goldberg et al. 2016; Srivastava et al. 2018) and organizational (Corritore, Goldberg, and Srivastava 2020) outcomes. In this sense, I argue that the

evaluation of culture, like many other social valuations, cannot be just a function of purely internal conditions (i.e., firm performance) but is also contingent on external factors.

This paper focuses on whether CEO status can affect the employee's perception of culture. Specifically, the focus is on CEO awards as an event exogenous to the firm that enables me to observe the symbolic value-added of CEO prestige on the subsequent evaluations of the company's culture. I propose that the effect of CEO status can lead to a variation in the cultural evaluation given by its symbolic value. Following the sociological and social psychological research on status and reputation, I argue that the cultural representation of companies with award-winning executives can be positively biased as a result of two mechanisms. First, the perception of culture can be positively affected *directly* as the award increases the credibility and charisma of the CEO in the eyes of key stakeholders (Bitektine 2011; Fombrun 1996; Hall 1992). Second, the influence of CEO awards on culture evaluation can be *indirect,* following the tendency to "bask in reflected glory" that can enhance the appreciation regarding a successful company they want to be associated with (Cialdini, Borden, Thorne, Walker, Freeman, and Sloan, 1976; Pfeffer and Fong, 2005).

I test this hypothesis using culture measures from Glassdoor.com, joint with culture discourse measures derived using natural language processing (NLP) tools. Glassdoor maintains the most extensive available database of employee reviews requiring customers to rate various aspects of their firm anonymously. I measure status through CEO awards data coming from *Chief Executive, Fortune, Forbes, Harvard Business Review, Ernst & Young, Industry Week, and MorningStar.com* from 2010 to 2020.

The results of my multi-methods analyses show that CEO awards have a symbolic effect on employees' subsequent perception of culture in terms of cohesion and sentiment. Employees' evaluation of culture in the quarter next to the award is more homogeneous and generally more positive after the CEO is awarded superior quality, which confirms a positive effect of CEO status on culture evaluation.

This article provides an empirical test on the external influences on organizational culture, demonstrating this construct's permeability to external events through a change in the subsequent culture evaluations. This study also contributes to the literature on the effects

of CEO awards. While other studies looked at the effects of CEO awards on performance (i.e., Malmendier and Tate 2009; Wade et al. 2006), or competition (Ammann, Horsch, and Oesch 2016), I studied how CEO status can affect the employees' perception of their company's culture and its cohesion. This paper also aims to contribute to the debate on the ecological consequences of status shocks (Kovacs and Sharkey 2014; Reschke, Azoulay, and Stuart 2018) by proposing an analysis of employees' reactions after CEO awards.

THEORETICAL FRAMEWORK

An Open-Systems Perspective on Organizational Culture

Organizational culture has been described from a closed system perspective. Although organizational culture is characterized as an evolving, adaptive response to internal and external pressures (Schein 1985), the theory does not account for outside influences' effects (Hatch 2011). An open system perspective of organizations (Scott and Davis 2007) conceive them as shaped, supported, and infiltrated by their environment. Research on resource dependence theory, for example, posited that the environment presents imperatives for behavior that managers enact in their organization (Pfeffer 1981) or, conversely, can legitimate and promote managerial actions, values, and norms through endorsements (Bitektine 2011; Suddaby 2005).

One of the main aspects of many theories on organizational culture (for a review, see Giorgi, Lockwood, and Glynn, 2015) is its focus on leadership. As the leader of the company, the role of the CEO in the creation and evolution of the organization's culture is critical (Barnard 1938; Selznick 1957; Simon 1947). Barnard (1938) emphasized the role of leaders as the rationalizing force that would provide an overarching point of view that brings meaning and order, while Simon (1947) pointed to the importance of the executive's values and norms in the process of decision-making. Selznick (1957) pointed to the leaders' roles in taking action on collectively valued purposes, crediting them with creating a community and a coherent set of values throughout the company. Agle, Mitchell, and Sonnenfeld (1999) argued and found that CEOs imprint their firms with their values through their strategic

decisions finding a strong relationship between CEO values and the priority that is given to each of the variety of stakeholders such as employees, government, and community. Thus, executives' identities and values are the foundational force that establishes the broader cultural values and beliefs that, later, will span throughout the organization (Pettigrew 1979) through socialization (Van Maanen 1978) and hiring (Rivera 2012).

Research on the relationship between organizational culture and identity observed how some aspects of the culture could be used to reinforce/reestablish organizational identity. Building on the social constructivist interpretation of organizational identity (Fiol 1991; Hatch and Schultz 1997), both culture and identity are defined as collectively interpreted schemes: culture is entrenched in organizational routines while identity is intrinsically relational and requires terms of comparison. Ravasi and Schultz (2006) examined the dynamics between organizational culture and identity during identity-threatening environmental changes finding that culture supported the reshaping of the organizational identity, providing sensemaking and sense giving processes. Similarly, as organizational culture drives the evolution of organizational identities (Hatch and Schultz 2002), the same can happen after sudden changes in identity to influence the perception of culture. Newly recognized high-status restaurants, for example, react to their status changes by displaying specific attributes of their identity like authenticity, superior techniques, and value creation for customers (i.e., pricing) (Favaron, Di Stefano, and Durand 2022). To better understand the dynamics between culture evaluation and status changes, I propose analyzing how external events occurring to the company's CEO, as the chief determinant of the company's culture (O'Reilly et al. 2014), can shape how this culture is evaluated by organizational members.

CEO Status and Culture Evaluation

This paper follows Pettigrew's (1979) insight that one of the most critical aspects in establishing the set of values, beliefs, and norms inside an organization (defined as "vision"), is given by "the credibility of its source and the form and process by which it is communicated." (1979:577). I focus primarily on CEO status as the mechanism through

which the organizational culture can be influenced from outside, as it affects the credibility of the CEO in the eyes of key stakeholders (Fombrun 1996; Hall 1992). The status of a social actor is defined by the hierarchical position that the actor occupies within a social system (Gould 2002). status constitutes an intangible asset likely to influence the behavior of stakeholders in different ways. Prior research supports the idea that evaluators are biased to positively evaluate high-status individuals (Podolny 1993); for example, group members considered high-status individuals to be more influential, and competent (Anderson et al. 2001) or, in the context of sports (i.e. Major League Baseball), umpires were more likely to misjudge in favor of high-status pitchers (Kim and King 2014).

Studying the effect of exogenous events on culture evaluation requires considering all the values and norms related to the company's culture. Prior research characterized organizational culture along multiple dimensions (i.e., content, consensus, and intensity - Chatman and O'Reilly 2016), significantly influencing firms' performance. Distinctively, cultural evaluation represents the degree of homogeneity between cultural representation, independently of the content of the norm, and the overall appreciation of culture. Research using this concept found that the degree of homogeneity of cultural representations can have different effects at the individual or organizational level (Corritore et al., 2020; Goldberg et al., 2016; Srivastava et al., 2018). Srivastava et al. (2018) described how the adaptation to the organizational culture could have consequences for individual attainments. Cultural fit can predict higher individual performance or predict voluntary and involuntary exit. At the organizational level, the similarity between cultural representations inside the organization (i.e., interpersonal heterogeneity) can explain higher performances for the company, while the focus on certain norms of the culture (i.e., intrapersonal heterogeneity) can hinder innovation (Corritore et al. 2020).

Since culture evaluation is by nature a dynamic construct, events outside the firm's boundaries can affect it in various ways. Evaluators, in this case, employees, make their culture evaluations under conditions of bounded rationality (Cyert and March 1963; March and Simon 1958), and variations in CEO prestige can bias their evaluation of quality (Bitektine 2011). For example, subjective evaluations of quality can be biased depending on past performance outcomes (Rao 1994; Wade et al. 2006; Waguespack and Salomon 2016).

External certification of CEO quality can bias how stockholders evaluate the company in the short term; however, high status also entails an increase in expectations which, if not matched, leads to adverse outcomes in the long run (Wade et al. 2006). Status contests can also bring increased attention to the organization. In the context of quality evaluations after book awards, Kovacs and Sharkey (2014) found that publicity after certification of superior quality led to widespread adoption but, at the same time, attracted audiences that would not acquire the same product otherwise, which led to a more negative evaluation of quality in the long run.

Building on social identification theory (Ashforth and Mael, 1989), I argue that a factor that increases the social identification (i.e., perception of oneness) with the company's culture is the prestige of the firm. CEO Awards are a celebration of the leader's ability to "make things happen," thus celebrating the firm's values and norms – its culture. In other words, CEO awards also celebrate the organizational culture that executives were able to build. This mechanism is known in the psychology literature as the "basking in reflected glory" effect (Cialdini, Borden, Thorne, Walker, Freeman, and Sloan, 1976), through which individuals' desire to associate with winners leads to increased adherence to a winning organization's values and norms (Pfeffer and Fong, 2005). Through this mechanism, I expect employees to feel a higher sense of belonging and identification with the organization as the aftermath of CEO awards leads to a more homogenous and positive evaluation of the culture. In other words, I expect that:

> *Hypothesis: CEO awards will positively influence the subsequent culture evaluation of the company.*

DATA AND METHODS

Sample

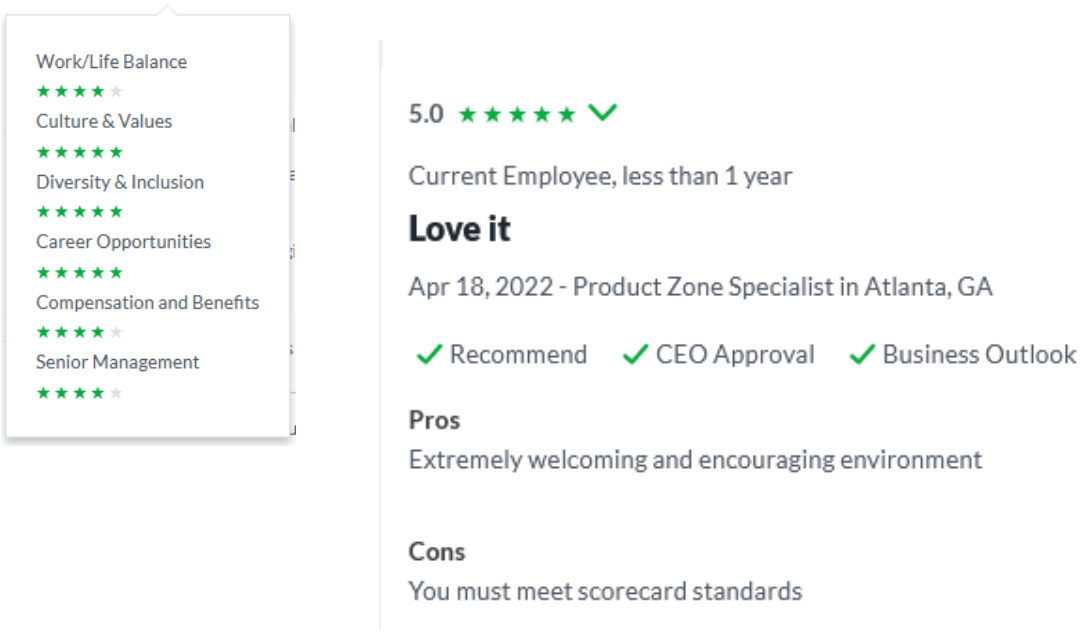
I tested the hypothesis using a panel dataset of quarterly firm observations for a sample of firms covered in both Compustat, evaluated on Glassdoor, and by media outlets conferring CEO awards. The core of our dataset is a hand-collected list of CEO awards published

between 2010 and 2020 from multiple media outlets. Several magazines confer such awards, for instance, the "CEO awards" awarded by Forbes every year.

I developed a language-based measure of culture discourse using free-response text written by employees reviewing the firm on Glassdoor.com. This service aggregates millions of reviews covering different aspects of the working environment: ratings, CEO approvals, salary, interview process, and benefits reports. Glassdoor covers more than 250 thousand companies in the U.S., counting more than 70 million reviews worldwide. An example of a Glassdoor review is provided in Figure 1. For this study, I will focus on both the textual section (pros) representing the positive aspects of the working experience and the quantitative measure describing the general evaluation of culture (culture and values).

FIGURE 1

Example of an Employee's Review on Glassdoor.com



As the Glassdoor service provides only an incomplete match with Compustat, I matched companies through a Python fuzzy name-matching algorithm (i.e., fuzzywuzzy package). This algorithm calculates the distance between two string sequences providing a score representing the similarity between the name and its best match available (Levenshtein 1965). Further manual inspection validated the method to provide accuracy in the matching process.

Matching the three datasets resulted in an initial sample of 2.6 million reviews from 4,278 companies which, following literature that used Glassdoor data as an explanatory variable (Corritore et al. 2020), was filtered to exclude firm quarterly observations of less than 25 reviews. Then, as I focused on the variation of culture discourse, I further filtered the sample of reviews, including only the reviews that current employees wrote of the company. These filtering operations resulted in 685,040 reviews for 798 firms, yielding an unbalanced panel dataset of 8,692 firm-year-quarter observations.

Dependent Variable

To analyze variations in culture evaluation, I use two measures representing the distance in cultural perception between employees (*culture homogeneity)* and a general sense of the appreciation of culture in the organization (*culture appreciation).*

The hypothesis proposed focuses on the link between CEO status and culture evaluation. To create the variable, I use Latent Dirichlet Allocation [LDA] (Blei, Ng, and Jordan 2003), a specific method for topic modeling. Expressly, LDA assumes that each word in a document is generated in two steps. First, assuming that each document has its topic distribution, a topic is randomly drawn based on its topic distribution. Next, assuming that each topic has its word distribution, a word is randomly drawn from the word distribution of the topic selected in the previous step. Repeating these two steps word by word generates a document. The LDA algorithm discovers the topic distribution for each document and the word distribution of each topic iteratively by fitting this two-step generative model to the observed words in the documents until it finds the best set of variables that describe the topic

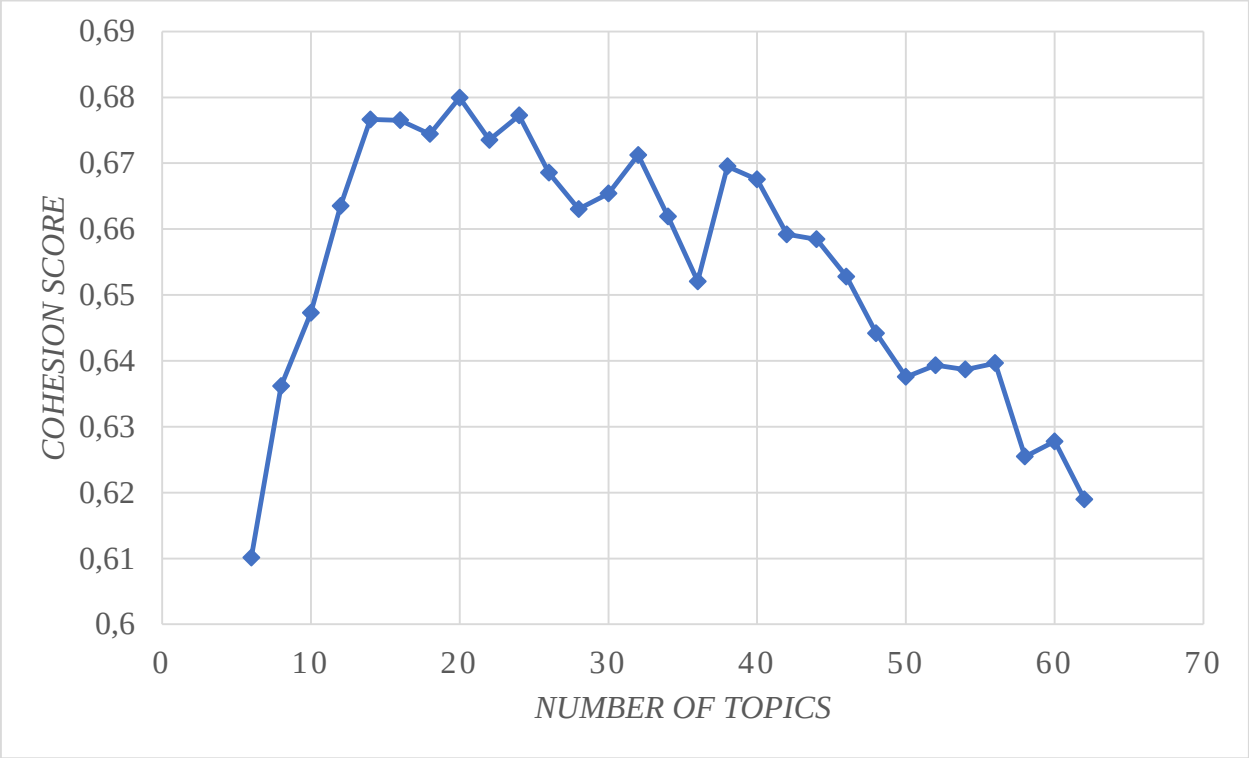
and word distributions. Essentially, LDA reduces the extraordinary dimensionality of linguistic data from words to topics based on word co-occurrences in the same document, similar to cluster analysis or principal component analysis applied to quantitative data. LDA provides a reliable and replicable classification of topics.

As with every generative model, LDA adopts a training model to infer the words contained in the topics and their distribution. Following prior text analysis work using Glassdoor data (Corritore et al. 2020), I created the training model starting from a sample of sentences that adopted the word "culture" or synonyms explicitly (i.e., atmosphere, attitude, climate, value, philosophy, belief) assuming that the presence of a culture synonym would indicate that the phrase contains content related to culture. I allow the model to identify a set of cultural topics with this specification. The model was then fit to the entire sample of reviews to identify the cultural topics in the reviews.

LDA is an unsupervised model except for several topics to output. To select the optimal number of topics, I followed the computation linguistic literature (Newman et al. 2010) and calculated the LDA model's Cohesion Score based on different numbers of topics. Topic coherence is a standardized measure that evaluates the cohesion or interpretability of a set of topics composing the model using a co-occurrence measure based on pointwise mutual information. Figure 2 shows the distribution of cohesion scores depending on the number of topics selected. The final decision had been to set the number of topics to 20 as the combination with the highest score. Finally, I fit the LDA model to the reviews in my sample. LDA assigns for each document a probability distribution depending on the probability that the set of words is contained in a determined topic. The model predicts, therefore, that two reviews, as the minimal unit, with similar topic distributions, will contain similar content.

FIGURE 2

Topic Models' Cohesion Scores



I measure culture homogeneity as the inter-quarter similarity between a set of reviews. Culture homogeneity represents the similarity between aggregated cultural topics. I define culture homogeneity for a given firm/quarter as the inverse of the mean Jensen-Shannon (JS) between all unordered pairs of reviews *x*,*y*, formally:

$$culture\ homogeneity = 1 - \frac{\sum_{x,y} JS(p_x, p_y)}{\sum_{x,y}}$$

Where,

$$JS(p_x, p_y) = \frac{1}{2} KL(p_x, \frac{1}{2}(p_x + p_y) + \frac{1}{2} KL(p_y, \frac{1}{2}(p_x + p_y)$$

and KL represents the Kullback-Leibler divergence of the two terms inside the parenthesis (Corritore et al., 2020; Marchetti, 2019). In text analysis, the probabilities of texts always have positive values; thus, the measure of *culture homogeneity* will be a continuous value that goes from 0 (in the case in which there is no similarity) to 1 (in the case of perfect similarity).

Finally, as a measure of employees' overall appreciation of the organizational culture, I also adopt the quantitative measure for culture and values as the overall employees' *culture appreciation.* Employees can (optionally) state their overall feeling about the organizational culture by filling a 5-point Likert Scale from strong disagreement (1) to strong agreement (5). From an inspection of the sample, I found that less than 10 percent of the reviews did not contain indications of the overall appreciation for the organizational culture.

Independent Variable

I followed prior research using CEO awards (Ammann et al. 2016; Malmendier and Tate 2009) in selecting specific awards that were, first, nationwide contests that would allow any CEO to win it, and second, prominent enough to affect CEO status plausibly.

CEO award data come from *Chief Executive, Ernst & Young, Fortune, Forbes, Harvard Business Review, Industry Week,* and *MorningStar.com.* The data was hand-collected using EBSCOhost Business Source or from public data available on the media webpage (i.e., Fortune). The collection of awards resulted in a sample of 955 CEO awards.

Estimation Techniques

I tested my hypothesis with two types of models. The first model is a conventional OLS model with fixed effects for year-quarter and industry (2-digits SIC code). I clustered standard errors by firm to allow for correlation between observations of the same firm over time. I have included several control variables in these analyses. First, I controlled for the

number of reviews on Glassdoor for the focal quarter and *size* as total assets. Both measures help control for firm size and are used in logarithmic form. Second, following studies on organizational culture that theorized an important effect of performances on the perception of culture (i.e., Chatman and O'Reilly 2016; Schein 1985), I include *sales* (in logarithmic form) and *ROA* (winsorized at the 1% and 99% level) to account for firm performance. Finally, I controlled for other quantitative variables measured in Glassdoor reviews, which can explain variations in culture evaluation. I use measures for *overall evaluation, senior management approval, compensation and benefits, work-life balance,* and *career opportunities.* These measures are represented by a 5-point Likert scale from 1 (very low) to 5 (very high).

The second model is a difference-in-difference model that relies on coarsened exact matching [CEM] (Blackwell et al. 2009). CEM helps correct selection bias based on the identification of similar observations based on a set of variables. I use CEM to create two different models. First, I pick the observations with the highest similarity for the dependent variable, either culture homogeneity or culture appreciation. In this model, I also exactly match year, quarter, and industry and coarsely match the number of reviews (in logarithmic form). Second, I coarsened matched companies following research that showed the organization variables related to higher chances for CEO to win awards for superior performance (Malmendier and Tate 2009). Respectively, firms were matched based on market capitalization (price x shares outstanding) and book-to-market ratio (book equity over market capitalization) measured for the year preceding the quarter of the award, to which I added a match on return on assets (ROA). I also exactly matched the year, quarter, and industry and coarsely matched the number of reviews (in logarithmic form). Malmendier and Tate (2009) added measures related to the CEO that, in my case, would reduce the number of matched firms drastically and were excluded.

Finally, for both models, I let CEM find the one-best match available in the sample (*k2k*) to increase the validity of the test. The CEM algorithm creates weights that I will use in the "matched" model, which I use together with stratum fixed effects and robust standard errors. The matching strategy is considered successful when it eliminates statistically

significant differences in the observed covariates for the observations across all the matched variables: tables 1a and 1b present the result of the coarsened exact matching process.

TABLE 1a

CEM Matching Summaries for Culture Homogeneity

Culture Homogeneity - CEM 1				
Number of Strata	14236		**Non Winners Quarters**	**Award Won Quarters**
Number of Matched Strata	269	**Number of Firm/Quarters**	176421	955
Multivariate L1 Distance	0.2903	**Matched**	784	784
		Unmatched	175637	171

VARIABLES	**Univariate L1 Distance**	**Mean Imbalance**
Number of Reviews (log)	0.0161	-0.0009
Culture Homogeneity	0.0677	0.0009

Culture Homogeneity - CEM 2				
Number of Strata	16143		**Non Winners Quarters**	**Award Won Quarters**
Number of Matched Strata	305	**Number of Firm/Quarters**	176421	955
Multivariate L1 Distance	0.7977	**Matched**	820	820
		Unmatched	175601	135

VARIABLES	**Univariate L1 Distance**	**Mean Imbalance**
Number of Reviews (log)	0.0317	-0.0045
ROA	0.1387	0.0160
Book To Market Ratio	0.1965	1171.5
Market Capitalization	0.26012	72.2

TABLE 1b

CEM Matching Summaries for Culture Appreciation

Culture Appreciation - CEM 1				
Number of Strata	11454	**Quarters**	**Non Winners Quarters**	**Award Won Quarters**
Number of Matched Strata	217	**Number of Firm/Quarters**	176421	955
Multivariate L1 Distance	0.0415	**Matched**	739	739
		Unmatched	175682	216

VARIABLES	**Univariate L1 Distance**	**Mean Imbalance**
Number of Reviews (log)	0.0189	-0.0020
Culture Appreciation	0.0038	-0.0002

Culture Appreciation - CEM 2				
Number of Strata	16143	**Quarters**	**Non Winners Quarters**	**Award Won Quarters**
Number of Matched Strata	305	**Number of Firm/Quarters**	176421	955
Multivariate L1 Distance	0.6647	**Matched**	820	820
		Unmatched	175601	135

VARIABLES	**Univariate L1 Distance**	**Mean Imbalance**
Number of Reviews (log)	0.0317	-0.0025
ROA	0.1243	0.0108
Book To Market Ratio	0.0867	1230.6
Market Capitalization	0.2254	50.023

RESULTS

Table 2 provides pairwise correlations and descriptive statistics for each of the study's variables. The correlation for the dependent variables under study is positive but lower than other quantitative variables available on Glassdoor. As expected, the variable representing CEO awards is positively correlated with culture discourse, while the correlation with culture and values is almost zero.

TABLE 2

Descriptive Statistics and Correlation Table

	Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1 -	*Culture Appreciation*	*3.564*	*0.543*	-										
2 -	*Culture Homogeneity*	*0.353*	*0.079*	*-0.301*	-									
3 -	*Lag CEO Award*	*0.007*	*0.082*	*-0.001*	*0.007*	-								
4 -	*Lag Number of Reviews (log)*	*4.020*	*0.716*	*0.046*	*-0.138*	*-0.004*	-							
5 -	*Lag ROA (log)*	*0.012*	*0.031*	*0.028*	*-0.035*	*0.008*	*0.053*	-						
6 -	*Lag Sales (log)*	*7.949*	*1.630*	*-0.089*	*-0.131*	*0.023*	*0.391*	*0.171*	-					
7 -	*Lag Total Assets (log)*	*9.824*	*1.968*	*-0.027*	*-0.186*	*0.013*	*0.330*	*0.040*	*0.825*	-				
8 -	*Lag Overall Evaluation*	*3.590*	*0.473*	*0.728*	*-0.322*	*-0.001*	*0.066*	*0.023*	*-0.065*	*-0.008*	-			
9 -	*Lag Sen. MGMT Approval*	*3.162*	*0.514*	*0.693*	*-0.225*	*-0.008*	*0.022*	*-0.019*	*-0.188*	*-0.117*	*0.910*	-		
10 -	*Lag Compensation & Benefits*	*3.435*	*0.528*	*0.579*	*-0.248*	*0.000*	*0.065*	*-0.003*	*0.109*	*0.176*	*0.794*	*0.693*	-	
11 -	*Lag Work-Life Balance*	*3.457*	*0.488*	*0.598*	*-0.297*	*-0.008*	*0.008*	*-0.040*	*-0.119*	*0.011*	*0.756*	*0.723*	*0.605*	-
12 -	*Lag Career Opportunities*	*3.386*	*0.474*	*0.643*	*-0.230*	*0.005*	*0.110*	*0.017*	*-0.077*	*-0.025*	*0.885*	*0.875*	*0.742*	*0.607*

I report both OLS (Table 3) and CEM (Table 4) model results as my main findings. I study the effects of CEO awards on culture discourse using two separate variables. One represents the homogeneity of cultural representations by employees, while the other is an overall measure of employees' appreciation for the organization's culture.

The regressions in Table 3 show the effects of CEO awards on the subsequent employees' culture evaluation. Both OLS models show that the effect of CEO awards on the subsequent evaluation of culture is positive and significant. On one side, Models 1 and 2 show that awards increase the homogeneity of the cultural representation by employees. The effect is marginally significant for model 1 (p= .92) but increases significance in Model 2, adding the other quantitative measures for the review (p= .49). The effect is confirmed regarding the appreciation of organizational culture. Model 3 shows a strong significant

effect on the evaluation of culture after the CEO wins the award (p=.002), while Model 4 shows a marginally significant positive effect when adding the other quantitative measures of the review (p=.079).

Table 4 adopts Coarsened Exact Matching methods to better account for heterogeneity using two different matching strategies. One searches for matching firm-year observations based on a similar cultural representation. The second model looks for firm-year observations of firms similar to the winners in specific financial categories but eventually did not win. Model 1 shows a significant positive effect on culture homogeneity ($p<0.01$). The same direction resulted in Model 2 ($p<0.05$) confirming that employees described culture more homogeneously in the quarter after CEO awards. Model 3 and 4 show the same models regarding the overall evaluation of culture for the organization. Model 3 shows a positive effect for CEO awards in the quarter after the CEO is awarded ($p<0.01$). Model 4 confirms the effect ($p<0.05$).

While I find this effect to be significant throughout different estimation techniques, the economic significance of the increase in culture evaluation is relatively small. For both culture homogeneity and appreciation, the effect is lower than one standard deviation of the dependent variable.

Overall, these results confirm the hypothesis: employees' evaluation of culture are more homogeneous and generally more positive in the quarters after CEO certifications of superior quality. Moreover, this effect is confirmed using both OLS and CEM methods.

TABLE 3

Regressions on Culture Homogeneity and Culture Appreciation

VARIABLES	Culture Homogeneity OLS		Culture Appreciation OLS	
	(1)	(2)	(3)	(4)
Lag CEO Award	0.00213+	0.00303*	0.135**	0.0476+
	(0.00126)	(0.00153)	(0.0434)	(0.0271)
Lag Number of Reviews (log)	-0.000539	-0.000596	0.0653*	0.00988
	(0.000716)	(0.000722)	(0.0254)	(0.0125)
Lag Total Assets (log)	-0.000883	-0.00108	0.364	0.269
	(0.0129)	(0.0130)	(0.453)	(0.211)
Lag Sales (log)	-0.000155	-1.30e-05	-0.0236	-0.00587
	(0.000799)	(0.000785)	(0.0306)	(0.0152)
Lag Total Assets (log)	-0.000581	-0.000675	-0.00164	-0.000163
	(0.000788)	(0.000792)	(0.0296)	(0.0143)
Lag Overall Evaluation		-0.00919***		0.533***
		(0.00199)		(0.0479)
Lag Sen. MGMT Approval		0.000847		0.173***
		(0.00151)		(0.0352)
Lag Compensation & Benefits		0.00228		0.103***
		(0.00152)		(0.0273)
Lag Work-Life Balance		0.00299*		0.0771**
		(0.00152)		(0.0293)
Lag Career Opportunities		0.00473**		-0.0600
		(0.00150)		(0.0385)
Constant	0.373***	0.377***	3.493***	0.693***
	(0.00382)	(0.00554)	(0.142)	(0.0994)
Year-Quarter FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	7,396	7,396	8,065	8,065
R-squared	0.245	0.250	0.202	0.565

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

TABLE 4

Regressions on Culture Homogeneity and Culture Appreciation

VARIABLES	Culture Homogeneity		Culture Appreciation	
	CEM 1	**CEM 2**	**CEM 1**	**CEM 2**
	(1)	(2)	(3)	(4)
Lag CEO Award	0.00754**	0.00499*	0.146**	0.140*
	(0.00283)	(0.00248)	(0.0538)	(0.0554)
Constant	0.384***	0.382***	3.188***	3.393***
	(0.00242)	(0.00200)	(0.0386)	(0.0401)
Strata FE	YES	YES	YES	YES
Observations	990	999	870	949
R-squared	0.007	0.004	0.007	0.006

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

DISCUSSION AND CONCLUSION

Can CEO prestige influence organizational culture? The main theories of organizational culture in the literature consider culture to be relatively stable and a result of external adaptation and internal integration (Schein 1985). By studying culture evaluation, this article provides an analysis of the effects of external influences on organizational culture. As also noted in other works (i.e., Hatch 2011), the literature on organizational culture lacked an analysis of environmental influences on culture, with the literature's primary focus on firm performances and survival as the principal reason behind the dynamics of a firm's culture (Meyerson and Martin, 1987). The results of CEO awards' effect on cultural evaluation provide evidence consistent with the hypothesis that external events can influence the perception of culture. In the subsequent quarter, companies in which CEOs win an award as top executives improve both the homogeneity and overall culture appreciation. Although the results do not show drastic improvements economically, the results are confirmed throughout the different types of analyses.

The results are consistent with the idea that a factor that increases individual social identification with the company is the firm's prestige (Ashforth and Mael 1989). CEO awards celebrate the leader's abilities, values, norms, and expectations that they carry inside the company, thus celebrating the organizational culture. This is also consistent with the idea that employees can be positively biased toward the company's values due to a mechanism of basking in reflected glory (Cialdini et al. 1976; Pfeffer and Fong 2005). In other words, CEO awards interfere with the employee's desire to associate with winners.

This paper also contributes to the debate on the ecological consequences of status shocks (Prato and Ferraro 2018; Reschke et al. 2018; Reschke and Stuart 2017) by proposing the analysis of employees' reactions after CEO awards. Status shocks may instigate within-domain and between-domain attention reallocation. Unlike other studies, my within-domain analysis of the effects of status on culture shows that employees of the company can face biases when evaluating other aspects of the organization that are not directly related to the subject of the award. Furthermore, this study does not focus on peers' judgment, as in the Matthew Effect (Merton 1988), as the most famous example. My sample of "judges" is composed of employees who might be more, or less, inclined to biases when judging quality.

This work has undoubtedly some limitations. First, the lower number of observations in the CEM models could lead to problems of selection bias. Companies with a low number of reviews depending on the study's selection criteria were dropped, as well as companies not available on Glassdoor. However, prior studies on the effect of CEO awards using matching algorithms suffered the same problem (i.e., Corritore et al. 2020; Malmendier and Tate 2009). At the same time, this study offers two different types of matching solutions, and the results hold in both settings.

Second, the nature of CEO awards had also changed from prior studies: most of the studies that looked at the effects of CEO awards used samples of years that ranged from roughly from the 1970s to no later than 2008 (Ammann et al. 2016; Malmendier and Tate 2009; Wade et al. 2006). Specifically, I noted that after the ceasing of Business Week's Best Manager Award (after 2005), the average number of awards both decreased and became more associated with objective evaluations of firm performance. Unfortunately, this dataset builds

on Glassdoor reviews, a service that started in 2008 and became popularly used in 2010. Thus, while the effect of CEO awards on status and their relative advantages seem to disappear through the years, other social assets related to the CEO can bias employees' evaluation of culture. For example, future studies could focus on the effects of reputation or celebrity on employee reviews. Whether CEO awards or other positive external events related to the firm can positively affect organizational culture, I expect that adverse events related to the company can affect the employee's judgment of culture.

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GENERAL CONCLUSION

Current data availability and computing power offer possibilities that were just unthinkable a few years ago. For organization and management scholars, the doors that technology opens allow us to test long-standing theories and improve our knowledge of how organizations operate using more sophisticated methods and research designs. One of these, the subject of this thesis, was the rediscovery of organizational culture through natural language processing methods.

All three chapters speak to the wide possibilities to study culture and its effects on organizational life through unobtrusive observation of employees' perceptions of their firms. I highlight some key takeaways from the studies comprising this thesis on employees' importance in understanding corporate events. In the first study, I focus on the managerial exasperation of certain norms, which increases the chances of organizational misconduct. Like the case of whistle-blowing (Dyck, Morse, and Zingales 2010), I find that employees are a key stakeholder in signaling these strain situations. In the second chapter, I disregard the "corporate talk" on organizational purpose, which is usually highly correlated with green- and social-washing (Guiso, Sapienza, and Zingales 2006), focusing on how employees talk about corporate purpose. In doing so, I find that purpose can affect sustainability by providing meaning to the individual contributions of employees who want to "do good "and" do well." Grand societal challenges require the help of multiple stakeholders (Ferraro, Etzion, and Gehman, 2015) to improve the efficiency of organizational sustainability actions. In this study, I suggest some conditions under which this might happen. In the last chapter, I test how the perception of organizational cultures is not immune from external influences and that CEO prestige can become one element to legitimate a specific culture inside the organization.

To conclude, this thesis points to the importance of understanding and evaluating what employees have to say about their daily work. Their experiences and thought can speak to us about organizations better than many other financial indicators. Moreover, all of the studies used their insight into the organization to understand the company's decision-making or to predict future events related to the company. In an era full of uncertainties, in which every

individual capability seems to be replaceable, it is critical to remember the importance of employees and workers as the core of the business.

ONLINE APPENDIX

Appendix A: Detecting Organizational Culture Topics Using Latent Dirichlet Allocation (LDA)

The Latent Dirichlet Allocation **(**LDA) algorithm assumes that every document has its own topic distribution from which a topic is randomly selected. Moreover, each randomly selected topic has its word distribution, from which a word is randomly selected. Repeating these two steps word by word generates a document. The LDA algorithm discovers the topic distribution for each document and the word distribution of each topic iteratively by fitting this two-step generative model to the observed words in all documents until it finds the best set of variables to describe the topic and word distributions. Like cluster analysis or principal component analysis, LDA reduces the extraordinary dimensionality of linguistic data from words to topics based on word co-occurrences in the same document and provides a reliable and replicable classification of topics.

Like any other generative model, LDA adopts a training model to infer the words contained in the topics and their distributions. We created the training model for computational reasons starting from a random sample comprising 20% of the entire sample of reviews (*cons* section only). Other researchers (Corritore, Goldberg, & Srivastava, 2020) created a training model using all sentences containing the word "culture" or synonyms (i.e., atmosphere, attitude, climate, value, philosophy, belief) to reduce the number of "non-culture" topics that might come up in the reviews. However, unlike these researchers who analyzed similarity and heterogeneity using all topics from the training model, we focused on a single topic: performance pressure.

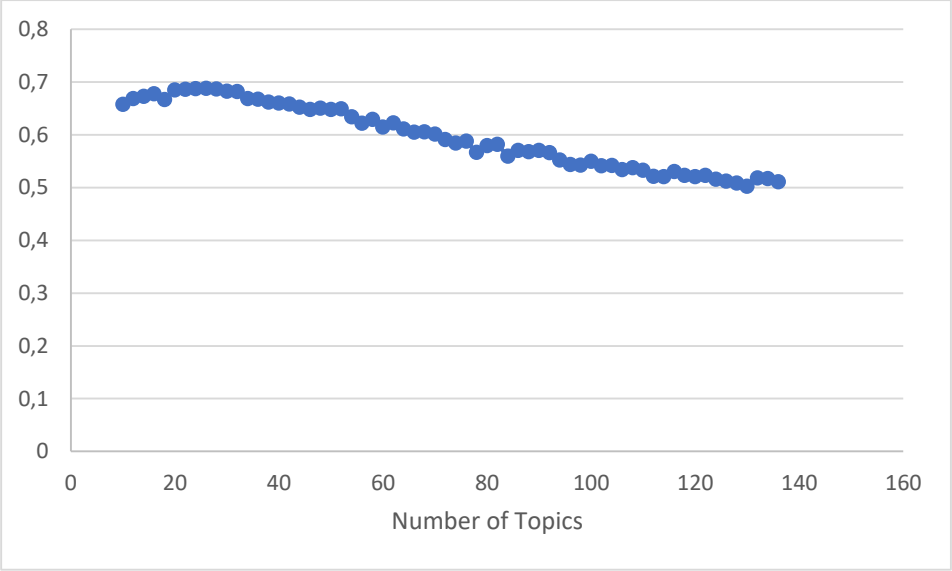
Topic modeling requires a great deal of pre-processing to prepare the text for analysis. We followed the three-step process by Hannigan et al. (2019) and first started by filtering stop words (i.e., words that do not add meaning to the text, for example, "the," "an," etc.), and punctuations. Next, we standardized word forms by converting words to their singular forms using WordNet, an extensive lexical database of English that enriches the text with conceptual-semantic and lexical relations (Miller, 1995; Miller, Beckwith, Fellbaum, Gross, & Miller, 1990). Finally, we created bigrams and trigrams by connecting, with dashes, words that appeared together in the corpus at least five times. For example, words like "New_York" or "Natural_Language_Processing" have a different meaning whether analyzed singularly or together. This last pre-processing passage improves our topic model's ability to describe the corpus by creating new words with a unique meaning.

Second, we applied the LDA algorithm to the cleaned corpus. LDA is an unsupervised model, and the only action required from the researcher is to select the number of topics for the model. To select the optimal number of topics, we followed the computational linguistics literature (Mimno, Wallach, Talley, Leenders, & McCallum, 2011; Newman, Lau, Grieser, & Baldwin, 2010) and calculated the *coherence score* of the LDA model computed with different numbers of topics (i.e., from 2 to 200). Topic coherence is a standardized measure that evaluates the cohesion, or accuracy, of a set of topics in a model using a co-occurrence measure based on pointwise mutual information. Figure A1 shows the distribution of coherence scores based on the number of topics selected. We decided to rely on the model with the best accuracy, as indicated by the highest coherence score, which resulted in a model composed of 26 topics. Unlike other researchers that pointed to differences between quantitative metrics and semantic meaningfulness (Chang, Boyd-Graber, Gerrish, Wang, &

Blei, 2009; DiMaggio, 2015; DiMaggio, Nag, & Blei, 2013), we found the 26 topics model to be also the most meaningful semantically for our research.

FIGURE A1

Coherence Scores for the Topic Models



Third, the word vectors that represent the topics can offer a range of opportunities theoretically that can take part in single- or multi-dimensional constructs (Haans, 2019; Kaplan & Vakili, 2015). We decided to use a single-dimensional approach and assign unique labels to the topics resulting from the LDA process, as shown in Table 2. These labels were coded focusing on the words that were both frequent and exclusive for every topic, which, as demonstrated by Bischof and Airoldi (2012), is a more rigorous way to characterize topical content. Figure A2 shows the words related to our topic of interest (performance pressure) in terms of frequency and exclusivity. Furthermore, we displayed our topic model using LDAvis (Sievert & Shirley, 2015), a Python package that permits visualization of topics in a two-dimensional space based on the similar/different words they comprise (Figure A3).

Topic 1 is the topic under study, defined by words that connote a negative perception of the company's pressure for performance (i.e., *sale*, *goal*, *number*, *expectation*, *pressure*, *commission).* However, Figure A3 shows that the topic is also semantically similar to other two topics: topic 12, with words related to pay and benefits (i.e., *pay*, *benefit*, *salary*, *bonus*, *compensation*); and topic 20, related to stressful work conditions (i.e., *environment*, *stressful*, *stress*). To avoid any explanatory limitation for our model, we decided to include these two topics as control variables.

FIGURE A2

Performance Pressure Topic Words Filtered on Exclusivity

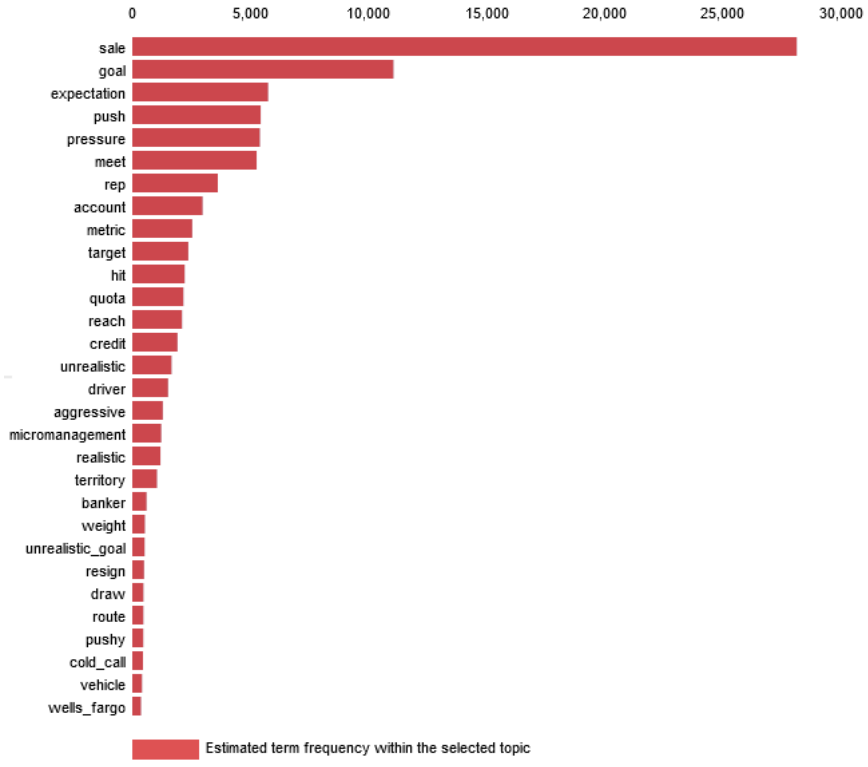
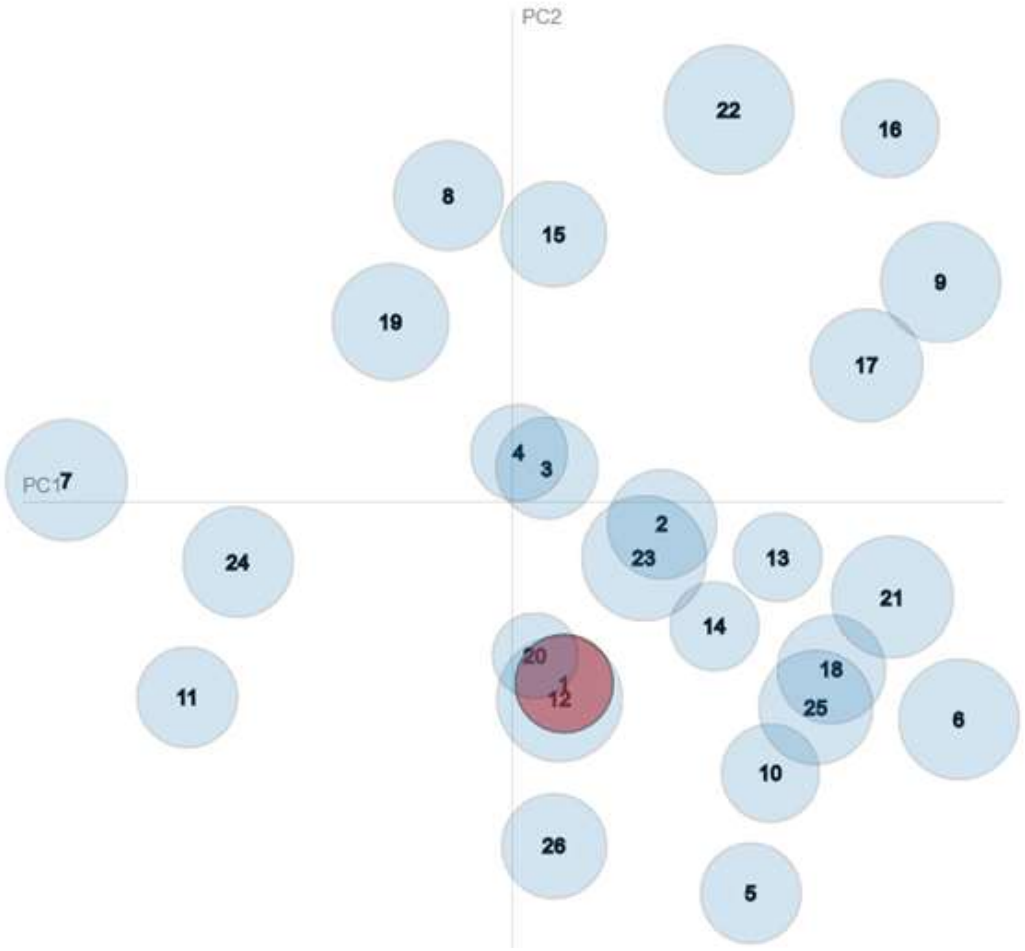


FIGURE A3

Intertopic Distance Map (via multi-dimensional scaling) using LDAvis



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Appendix B: Word Embedding and FastText

Word embedding (Mikolov, Chen, Corrado, & Dean, 2013; Turian, Ratinov, & Bengio, 2010) is a set of modeling techniques for mapping words or sentences to a vectorial space. Whereas other methods (e.g., LDA) use a similar operation to transform words inside a vectorial space, word embedding methods maintain syntactic and semantic information from the text. Unlike LDA, however, word embedding methods are supervised: to create a neural network with the ability to classify text into vectorial spaces, word embedding needs to "learn" from training inputs based on a series of ideal examples. Training a dictionary in machine learning is a long and computationally intensive process that requires various iterations to find the best fit for the semantic model that represents the data.

In this paper, we decided to skip the training process by using FastText to represent the text in vectorial space. FastText (Joulin, Grave, Bojanowski, & Mikolov, 2017) is a library that increases the efficiency of prior word representation models and sentence classifications developed by Facebook AI Research and trained using the entire Wikipedia dataset. Joulin et al. (2017) calculated that FastText had better performances regarding accuracy, scaling, and prediction compared to any other existing text classifiers. In a nutshell, FastText is a pre-trained dictionary that offers researchers that adopt machine learning operations such as text tagging, or sentiment analysis, to quickly set up a baseline semantic model. Furthermore, by using a pre-trained dictionary we reduce the concerns related to the replicability of the semantic model.

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Appendix C: Robustness Checks - Regressions with Negative ESG Media Coverage

Our analysis of misconduct relies on data on official penalties received after legal and regulatory proceedings. An alternative approach to measure misconduct is to rely on media's account of potential misconduct, which might both capture misconduct that does not lead to legal penalty, but might also be noisier and more skewed towards larger, more visible companies. In any case, in this set of analyses, we created two new dependent variables based on data provided by RepRisk, a business intelligence provider specialized in environmental, social, and governance (ESG) risk analytics and metrics. RepRisk identifies news items that criticize companies for misconduct on ESG issues such as corruption, fraud, environmental degradation, and human rights abuses. In this analysis, we will follow prior literature that used RepRisk data (e.g. Kölbel, Busch, and Jancso, 2017) and use a similar scope of consideration of the ESG issues.

RepRisk search methodology is guided by a scope of 28 pre-defined issues, divided into 5 categories: environmental footprint, community relations, employee relations, corporate governance, general. Issues in the last category are only used in conjunction with another category. RepRisk analysts collect and code this media information as a professional service for banks and investors, and thus we believe they provide a good level of consistency and reliability.

We define negative ESG media coverage as the *number of articles* covering the organization for their misconduct on ESG issues. The variable was winsorized (1^{st} and 99^{th} percentile) and, as it represents media coverage which is different from official penalties coming after a trial, we did not use lagged independent variables. The analyses represent panel OLS regressions with year and industry (SIC 2-digits) fixed-effects.

Table C1 shows that the amount of negative media coverage is positively correlated with performance pressure and is consistent after adding multiple control variables. The sub-sample analysis in Table C2 divided by type of organizational structure shows that the number of articles covering the company is higher in the low formalized subset, though not significantly. However, the high decentralization subsample results show that performance pressure is positively related to negative media coverage (b= 24.88; p= 0.083). Interestingly,

the positive perception of performance pressure influence ESG media attention negatively both in the high formalization sub-sample of Model 4 (b= -12.74; p= 0.024), and the sample for high decentralization of Model 8 (b= -16.58; p=0.007).

TABLE C1

Robustness Checks - Regressions with Reputational Risk

Variable	Negative ESG Media Coverage			
	(1)	(2)	(3)	(4)
Performance pressure $_{n-1}$	32.19+	32.48+	26.19*	24.88+
	(18.18)	(17.58)	(12.97)	(13.03)
Performance pressure (PROS) $_{n-1}$		-0.271	1.813	2.149
		(9.076)	(9.392)	(9.555)
Formalized $_{n-1}$		-0.587**	-0.601**	-0.598**
		(0.189)	(0.196)	(0.194)
Decentralized $_{n-1}$		0.0729	0.0104	0.0388
		(0.293)	(0.302)	(0.300)
Pay and benefits $_{n-1}$		-2.634	-1.096	-4.404
		(7.464)	(7.741)	(7.384)
Stressful working conditions $_{n-1}$		20.19	12.51	14.08
		(19.07)	(19.07)	(19.12)
Number of reviews (log)$_{n-1}$		0.828*	0.656+	0.675+
		(0.338)	(0.347)	(0.347)
Number of employees (log)$_{n-1}$		0.844*	1.036*	1.110*
		(0.397)	(0.417)	(0.434)
ROA $_{n-1}$			-3.498	-3.724+
			(2.128)	(2.117)
Sales growth $_{n-1}$			-1.334**	-1.388**
			(0.447)	(0.456)
Market competition$_{n-1}$			12.00**	12.23**
			(4.181)	(4.217)
Senior management approval $_{n-1}$				-0.292
				(0.387)
Compensation and benefits $_{n-1}$				-0.712
				(0.868)
CEO approval $_{n-1}$				0.638
				(0.525)
Constant	1.226*	-7.276**	-7.473**	-6.919*
	(0.581)	(2.282)	(2.352)	(3.349)
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	2,168	2,082	1,995	1,995
Number of Firms	437	420	403	403
R-squared	0.669	0.678	0.678	0.679

Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

TABLE C2

Robustness Checks - Regressions with Number of Articles, by Type of Organizational Structure

Variable	Negative ESG Media Coverage							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Low Formalization		*High Formalization*		*Low Decentralization*		*High Decentralization*	
Performance pressure $_{n-1}$	32.35	15.75	0.231	3.305	35.97	14.72	29.32+	33.70+
	(21.69)	(15.04)	(13.36)	(14.60)	(23.63)	(13.28)	(16.78)	(19.37)
Performance pressure (PROS) n-1		15.06		-12.74*		10.24		-16.58**
		(18.70)		(5.604)		(17.75)		(6.067)
Formalized $_{n-1}$		-		-		-0.252		-0.227
		(-)		(-)		(0.233)		(0.274)
Decentralized $_{n-1}$		-0.247		-0.275		-		-
		(0.343)		(0.396)		(-)		(-)
Pay and benefits $_{n-1}$		19.84		0.906		10.92		34.75
		(16.39)		(15.08)		(15.41)		(27.01)
Stressful working conditions $_{n-1}$		11.49		-2.841		4.960		14.98
		(19.80)		(23.57)		(17.78)		(24.69)
Number of reviews (log)$_{n-1}$		1.158***		0.329		1.038*		0.432
		(0.331)		(0.554)		(0.452)		(0.383)
Number of employees (log)$_{n-1}$		0.921+		2.044**		0.599		1.968*
		(0.510)		(0.741)		(0.726)		(0.795)
ROA $_{n-1}$		-2.912		-4.249+		-5.977**		-3.628
		(2.353)		(2.396)		(2.264)		(3.007)
Sales growth $_{n-1}$		-1.617*		-1.406*		-1.353*		-1.311+
		(0.700)		(0.649)		(0.536)		(0.705)
Market competition$_{n-1}$		13.20**		6.035		5.891		15.75*
		(4.812)		(7.253)		(4.645)		(7.014)
Senior management approval $_{n-1}$		-0.324		-0.784		0.374		-0.266
		(0.474)		(0.484)		(0.460)		(0.607)
Compensation and benefits $_{n-1}$		-0.542		0.867		-2.497*		1.012
		(0.941)		(0.959)		(1.051)		(0.945)
CEO approval $_{n-1}$		1.111*		0.838		2.150**		-0.247
		(0.527)		(0.631)		(0.720)		(0.629)
Constant	1.112	-12.61**	2.042***	-10.96*	0.618	-9.139*	1.701**	-11.33**
	(0.728)	(3.908)	(0.411)	(4.426)	(0.794)	(4.625)	(0.512)	(3.888)
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1,495	1,242	1,216	1,014	1,557	1,345	1,190	951
Number of Firms	347	296	306	262	376	328	284	235
R-squared	0.696	0.710	0.695	0.694	0.669	0.675	0.787	0.789

Robust standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

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Appendix D: Word Embedding and FastText

Word embedding (Turian, Ratinov, and Bengio, 2010; Mikolov, Chen, Corrado, and Dean, 2013) is a set of modeling techniques whereby words or sentences are mapped to a vectorial space. Whereas other methods (e.g., LDA) use a similar operation to transform words inside a vectorial space, word embedding methods maintain syntactic and semantic information from the text. However, unlike LDA, word embedding methods are supervised: to create a neural network with the ability to classify text into vectorial spaces, word embedding needs to "learn" from training inputs based on a series of ideal examples.

In this paper, I decided to circumvent the training process by using FastText to represent the text in vectorial space. FastText (Joulin, Grave, Bojanowski, Mikolov, 2016) is a library that increases the efficiency of prior word representation models and sentence classifications developed by Facebook A.I. Research and trained using the entire Wikipedia dataset. In a nutshell, FastText is a dictionary that introduces context and meaning and enables operations such as text tagging or sentiment analysis in a quick and replicable way.

Appendix E: List of Questions Used to Create the Polarization Measure (Yale Program on Climate Change Communication)

BELIEFS

Global warming is happening (Yes, No, Dont' Know)

Recently, you may have noticed that global warming has been getting some attention in the news. Global warming refers to the idea that the world's average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world's climate may change as a result. What do you think: Do you think that global warming is happening?

Global warming is caused mostly by human activities (Caused mostly by human activities, Caused mostly by natural changes in the environment, None of the above because global warming isn't happening, Other, Don't know)

Assuming global warming is happening, do you think it is… ?

Most scientists think global warming is happening (Most scientists think global warming is happening, There is a lot of disagreement among scientists about whether or not global warming is happening, Most scientists think global warming is not happening, Don't know enough to say)

Which comes closest to your own view?

Global warming is affecting the weather in the United States (Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree)

How strongly do you agree or disagree with the statement below?

RISK PERCEPTIONS

Worried about global warming (Very worried, Somewhat worried, Not very worried, Not at all worried)

How worried are you about global warming?

Global warming will harm plants and animals (Not at all, Only a little, A moderate amount, A great deal, Don't know)

How much do you think global warming will harm plants and animal species?

Global warming will harm future generations (Not at all, Only a little, A moderate amount, A great deal, Don't know)

How much do you think global warming will harm future generations of people?

Global warming will harm people in developing countries (Not at all, Only a little, A moderate amount, A great deal, Don't know)

How much do you think global warming will harm people in developing countries?

Global warming will harm people in the U.S. (Not at all, Only a little, A moderate amount, A great deal, Don't know)

How much do you think global warming will harm people in the United States?

Global warming will harm me personally (Not at all, Only a little, A moderate amount, A great deal, Don't know)

How much do you think global warming will harm you personally?

Global warming is already harming people in the U.S. (They are being harmed right now, In 10 years, In 25 years, In 50 years, In 100 years, Never)

When do you think global warming will start to harm people in the United States?

Has personally experienced the effects of global warming (Strongly agree, Somewhat agree, Somewhat disagree, Strongly disagree)

How much do you agree or disagree with the following statement: "I have personally experienced the effects of global warming"?