Better Safe Than Sorry: CEO Regulatory Focus and Workplace Safety

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ABSTRACT

Research shows that CEOs who are sensitive to maximizing gains (promotion focus) engage in more socially oriented initiatives whilst CEOs who are sensitive to avoiding losses or harm (prevention focus) attend more to shareholder concerns. Our point of departure, however, is that many social initiatives are of the "do no harm" type that involve efforts to avoid burdening stakeholders with social and economic costs. Integrating research on strategic leadership and regulatory focus, we develop a framework for understanding the relevance of CEO regulatory focus for workplace safety. We argue that firms with prevention-focused CEOs have fewer employee injuries than firms with promotion-focused CEOs as these latter CEOs impose aggressive workloads on employees. Drawing on regulatory fit theory, we further identify two contextual factors that attenuate or accentuate CEO motivation to pursue harm-reducing or growth-maximizing goals. Whereas analyst downgrades mitigate the influence of prevention focus by motivating CEOs to avoid missing their obligations to shareholders, environmental munificence strengthens the influence of promotion focus on injuries by motivating CEOs to take advantage of growth opportunities in the environment. Based on a sample of S&P500 firms and injury data from Occupational Safety and Health Administration (OSHA) from 2002-2011, we find support for our predictions. The results illustrate the unforeseen consequences of CEO regulatory focus on employee interests.

Keywords: CEO regulatory focus; workplace safety; "do no harm"; stakeholder management; strategic leadership

INTRODUCTION

Studies building on upper echelons theory document important influences of CEOs on corporate stakeholder strategies through attributes such as political beliefs and values (Chin, Hambrick, & Treviño, 2013; Gupta, Fung, & Murphy, 2021), narcissism (Petrenko, Aime, Ridge, & Hill, 2016; Tang, Mack, & Chen, 2018), hubris (Tang, Qian, Chen, & Shen, 2015), and personal experience (O'Sullivan, Zolotoy, & Fan, 2021). Common to these studies is the idea that CEOs pursue multiple and conflicting goals, and their decision-making regarding the relative importance of these goals and how to achieve them is influenced by their individual preferences. In this regard, an attribute that has garnered the recent attention of stakeholder theorists is regulatory focus, defined as the motivational orientation used in pursing one's goals (Crowe & Higgins, 1997). Regulatory focus consists of two self-regulatory systems: a promotion focus sensitive to gains, advancement and achievement, and a prevention focus sensitive to loss and avoiding undesirable states (Higgins 1997, 1998; Lanaj, Chang, & Johnson, 2012). A recent study by Gamache, Neville, Bundy and Short (2020) finds that CEOs with high promotion focus engage in more socially oriented initiatives, whereas CEOs with high prevention focus are associated with a tendency toward narrower governance-oriented strategies that benefit shareholders.

Despite the important insights generated in the literature, we argue that stakeholder-oriented strategies may be more nuanced than current research implies. In contrast to proactive attempts to create social value (e.g., so-called "do good" initiatives, Crilly, Ni, & Jiang, 2015, consistent with the ethical principle of beneficence) that have been the focus of prior studies, some initiatives aim to minimize potential harm to stakeholders. These so-called "do no harm" initiatives (consistent with the principle of non-maleficence) focus on meeting obligations and avoiding burdening stakeholders with social and/or economic costs (Crilly, Ni, & Jiang, 2015), which is distinct from socially irresponsibility that "negatively affects an identifiable social

stakeholder's legitimate claims in the long run" (Strike, Gao, & Bansal, 2006: 852). Whilst not implying a proactive stance to improve stakeholder wellbeing, "do no harm" does not mean that the firm will engage in irresponsible behaviors or "bad deeds" to harm certain stakeholders' interests. We thus argue that the differences between proactive "do good" social initiatives and reactive "do no harm" initiatives, as well as socially irresponsible actions present different dynamics for CEO-stakeholder relations. As a result, when it comes to initiatives that limit social costs borne by stakeholders, promotion and prevention foci likely generate predictions *at odds* to those proposed by prior research; in some instances, a promotion focus will give rise to growth-oriented practices that impose costs on stakeholders, whereas a prevention focus will sensitize CEOs to their obligations towards minimizing harm to stakeholders.

Advancing this line of research, our study investigates the relationship between CEO regulatory focus and workplace safety. Focusing on the downside risk of harm from workplace accidents, we explain how CEOs' prevention and promotion foci are consequential for a specific stakeholder group, namely employees. Integrating research on strategic leadership with regulatory focus theory, we develop a framework for understanding how CEO regulatory focus predicts workplace injuries through the differing priorities attached to distinct goals (safety vs. growth). Whereas a promotion focus is "concerned with attaining virtues," a prevention focus is "concerned with maintaining obligations" (Cornwell & Higgins, 2015: 312). Therefore, even as they actively pursue other forms of stakeholder engagement, CEOs with high promotion focus may end up with lower workplace safety (more injuries). Similarly, while generally pursuing shareholder-oriented strategies, CEOs with high prevention focus may engender greater workplace safety (fewer injuries). For example, California's Occupational Safety and Health Administration (OSHA) launched an investigation into Tesla's workplace injuries.[1] A leaked email from CEO Elon Musk calling for increased production targets and precision standards points to an association between a push for higher performance (indicative

of a promotion focus) and injuries. Indeed, workers attributed the spate of workplace injuries to Musk's leadership style and aggressive production objectives. In the words of an employee, "There's not a big safety culture, and they're pushing super hard for production. It's just going to be injuries everywhere."[2]

Consistent with arguments that people put increased effort into pursuing their goals when the situational frame aligns with their regulatory focus (Crowe & Higgins, 1997; Neubert, Kacmer, Carlson, Chonko, & Roberts, 2008), we further take into account how the influence of regulatory focus is modified by environmental factors. In essence, when contextual cues align with CEO regulatory focus, CEOs "feel right" (Johnson, Smith, Wallace, Hill, & Baron, 2015) and have increased motivation to pursue their goals. Alternatively, the impact of regulatory focus is mitigated when misalignment occurs. Specifically, negative performance feedback attenuates the negative influence of prevention focus on workplace injuries because prevention-focused CEOs perceive pressure to restore their performance status quo to fulfil their duties to shareholders. Environmental munificence accentuates the positive impact of promotion focus because promotion-focused CEOs do not want to miss out on enhanced growth opportunities.

We also study the channel through which CEO regulatory focus affects workplace safety by identifying employee workload, a key determinant of safety (Qian, Crilly, Lin, Zhang, & Zhang, in press), as a mediating mechanism. Though CEOs influence workplace safety through various channels (e.g., policies, culture, and resources), allocating resources, including human resources, in ways that affect workloads is the most direct mechanism. We argue that, because prevention-focused CEOs are more attentive to safety-related issues while promotion-focused CEOs aim for growth and push employees to work harder, prevention-focused CEOs will impose lower employee workloads while promotion-focused CEOs will impose higher workloads. Imposing heavier workloads to pursue growth goals will deplete employees' mental

and physical resources, leading to more workplace accidents (Nahrgang, Morgeson, & Hofmann, 2011).

This study makes two contributions. First, we offer new insights into the relationship between CEO regulatory focus and stakeholder management. By investigating "do no harm" initiatives surrounding workplace safety, we highlight the potential downsides of CEO promotion focus and the positive influence of prevention focus through their impact on workplace injuries, demonstrating different insights from previous studies (e.g., Gamache et al., 2020). Further, our study contributes to strategic leadership research by articulating the mechanisms through which CEO characteristics influence employee interests. Specifically, we suggest that CEO psychology influences the workloads CEOs impose, thus accounting for workplace injuries. As pointed out by Tucker, Ogunfowora, and Ehr (2016: 1228), "CEOs play a key role in shaping positive or negative safety outcomes, empirical evidence related to the influence of the top organizational leaders on safety is non-existent."

THEORY AND HYPOTHESES

Research on Workplace Injuries

Workplace injuries are costly. The International Labor Organization records that occupational injuries and illnesses cost approximately 4% of global GDP. Organizational safety research has identified numerous individual and situational drivers of workplace injuries. Characteristics of supervisors, teammates, and employees (please refer to the meta-analysis by Christian, Bradley, Wallace & Burke, 2009; Clarke & Ward, 2006) as well as the organizational and industry safety climate (Beus, Payne, Bergman, & Arthur, 2010) all influence workplace safety. Capital market pressures from activist investors (Shi, Xia, & Meyer-Doyle, in press) and short sellers (Qian et al., in press) also have a significant impact on workplace safety.

Among these factors, employees' regulatory focus has been shown to affect safety performance—that is, activities that contribute to workplace safety such as following safety

protocols, wearing protective equipment, and assisting co-workers with safety-related concerns (Griffin & Neal, 2000; Lanaj et al., 2012). Some studies have found that greater employee promotion focus yields higher productivity at the expense of safety performance whereas a greater employee prevention focus yields higher safety performance at the expense of productivity (Wallace & Chen, 2006), though the effects may be contingent on situational factors (Wallace, Little, & Shull, 2008).

Surprisingly, while most studies examine the direct influence of supervisors and group leaders (e.g., Griffin, & Curcuruto, 2016; Zohar & Luria, 2002), no research has yet explored the relationship between the psychological attributes of top executives and workplace injuries (Tucker et al., 2016), despite evidence that how leaders allocate resources is critically important to workplace safety (Qian et al., in press). For example, providing appropriate equipment can increase employees' motivation to take safety at work seriously (Flatau-Harrison, Griffin, & Gagne, 2020; Kelloway, Mullen, & Francis, 2006). Management values are foundational for organizations' safety climate and for encouraging participation in safety initiatives (Clarke & Ward, 2006). For instance, James D. Hoffman, CEO of Reliance Steel and Aluminium Company, a Fortune 500 firm, reiterated that safety was a critical goal: "As a family of companies, it is our greatest obligation and moral responsibility to keep our entire family of more than 15,000 employees across 300-plus locations safe.… It only takes seeing one person get hurt and the ripple effect the injury has on the injured colleague's family and co-workers to make safety truly personal."[3] Hoffman was recognized by *Safety+Health Magazine* in 2020 as a proponent of workplace safety. Moreover, apart from their direct effect on safety, CEO-driven priorities potentially have potential indirect effects (Tucker et al., 2016; Zohar, 2002): When employees perceive their leaders as supportive of safety, they also become motivated to perform safely (Salas, Bisbey, Traylor, & Rosen, 2020).

In short, as key strategic decision-makers, CEOs are likely to have a sizeable influence on policies and decisions that affect workplace safety, and therefore research on the impact of CEO characteristics should be undertaken to advance our understanding of safety issues in organizations.

CEO Regulatory Focus and Stakeholder Engagement

Regulatory focus theory explains approaches to pursuing goals (Higgins, 1997, 1998). Promotion and prevention focus are two orthogonal self-regulatory systems of behavioral choice. Prevention focus is associated with sensitivity to caution and responsibility, with the result that individuals with high prevention focus "attain correct rejections and avoid errors of commission (i.e., making a mistake)" (Crowe & Higgins, 1997: 120). In contrast, promotion focus denotes an orientation towards gains, accomplishment and growth, with an aim to "insure hits and insure against errors of omission" (Crowe & Higgins, 1997: 120). An individual with strong prevention focus emphasizes the "ought self" and strives for goals through fulfilment of duty or responsibility while an individual with strong promotion focus strives for goals through self-growth and the pursuit of an ideal self (Johnson et al., 2015). Prevention and promotion foci are two independent dimensions rather than the opposite ends of a continuum (Higgins, 1997, 1998).

Top executives' regulatory focus shapes corporate strategies and firm risk-taking through the forms of mergers and acquisitions (Gamache, McNamara, Mannor, & Johnson, 2015) and other growth-oriented initiatives (Chen, Meyer-Doyle, & Shi, 2018). Regulatory focus of small-business CEOs also affects firm financial performance (Wallace, Little, Hill, & Ridge, 2010). A recent study by Gamache et al. (2020) finds that differences in goal hierarchy arising from CEOs' regulatory focus lead to distinct stakeholder strategies: CEOs with high prevention focus tend to engage more shareholder-oriented strategies while CEOs with high promotion focus are associated with more stakeholder-oriented strategies.

Our point of departure is to recognize that stakeholder strategies not only include initiatives that create value but also include initiatives that are intended to prevent harm to stakeholders (Crilly et al., 2015). Workplace safety is such an initiative. Even if CEOs with prevention focus care more about shareholder interests, the desire to fulfil their obligations may make them attend to safety at work. On the other hand, whereas CEOs with promotion focus generally pursue stakeholder-focused strategies, their pursuit of growth may lead to more injuries at work. In the following sections, we first develop arguments on how CEO prevention and promotion foci influence the means that CEOs take to attain goals and manage their firms, thereby impacting workplace injuries. We then move to a discussion of the situational factors that trigger the influence of each type of regulatory focus and the mediating mechanism of human resource allocation—employee workloads.

CEO Regulatory Focus and Workplace Injuries

Our central argument is that CEOs with different regulatory foci formulate and execute their strategies differently. Prevention-focused CEOs are averse to potential negative events. Emphasizing the importance of caution, they are cognizant of downside risks. In regulating behavior, they tend toward obligation and accountability and have a stronger motivation to prevent mistakes. They perceive non-loss (positive and desired) or loss (negative and undesired) as salient outcomes. Accordingly, these CEOs will minimize opportunities to commit errors in pursuit of goals (Johnson et al., 2015). To them, an absence of negative consequences is a positive outcome that brings about a pleasurable experience (Brockner & Higgins, 2001).

Workplace injuries are one downside risk that CEOs with a high prevention focus would want to avoid. First, workplace injuries directly impact the cost, delivery, and quality of a company's products (Brown, Willis, & Prussia, 2000). Occupational safety incidents are known to cause major supply-chain disruptions (Das, Pagell, Behm, & Veltri, 2008). Further, such incidents can increase the direct costs to the organization in the form of recruiting and

training of replacement employees, fines and sanctions levied by governmental agencies (Davidson, Worrell, & Cheng, 1994), and legal fees and settlements. Insurance premiums will also rise in the long run. Finally, negative news about employee injuries damages corporate reputation (Kabir, Watson, & Somaratna, 2018). To avoid injuries and the aforementioned consequences, CEOs with a higher prevention focus should be more concerned about safety-related issues.

Top executives often contend with prioritizing safety versus other competing goals, such as efficiency and the rapid introduction of new products (Zohar, 2010), with the latter more strongly related than safety to achieving gains. Based on the risk-averse nature of prevention focus, we argue that prevention-focused CEOs will place greater priority on safety. Accordingly, they will engage in a series of safety-oriented actions including emphasizing safety, engaging in safety-consistent behavior, and reinforcing safety in the workforce (Zohar, 2010). Ensuring safety compliance—i.e., the core activities employees engage in to maintain workplace safety such as keeping speed limits or wearing hard-protective hats (Neal & Griffin, 2002)—is likely to be a higher priority. Prevention-focused CEOs may also facilitate a prevention-focused culture (e.g., Johnson, King, Lin, Scott, Walker, & Wang, 2017; Kristof-Brown, Zimmerman, & Johnson, 2005), in which leaders introduce behavioral norms that prioritize the personal safety of employees (Flatau-Harrison et al., 2020; Salas et al., 2020). Consistent with this logic, Tucker and colleagues (2016) find that by engaging in safety-oriented actions, CEOs facilitate an organizational safety climate.

Many of these actions involve allocating resources appropriately: they will provide more equipment, which is a prerequisite for safety (Salas et al., 2020). More importantly, they will be cautious in allocating workloads to prevent injuries arising from employee burn-out. To these CEOs, safety itself could be one of the important goals and firms should devote

resources to prevent injuries at the workplace. Based on the above discussion, we establish the following hypothesis.

Hypothesis 1 (H1). CEO prevention focus is negatively associated with employee injury rate.

In contrast, CEOs with a strong promotion focus strive for goals through growth and center on hopes and aspirations when regulating behaviors. They have a stronger motivation to accomplish their aims and view salient outcomes in terms of gains (positive and desired) or non-gains (negative and undesired) (Higgins, 1997; Johnson et al., 2015). Accordingly, such CEOs actively pursue goals by avoiding errors of omission.

CEOs have multiple choices regarding firm growth (McKelvie & Wiklund, 2010). They can expand existing business to produce more of their established products or develop new products and services (Shi, Connelly, & Cirik, 2018). Prior research has found a positive association between CEO promotion focus and an expansion of firm scope through growth initiatives (Chen et al., 2018). Aggressive expansion may lead to employee burn-out and thus an increase in injuries. Developing new products and services also entails risks to safety. Employees' lack of familiarity with a new development or production process may lead to injuries. Individuals with high promotion focus use an "eagerness means" approach to attain their goals (Higgins, 2002). Such CEOs focus on maximizing speed and efficiency and attaining maximal performance levels (Förster, Higgins, & Bianco, 2003). Promotion-focused CEOs pursue various ideas to see what works best (Johnson et al., 2015), since goals and accomplishments are most salient to them. As a result, firms led by promotion-focused CEOs may be inclined to follow performance standards that lead to long hours and safety lapses.

As such, we suggest that promotion-focused CEOs are concerned with achieving higher growth and developing new products in a short time frame and therefore pay relatively less attention to procedural quality and potential safety issues. Such strategies should translate into higher performance pressures along the hierarchy of the organization, leading to an emphasis

on performance. In less-supportive environments for safety, this means that employees may be reluctant to communicate relevant safety concerns with supervisors and leaders who are keen on growth and emphasize higher job demands (Kath, Marks, & Ranney, 2010). Instead, they would perceive pressure from their superiors to work long hours even at the risk of burnout. If employees feel that safety is not valued by the organization, the development of behavioral norms around safety compliance will be impeded.

Accordingly, promotion-focused CEOs may tilt more resources toward growth, allocate fewer resources to safety by purchasing less equipment and providing safety less training, and pay less attention to safety policies and procedures. They are less committed to the safety environment of their firms. More importantly, during the process of pursuing growth, these CEOs may push their employees to work harder, increasing workloads, which may subsequently lead to more injuries due to employee burnout. Overall, CEOs with strong promotion focus are more likely to promote growth strategies and less likely to allocate resources to organizational safety, leading to more workplace accidents and injuries.

Hypothesis 2 (H2). CEO promotion focus is positively associated with employee injury rate.

Regulatory Fit Framework: External Performance Targets as Motivational Factors

Even though a person may have a disposition favoring a particular regulatory focus, situational triggers can evoke or suppress that focus (Crowe & Higgins, 1997; Gamache et al., 2015; Neubert et al., 2008). Regulatory fit is the idea that promotion and prevention foci have more pronounced effects when they are congruent with the demands of the situation facing a decision-maker (Higgins, 2000, 2006; Scholer & Higgins, 2008). The effects of regulatory focus are thus accentuated when individuals' prevention and promotion foci are congruent with salient situational characteristics (Higgins, 2000). Based on regulatory fit, we explore two external performance-related factors that attenuate or accentuate levels of prevention and promotion foci, respectively: analyst recommendations, and the industry environment. For

instance, CEOs with prevention focus also have a strong sense of responsibility to their shareholders. Thus, when analysts, as key market evaluators of the firm, make negative recommendations in the form of downgrades, these CEOs experience negative and undesired states. Their sense of obligation towards shareholders becomes stronger (Gamache et al., 2020), which may mitigate their attention to employee safety. On the other hand, CEOs with promotion focus always desire to achieve growth. Thus, when the industry presents a munificent environment that facilitates growth, these CEOs have an even stronger desire to pursue growth goals and drive employees to work harder.

Analyst downgrades. Analysts' forecasts and recommendations represent an important externally generated performance target that firms are expected to meet (Gentry & Shen, 2013). As information intermediaries, security analysts perform the crucial role of providing information for investors on a firm's performance and its prospects driving investment decisions (Feldman, Gilson, & Villalonga, 2014; Gentry & Shen, 2013). Management deems analyst earnings forecasts and recommendations as important and they are willing to sacrifice long-term gains for short-term gains to build credibility and avoid a negative impact on stock price (Graham, Harvey, & Rajgopal, 2005).

Changes in analyst recommendations influence firms' social evaluations with far-reaching consequences (Boivie, Graffin, & Gentry, 2016). Analyst downgrades constitute a stigmatizing event, drawing attention and negative perceptions to the firm. CEOs of downgraded firms experience a threat to their reputations (Harrison, Boivie, Sharp, & Gentry, 2018) and employment status (Wiersema & Zhang, 2011) and therefore feel significant short-term performance pressure. They will then allocate more resources and attention to improving performance. In sum, firms aim to avoid downgrades and pursue positive recommendations that encourage stock holdings or shareholder purchases. As downgrades reflect deviations from

ideal recommendations, we argue that analyst downgrades provide a critical condition that modifies the influence of CEO prevention focus on employee injuries.

The more analyst recommendations for a firm reflect a negative outlook in the form of downgrades, the greater is the loss perception of prevention-focused CEOs in terms of shareholder concerns. CEOs with prevention focus want to restore the status quo from a state of loss, as the state of non-loss is the preferred outcome for individuals with prevention focus. They seek to restore balance to achieve fit with situational conditions, leading to a temporary shift in goal hierarchy. The greater the need to improve performance and restore the status quo from a state of loss, the greater is the tendency of prevention-focused CEOs to exhibit risk-seeking behavior associated with tactics such as relaxing due diligence and decreasing requirements for approving projects (Johnson et al., 2015). They are less likely to adhere to their obligations and responsibilities with respect to safety, as the goal of restoring the non-loss associated with firm performance takes precedence. Also, as noted, decreasing recommendations from financial analysts are naturally negative news to shareholders and signal that the firm did not serve shareholders' interests well, which runs counter to the high obligation and accountability nature of prevention-focused CEOs (Gamache et al., 2020). Therefore, the downgrades trigger their sense of accountability to shareholders and spur a desire to return, at the very least, to prior levels of performance.

Our argument is consistent with the logic of stakeholder salience, which suggests that the degree to which CEOs give preference and priority to the needs of one set of stakeholders (e.g., employees) over that of others (e.g., shareholders) may shift based on circumstances (Mitchell, Agle, & Wood, 1997). Given the drop in market reputation that accompanies analyst downgrades, the "loss" situation increases the salience of shareholders' interests to prevention-focused CEOs and the interests of employees are relatively less salient. As a result, they may tilt resource allocation processes in favor of firm growth and profitability and shift attention

from workplace safety to financial performance, thereby mitigating the influence of CEO prevention focus on employee injuries. In conclusion, a greater proportion of downgrades in analyst ratings motivates the need to prevent future losses for CEOs with high prevention focus and the negative effect of prevention focus on employee injuries will be weakened. Therefore,

Hypothesis 3 (H3). Analyst downgrades weaken the negative effect of CEO prevention focus on employee injury rate.

Industry munificence. In contrast, for promotion-focused CEOs, we argue that a munificent industry environment, defined as the extent to which the environment provides the critical resources needed by firms operating within it (Dess & Beard, 1984), constitutes an opportunity to take advantage of. Industry environments influence managerial decision making and firm strategic outcomes (Porter, 2008). Resources available in the environment significantly affect the survival and growth of firms. When resources are abundant, it is relatively easy for firms to survive, and the resources enable firms to pursue growth. Environmental munificence is positively associated with a range of strategies and organization options available to firms (Castrogiovanni, 1991).

We argue that environmental munificence aligns with goals for achievement for promotion-focused CEOs and makes them eager to generate announcements that reflect positive actions, such as approving and launching new products without engaging in full due diligence, leading to a neglect of employee welfare and more workplace injuries. Such a high potential to achieve goals leads CEOs to further emphasize performance goals, even to the extent of taking risks—such as indulging in irresponsible activities—to ensure gains (Harris & Bromiley, 2007; Lant & Montgomery, 1987). In a munificent environment, the CEO's promotion focus is heightened by the need to achieve a "winning" outcome of improved performance. Thus, a munificent environment amplifies the influence of CEO promotion focus to achieve high performance goals and allocate less resources and attention to workplace safety. The joint effect of a positive industry environment and high promotion focus will make

promotion focused CEOs even more likely to take unnecessary risks to avoid missed opportunities for corporate growth and advancement. They will experiment with various strategies to achieve corporate goals. In the process, they will also become more aggressive, less vigilant to potential risks, allocate more resources to corporate investment and less to safety expenditures, and approve projects with lower acceptance thresholds, which may lead to safety concerns and more workplace injuries. Their obsession with performance goals may also filter down to frontline employees by pushing them to work harder and make them feel their priority is to increase performance, thus neglecting workplace safety guidelines and rules, leading to more injuries.

In contrast, in a less munificent environment, there are fewer opportunities for growth, which limits the motivation of promotion-focused CEOs to chase more ambitious goals. Their desire to pursue growth and to advance performance goals is suppressed by the less munificent external environment. As a result, the CEOs' high promotion focus is less likely to lead to strategies and policies that favor stronger financial results at the expense of employee safety. Together, we argue:

Hypothesis 4 (H4). Industry munificence strengthens the positive effect of CEO promotion focus on employee injury rate.

Employee Workloads as a Mediating Mechanism

We expect that the effects of CEO prevention and promotion focus on employee injury rate are driven by changes in the workloads imposed on employees. Leaders shape workplace characteristics through developing policies and practices and communicating their importance to downstream employees (Fenton-O'Creevy, 2001; Stanton, Young, Bartram, & Leggat, 2010). CEOs influence employee actions through a cascading effect down the organizational hierarchy; resource allocation and human resource strategies and policies are some of the most important ways. For instance, CEO emphasis on human resource is shown to impact adoption of strategic human resource systems by managers (Chadwick, Super, & Kwon, 2015).

Leaders play a key role in influencing employees' workloads by shaping the objective and subjective requirements imposed on employees, as well as acting as possible role models (Zhang & Seo, 2018). Increased workloads lead to greater levels of employee fatigue (Beckers, Van der Linden, Smulders, Kompier, Taris, & Geurts, 2008), cardiovascular disease (Virtanen et al., 2012), and psychological distress (Van der Hulst & Geurts, 2001). As a result, higher workloads such as long working hours contribute to increased safety issues resulting in injury and illnesses of employees (Dembe, Erickson, Delbos, & Banks, 2005).

We argue that, as CEO regulatory focus reflects differences in orientation towards acquiring gains versus avoiding losses, it is also likely to influence policies and norms in the work environment regarding workloads. While workloads may include both the output (e.g., revenues/employees) and input (e.g., working hours per employee) imposed on employees, it is relatively easier for CEOs to control the input in the form of working hours compared to the output. Thus, CEOs with different regulatory foci will impact the extent to which employees will spend long hours at work.

A CEO with a high prevention focus is likely to undertake decisions that result in a reasonable number of working hours. As discussed above, workplace safety could be a goal for prevention-focused CEOs. Long working hours are known to have several detrimental effects on employees. Extended daily and weekly working hours are associated with a higher incidence of injuries (Dembe et al., 2005) because of increased stress and fatigue. As CEOs with high prevention focus exert caution and reduce such risks, they are more likely to aim to reduce employee injuries through lowering workloads.

In contrast, CEOs with a high promotion focus aim to achieve growth and profitability and have higher risk thresholds (Crowe & Higgins, 1997). Eager to ensure no opportunities are missed, they aim to maximize the utilization of their workforce. As increasing workloads by requiring employees to work longer hours can increase productivity, promotion-focused CEOs

shall push for higher working hours for employees. Although higher workloads may increase firm output, overworked employees are likely to be stressed, make mistakes and experience accidents, leading to greater workplace injuries.

In summary, we have developed arguments that CEO prevention focus negatively affects employee workloads while CEO promotion focus positively affects employee workloads, which subsequently influence workplace injuries. Thus, we predict the following mediating hypotheses:

Hypothesis 5a (H5a). Employee workload mediates the relationship between CEO prevention focus and employee injury rate such that CEO prevention focus will lead to a lower level of employee workload, which subsequently decreases employee injury rate.

Hypothesis 5b (H5b). Employee workload mediates the relationship between CEO promotion focus and employee injury rate such that CEO promotion focus will lead to a higher level of employee workload, which subsequently increases employee injury rate.

METHODS

Data and Sample

We relied on a sample built from multiple databases to test our predictions. First, to capture core CEO characteristics and cognitions, we followed prior research (Fanelli, Misangyi, & Tosi, 2009; Gamache et al., 2015; Gamache et al., 2020) and collected letters to shareholders of S&P 500 firms during the period of 2002-2011.[4] Beginning with the list of firms in the S&P 500, we obtained the corresponding letters to shareholders from Mergent Online, Lexis-Nexis, and company websites. We used Google searches to obtain letters when they could not be obtained from one of the abovementioned sources. In total, we collected 2,502 letters to shareholders of 342 firms between 2002 and 2011, creating an initial data set of CEO regulatory focus data.

Second, for data on injuries, we used workplace injury data obtained from the Data Initiative Program (ODI) developed by OSHA for the years between 2002 and 2011, as OSHA discontinued data collection after 2011 due to funding issues. The OSHA-ODI database is a comprehensive record of workplace injuries (e.g., Caskey & Ozel, 2017). Under the initiative,

OSHA surveyed over 80,000 individual firm establishments for instances of severe work-related injuries and illnesses each year. Examples of establishments include manufacturing plants and retail stores. Except for establishments belonging to industries exempt from OSHA, all establishments with 11 or more employees are required to maintain records of injury and illness. Those who fail to comply are audited and pay fines under OSHA Directive 00-1 (CPL2). OSHA surveyed a subset of establishments each year, using a random-sampling method that ensured every establishment was sampled at least once every three years. OSHA usually releases data two years after collection. This provides a good representation of establishments where workplace safety issues are important. OSHA also records details of the establishment such as location, number of employees, and unusual events such as strikes and shutdowns.

Data on firm-level and industry-level characteristics, CEO characteristics, and analyst recommendations were obtained from Compustat, Execucomp, and the Institutional Brokers' Estimate System (I/B/E/S) Detail database, respectively. Since only firms that belonged to industries considered by the OSHA to be hazardous were covered in the collection of injury data, those S&P 500 firms from low-hazard industries were not included. For example, 56 firms in the finance, insurance, and real-estate industries (SIC codes 6000-6999) were eliminated from our sample as these were exempt from OSHA surveys. Further, since establishments were only sampled randomly and not annually, we have an unbalanced sample. After merging the data and deleting any observations missing values on any of the key variables, we obtained a final sample of 14,986 establishment-year observations nested in 5,634 establishments and 204 unique firms between 2002 and 2011.

Measures

The dependent variable, *Employee injury rate*, was measured as the count of all workplace injuries in an establishment divided by the number of employees in the establishment in a year (Cohn, Nestoriak, & Wardlaw, 2021). We multiplied this by 100 for convenience of

interpretation, arriving at an injury rate for 100 employees in a given establishment that year. Prior studies have used different measures to capture the extent of employee injuries, including injuries per hour (Cohn & Wardlaw, 2016; Shi et al., in press), injuries per 100 employees in an average work year (Caskey & Ozel, 2017), and count of injuries (Bradley, Mao, & Zhang, 2022). In our study, employee work hours were incorporated into the measure of employee workload, the mediating variable in our study.

CEO Prevention focus and *Promotion focus* were our key independent variables. We used content analysis of letters to shareholders in annual reports to obtain these variables at a firm-year level. Research has suggested that executives' language use reflects their cognitive characteristics (e.g., Nadkarni & Chen, 2014). The psycholinguistic approach (Pennebaker, Booth, & Francis, 2007) allows for psychological characteristics to be inferred from writing styles. Thus, we used the Linguistic Inquiry and World Count (LIWC) text analysis software and analyzed the language used by CEOs in annual letters to shareholders to capture their corresponding prevention and promotion foci for each year.

Gamache and colleagues (2015; 2020) have developed a list of 25 prevention words and 27 promotion words that indicate CEO prevention and promotion focus and that have been previously validated for content, convergent, and discriminant validity. For instance, words such as "*Avoid*" and "*Security*" convey prevention focus, and words such as "*Grow*" and "*Expand*" signify promotion focus. Following Gamache and colleagues (2015), we also included alternate verb tenses to capture the measures and used the same dictionary of words for promotion focus. However, given our specific interest in the relationship between regulatory focus and workplace safety, there is a possibility that the results may be driven by the safety-specific words in the dictionary of prevention measure. For instance, CEOs may be more likely to emphasize safety in 10-Ks and conference calls specifically when they do well on safety issues and avoid mentioning safety when their companies had safety incidents

(Caskey & Ozel, 2017). To minimize the possibility of these issues, we used all words except 'safety' related words for CEO prevention focus (24 words) since those words could indicate a direct reference to employee safety, which is our dependent variable. [5] Using the LIWC text analysis program (Pennebaker et al., 2007), we measured the percentage of the prevention-related and promotion-related words in each letter to arrive at the *CEO Prevention focus* and *CEO Promotion focus* measures respectively for each firm-year observation.

We measured *Analyst downgrades* as the proportion of analyst rating downgrades of firm stock relative to the total number of ratings issued on firm stock that year. We identified downgrades to a firm's stock each year using any revision to an analyst's rating that was lower than the analyst's prior rating on a five-level recommendation system (Busenbark, Lange, & Certo, 2017). For instance, a rating that changed from a Strong Buy to a Buy, or a Hold to a Sell was classified as a downgrade. Then we divided the number of downgrades by the total number of recommendations made by analysts for the firm in that year.

Industry munificence denotes the extent to which the industry shows a potential for sustained growth (Dess & Beard, 1984; Wiersema & Bantel, 1993). We regressed yearly industry sales over the previous five years and used the value of the slope divided by average industry sales to measure industry munificence (Dess & Beard, 1984).

We measured our mediator, *Employee workload*, as the total number of hours worked by employees divided by the total number of employees in the establishment in a given year. As the measure was skewed, we log transformed the measure.

We included a set of systematic control variables at firm-, establishment-, and CEO-levels that may also affect workplace injuries (Caskey & Ozel, 2017; Haga, Huhtamäki, & Sundvik, 2022). We controlled for firm-level characteristics including *Firm size*, *Capital expenditures (CAPX), Leverage* and past performance. *Firm size* was measured as the log of total assets, *CAPX* was capital expenditures scaled by assets, and *Leverage* was measured by

the ratio of long-term debt to the market value of assets. Past performance was measured using return on assets (*ROA*). At the establishment level, we controlled for the occurrence of abnormal events such as *Strikes* and *Shutdowns* using indicator variables for each if the abnormal event occurred at the establishment during a given year. We also included the *Number of employees* working in the establishment (logged) to control the size effect of the establishment. At the CEO level, we controlled for *CEO age* and *CEO gender*, as these factors are known to systematically influence perspectives and strategic decision making (Petrenko, Aime, Recendes, & Chandler, 2019). All independent variables were lagged by one year except indicator variables for *Strikes* and *Shutdowns* as those are meant to control for contemporaneous occurrence of abnormal events. Moreover, we controlled industry- (defined based on two-digit SIC codes) and year-fixed effects in all models to mitigate the influence of industry characteristics and time-varying factors on workplace safety.

Estimation Methods

We used the following estimations to test our hypotheses. To test Hypotheses 1-4 predicting the effect of CEO regulatory focus on employee injury, we used multilevel modelling (MLM) estimation to account for the nested nature of our data (Hitt, Beamish, Jackson, & Mathieu, 2007; Sauerwald, Van Oosterhout, Van Essen, & Peng, 2018). Traditional ordinary least squares (OLS) models assume independence of observations, which is likely to be violated since injury data is at the establishment-year level, with establishments nested within firms. Therefore, we used multilevel modelling that estimates a random intercept to account for within-firm and within-establishment effects (Hofmann, 1997) and the residual effect of the independent variables is estimated using the corresponding random coefficients. We used the *xtmixed* command in Stata 14 to estimate our results, specifying random effects at the firm and establishment levels. To test the mediating effects of employee workload as per hypotheses H5a and H5b, we used two Seemingly Unrelated Regression equations along with

bootstrapping (Oetzel & Oh, 2021) to estimate the indirect effects. We also used generalized structural equation modeling (GSEM) in supplementary analyses to demonstrate the robustness of the mediation test.

RESULTS

Table 1 lists the means, minimum, maximum and median values, standard deviations, and correlations of the variables. We winsorized the *CAPX* and *Leverage* variables at one percentile to reduce the effect of outliers. The mean of *Employee injury rate* is around 6.67, indicating that for an establishment of 100 employees, an average of around seven injuries in a typical year. We used the Variance Inflation Factor (VIF) to check for multicollinearity among the substantive variables. The VIFs of the substantive variables were below 4, much lower than the recommended cut-off of 10 (Cohen, Cohen, West, & Aiken, 2003), thus attenuating concerns of multicollinearity. The mean values for CEO prevention focus and promotion focus are 0.15 and 2.07, respectively.

Insert Table 1 about here

We present the results of the multilevel analyses of *CEO Prevention focus* and *CEO Promotion focus* on employee injury in Table 2. In Model 1a, we first enter the control variables. Firms with greater capital expenditure and lower leverage incur higher injury rates. Shutdowns in establishments are positively related to injury rate, as are older CEOs and male CEOs. In Model 1b, we add in the *CEO Prevention focus*, *CEO Promotion focus*, and moderating variables to test H1 and H2. *CEO Prevention focus* has a negative effect *(b=-0.72, p=.020)* and *CEO Promotion focus* has a positive effect *(b=0.61, p=.000)* on injury rate, providing support for H1 and H2 respectively. This implies that the employee injury rate at an establishment with a CEO of high prevention focus (one standard deviation above the mean) is 4.2% lower (employee injury rate=5.493) compared with firms whose CEOs have a low prevention focus

(employee injury rate=5.734). The injury rate at establishments with high promotion-focused CEO is 6.055 while it is 5.175 for firms with low CEO promotion focus, suggesting a difference of around 17% in employee injury rates between firms with high versus low promotion focus CEOs. These effects are also meaningfully significant since these values indicate injuries per 100 employees, which is amplified when we consider the number of employees across all establishments belong to each firm.

We present the results of the moderation hypotheses in Models 1c-1e. H3 predicts that the negative effect of *CEO Prevention focus* on employee injury is mitigated when the firm has a greater ratio of *Analyst downgrades*. From the results of Model 1c, we find support for this hypothesis, as the coefficient on the interaction term between *CEO Prevention focus* and *Analyst downgrades* is positive and significant *(b=10.23, p=.000)*.

H4 suggests that the positive effect of *CEO Promotion focus* on employee injury is amplified when there is a higher level of *Industry munificence*. Based on the estimation results shown in Model 1d, we find support for H4 as the coefficient of the interaction between *CEO Promotion focus* and *Industry munificence* is positive and significant *(b=3.97, p=.000)*. Results of the full model are presented in Model 1e and are consistent with the overall set of hypotheses tested in the individual models.

Insert Table 2 about here

To facilitate interpretation of the moderating factors, we describe the effect sizes at low (one standard deviation below the mean) and high (one standard deviation above the mean) values of the independent and moderating variables. We note that the injury rate of establishments with high prevention focus CEOs is 16% lower than those with CEOs of low prevention focus when analyst downgrades are lower. When analyst downgrades are greater, the effect is more pronounced, with a difference of 18% in injury rates of establishments with

high and low prevention focus CEOs. Further, at lower levels of *Industry munificence*, employee injury rate corresponds to 6.088 when *CEO Promotion focus* is high, versus 5.602 when promotion focus is low, indicating an 8.7% increase. But when *Industry munificence* is high, the injury rate increases at a higher rate of 9.5%, from 5.159 at low values of promotion focus to 5.650 when *CEO Promotion focus* is high.

Mediation Effects (H5a and H5b)

We test for the mediating effects using a path analytic method, combining Seemingly Unrelated Regression with bootstrapping to determine the confidence intervals of the indirect effect (Oetzel & Oh, 2021). Bootstrapping is a non-parametric approach that does not impose assumptions about the distribution of the indirect effect (Kiss, Libaers, Barr, Wang, & Zachary, 2020; Shrout & Bolger, 2002). Bootstrapping generates indirect effects for a series of randomly drawn samples from the overall sample which is then used to build a confidence interval. If the confidence interval does not include zero, the mediating effect is said to be supported (Kiss et al., 2020). Using a bootstrap technique with 1,000 replications can help account for the skewed distribution of the regression coefficients (Edwards & Lambert, 2007). Our results of the Seemingly Unrelated Regressions are presented in Table 3.

To estimate the indirect effect of *CEO Prevention focus* on *Employee injury rate* via *Employee workload* (H5a), we obtain the bootstrapped value of the product of the *CEO Prevention focus* coefficient in Model 1a and *Employee workload* coefficient in Model 1b. We find that the confidence interval based on 1,000 subsamples contains zero (*b=0.01, SE=.009, CI=-.008, .027*), which suggests that the indirect effect of *CEO Prevention focus* is insignificant and H5a is not supported. We examine this finding further in the discussion section. We find support for the mediating effect of *Employee workload* between *CEO Promotion focus* and *Employee injury rate* as per H5b. The 95% bootstrapped confidence interval for the indirect effect of *CEO Promotion focus* through *Employee workload* based on

1,000 subsamples (*b=.01, SE=.004, CI=.003, .020*) does not contain zero, supporting that the indirect effect is significant.

Insert Table 3 about here

Supplementary Analyses

We undertook additional analyses to show the robustness of our results. First, we reran our analyses of H1- H5 using a Tobit specification as the dependent variable takes on values of zero or greater and is continuous and left-censored (Wooldridge, 2009). We ran multilevel Tobit analyses using the *metobit* command in Stata 17, accounting for the nested structure of the data within establishments and firms. Results are presented in Table 4. As seen from the coefficients of *CEO Prevention focus* (*b=-0.63; p=.064*) and *CEO Promotion focus* (*b=0.61; p=.000*) in Model 1b, we find support for H2 and marginal support for H1 (*p<.10*). From the positive and significant coefficients of the interactions between *CEO Prevention focus* and *Analyst downgrades* in Model 1c (*b=10.89; p=.000*) and between *CEO Promotion focus* and *Industry munificence* in Model 1d (*b=3.01; p=.010*) respectively, we also find support for the moderating effects hypothesized in H3 and H4.

Next, we use multilevel models with an alternative nesting structure to account for CEO-level interdependence. Our sample consists of a multilevel structure where multiple establishments are nested within firms, but we do not observe significant nesting of CEOs across firms. In our sample, fewer than 2% of CEOs are employed in more than one firm. Thus, firm- and establishment- nesting is more suitable for our study (Gamache & McNamara, 2019). However, we use this alternative nesting of CEOs within firms as a robustness check. We specified a model with random effects at the firm- and CEO*establishment- levels, to account for CEO-level interdependence. Since CEOs are not exactly nested in firms (as a CEO may work in different firms), such a structure more appropriately captures the effects of CEO-level interdependence than a firm- and CEO- nested structure. As seen from Model 1b of Table 5,

we find that the effect of *CEO Promotion focus* on employee injury is significantly positive (*b=0.47, p=.000)* while the effect of *CEO Prevention focus* is not significant. From the coefficients of the moderating effects in Models 1c (*b=9.10, p=.000*) and 1d (*b=4.80, p=.000*) respectively, we find that the moderating hypotheses are supported.

In addition, we also used GSEM to test the direct and indirect effect of CEO regulatory focus and employee workload on employee injury. We used the *gsem* in Stata 17 command to take into account the multilevel data structure. We specified a firm- and CEO*establishment-nesting structure for our analysis. Our interest is the product of the effect of the independent variables on the mediating variable and the effect of the mediating variable on the dependent variable. Results are presented in Table 6. Panel A in Table 6 shows the effects of CEO regulatory foci on *Employee workload* and *Employee injury rate*, and Panel B shows the mediated effects from the CEO regulatory foci on *Employee injury rate* via *Employee workload*. The results show that the indirect effect of *CEO Promotion focus* on *Employee injury rate* via *Employee workload* is significant, but the corresponding mediation of *CEO Prevention focus* is not significant. Specifically, Model 1a tests the effects of *CEO Prevention focus* and *Promotion focus* on *Employee workload*. The results show that *CEO Prevention focus* does not have a significant impact on *Employee workload* while *CEO Promotion focus* has a marginally positive relationship with *Employee workload* (*b=0.02, p=.095*). Model 1b tests the directs of *CEO Prevention focus, CEO Promotion focus*, and *Employee workload* on *Employee injury rate*. Consistent with our expectation, *Employee workload* is positively associated with *Employee injury rate* (*b=2.27, p=.000*), which indicates the heavier employee load, the higher employee injury rate. The results also show a positive direct effect of *CEO Promotion focus* on *Employee injury rate* (*b=0.52, p=.029*), even though the effect of *CEO Prevention focus* on *Employee injury rate* is not significant.

The mediating effects stated in H5a and H5b are presented in Panel B of Table 6. There is a significant indirect effect of *CEO Promotion focus* via *Employee workload* (*b=0.04, p=.030*). The total mediated effect of *CEO Promotion focus* on the *Employee injury rate* was significantly positive (*b=0.56, p=.027*), suggesting support for H5b. We did not find support for H5a. To sum up, as shown in Figure 1, *CEO Promotion focus* has both direct and mediated effect on *Employee injury rate*. *CEO Promotion focus* lead to more employee injury both directly (H2: *b=0.52, p=.029*) and indirectly through increasing *Employee workload* (H5b: *b=0.56, p=.027*).

Finally, we used earnings call transcripts as an alternative source for our regulatory foci measures as used in previous studies (Chen et al., 2018; DesJardine & Shi, 2021). We downloaded quarterly earnings call transcripts from Capital IQ, along with details of the name of the company, speaker, date, and time. We isolated the text containing words spoken by the CEO during both the presentation and Q&A sessions and performed text analysis to capture the regulatory foci of CEOs. Since earnings calls are quarterly, we averaged the values of CEO prevention and promotion focus in each year to arrive at corresponding annual measures. As shown in Model 1b of Table 7, *CEO Prevention focus* has a significant negative impact (*b=-0.98, p=.023*), while *CEO Promotion focus* does not have a significant impact on the injury rate (*b=0.04, p=.759*). In Models 1c and 1d, while H3 is not supported (*b=1.32, p=.503*), we find support for H4 from the coefficient of the interaction between *CEO Promotion focus* and *Industry munificence* (*b=4.87, p=.000*). Model 1e presents the full model. As the transcripts were only predominantly available from the year 2008, a significant portion of our original sample of employee injury data were excluded in these analyses. Therefore, we believe that some of the insignificant results could be attributed to the smaller sample size. Overall, the results although weaker, show that the significant relationships are consistent with those

obtained using letters to shareholders to measure CEO regulatory foci. In sum, these various supplementary analyses show patterns consistent with the main results.

Insert Tables 4, 5, 6, 7, and Figure 1 about here

DISCUSSION

We advance a motivational model of workplace safety, which provides an overarching framework for understanding how CEO regulatory focus predicts workplace injuries as well as how the influence of regulatory focus may be accentuated or attenuated by situational factors. Specifically, we argue that greater CEO prevention focus reduces employee injury rate due to an orientation towards safety and responsibility in the pursuit of organizational goals. On the other hand, CEOs with high promotion focus engender the use of strategies that prevent errors of omission and push employees toward achieving organizational goals such as better performance and higher growth, leading to higher injury rate. Based on a large sample of establishment-level employee injury data during the 2002-2011 period, our results provide support for these hypotheses.

Contributions to Strategic Leadership Research

This study aims to provide the first evidence of how CEO regulatory focus affects workplace safety. In light of the recent push for "important management research" (Tihanyi, 2020: 330), we forge a connection between CEOs and workplace safety—a socially and economically important phenomenon. With the rising influence of the "CEO effect" (Quigley & Graffin, 2017; Quigley & Hambrick, 2015), research in strategic leadership has examined various impacts of CEO attributes and characteristics on firm outcomes (Finkelstein, Hambrick, & Cannella, 2008; Shi, Hoskisson, & Zhang, 2017).

Our study contributes to this stream of research in two important ways. First, our study extends the effects of CEO psychological characteristics from firm level to frontline employee

level. We join the study of Gamache et al. (2020) to answer the recent call to examine the influence of CEO regulatory focus on a broader range of strategic actions and outcomes (Gamache et al., 2015; Johnson et al., 2015). The existing literature has largely focused on how these attributes impact shareholder wealth or strategies that ultimately impact shareholder wealth. Beyond these intentional strategic decisions toward firms (e.g., M&As) and their stakeholders, our study advances this line of research by exploring the consequences of CEO regulatory focus on firm employees. We find an unintended, adverse effect of a CEO's high promotion focus as a result of their strategic decisions despite the fact that promotion focus may lead to positive organizational outcomes, such as speed and efficiency (Scholer & Higgins, 2008) as well as proactive stakeholder engagement (Gamache et al., 2020). On the other hand, CEOs with high prevention focus are associated with fewer employee injuries due to their adherence to regulations and tendency to avoid undesirable outcomes, even though research has found that employees' prevention focus may lead to lower work performance (Wallace et al., 2008). Our study highlights the role of CEO regulatory focus in the discussion of a possible trade-off between achievement for growth and employee workplace safety.

Second, this study contributes to the strategic leadership literature by demonstrating how CEO attributes interact with situational factors including external evaluations and industry growth expectations. Our findings that performance inducement factors modify the negative influence of CEO prevention focus and the positive influence of CEO promotion focus on employee injuries suggest that certain corporate governance mechanisms may be designed to mitigate the influence of CEO regulatory focus (promotion focus, in our context). For instance, firms with a board emphasizing a long-term orientation may help CEOs buffer against short-term performance pressure from the capital market, relieving their negative influence on workplace safety. In summary, we suggest that beyond the direct strategic decisions that can be attributed to CEOs' motivational factors, there are far-reaching consequences of CEO

regulatory focus on firms' other stakeholders. A better-developed corporate governance structure will help drive firm and executive behaviours toward desired outcomes and away from undesired outcomes.

Contributions to Stakeholder Research

The study also contributes to management research on stakeholder relations by emphasizing the effects of upper-echelon characteristics and decision making on specific groups of stakeholders in the organization. Micro research has begun to investigate the ethical consequences of regulatory focus (Cornwell & Higgins, 2015; Gino, Kouchaki, & Casciaro, 2020), but thus far this research has focused on direct behavior of individuals. With a few exceptions (Gamache et al., 2020), macro research on regulatory focus has identified CEOs' influence on strategic decisions that impact firm performance and, therefore, shareholders. We expand these insights to the broader realm of stakeholders by examining how CEO regulatory focus impacts another key stakeholder group–employees. Stakeholder research has argued that conflicts can exist between diverse stakeholders (e.g., Freeman, 2010). Our findings imply that, in pursuing organizational performance goals, CEOs with high promotion focus emphasize accomplishments and gains and may pay less attention to the means to achieve such goals, leading to less adherence to safety rules and regulations and higher workplace injuries. On the other hand, CEOs with high prevention focus are more attentive to safety and responsibility, leading to fewer employee injuries.

Employees are important in helping firms achieve and maintain competitive advantage (Wang & Barney, 2006). Building human capital requires efforts to treat employees favorably to improve ability and motivation. Providing a safe and sound working environment is an obvious first step to achieving such competitive advantage. Thus, understanding how CEO regulatory focus influences safety performance informs the organization, board of directors, and managers on whether and how to develop systems and techniques to optimize the safety

environment and decrease employee injuries. Workplace injuries not only involve significant financial costs, but more importantly, the nonpecuniary loss associated with injuries signficantly reduces the marginal utility of the wealth of workers and their families (e.g., Calfee & Rubin, 1992; Viscusi & Evans, 1990). A safe workplace provides employees a sense of security, increases motivation, and thus potentially improves firm performance in the long run. Mitigating the negative influence of certain CEO psychological attributes may help the firm eventually achieve a mutually beneficial outcome for shareholders and other non-financial stakeholders (e.g., employees and their families).

Workplace safety is an important issue for employees. Our study is one of the first to examine directly the influence of CEO cognitive characteristics on workplace accidents and injuries. Workplace safety is embedded in a complex net of competing organizational goals and time frames (short-term vs. long-term goals) and contradictory messages such as enacted vs. declared policies (Griffin & Curcuruto, 2016; Zohar, 2002). Our study has demonstrated that such organizational goals are also influenced by CEOs, and their focus on speed and productivity vs. safety may create a tension that subsequently affects workplace safety.

Limitations and Future Research

In our study, we consider employee workload as a possible channel through which CEO regulatory focus influences workplace safety. Although CEO promotion focus impacts employee injuries through increased workloads, we do not find support that employee workloads mediate the effect of CEO prevention focus on workplace injuries. Whilst surprising, this finding is consistent with research suggesting that individuals with high promotion and prevention foci prefer to use different means to attain their goals (Higgins, Friedman, Harlow, Idson, Adyuk, & Taylor, 2001; Wallace & Chen, 2006). Individuals with a high prevention focus are known to use more avoidance means that involve avoiding potential barriers and hazards rather than approach strategies, suggesting that prevention-focused CEOs

are in general more likely to use ways to achieve safety that are centred around compliance, and increasing safety behaviors. Conceivably, reducing workloads is not as vigilant a strategy to achieve safety outcomes as other ways such as improving safety compliance (Griffin & Neal, 2000), directing resources towards safety (Wallace, Popp, & Mondore, 2006), and enhancing safety climate and knowledge (Burke & Signal, 2010; Neal & Griffin, 2006). Therefore, we submit that other than workload, a firm's prevention culture and safety compliance may also act as possible mediating mechanisms for firms with prevention-focused CEOs.[6] Given the available archival data, meaningfully capturing safety culture or compliance across the establishments in our sample is impossible. We call for future research to further explore the possible influence of firm safety culture in affecting the relationship between executive regulatory focus (and other characteristics as well) and workplace safety, which may help to capture the filter-down effect of top managers.

Although we draw attention to the asymmetric influences of CEO regulatory focus on the interests of employees, we encourage future research to assess whether our results are generalizable to other stakeholder groups, including those external to firms. "Do no harm" stakeholder strategies are not restricted to ensuring employee safety, and we encourage scholars to investigate whether a prevention focus may foster a broader range of stakeholder strategies. Ensuring that toxic emissions are not released into the environment, abiding by payment terms agreed with suppliers, and maintaining customer satisfaction are all examples of "do no harm" efforts. Indeed, many practices can be framed either as "do good" or "do no harm"—for example, making communities resilient to the effects of climate change vs. reducing the effects of climate change on communities—so that stakeholders may be able to harness this distinction to motivate their demands. Future research might assess the effectiveness of the "do good" and "do no harm" frames and how they vary according to CEO regulatory focus.

Similarly, whereas we have focused on the level of the CEO, we recognize that organizations are complex systems. Many stakeholder strategies are decided and implemented by managers and employees at other levels of the organizational hierarchy. Indeed, studies have shown that employee regulatory focus often mediates the influence of leadership (e.g., servant leadership) on employee behavior (e.g., in-role performance) (Neubert et al., 2008), and future research may explore the combined dynamics of CEO regulatory focus and employee regulatory focus on employee-related outcomes. The internal dynamics of organizations potentially matter in another way too. Whereas our research focuses on the moderating effects of external benchmarks for CEOs' stakeholder management decisions, internal performance targets set by the board are also critical. Future research can examine how internal benchmarks interact with CEO regulatory focus to impact stakeholder management. While external benchmarks may necessitate extreme measures that increase stakeholder harm, it is possible that internal factors may alter stakeholder strategies through reductions in the "do good" realm rather than changes to the "do no harm" aspects.

CONCLUSION

Our study shows that CEO regulatory focus influences workplace safety. CEO prevention focus is negatively related to employee injuries, whereas CEO promotion focus is positively associated with the rate of employee injury. We also find that the negative effect of CEO prevention focus on employee injury rate is attenuated under higher levels analyst downgrades. In contrast, the positive relationship between CEO promotion focus and employee injury rate is greater when industry munificence is higher. Further, employee workload mediates the effect of CEO promotion focus on employee injury rate, highlighting that CEO psychological attributes influence workplace safety via the allocation of resources (i.e., human resources in our context). Overall, our study extends research on CEO regulatory focus and executive characteristics by explaining the impact of regulatory focus on internal stakeholders, as well

as by identifying the critical boundary conditions that trigger the influence of executive psychological characteristics.

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FOOTNOTES

1. Tesla shares fall on news of new probe into workplace injury. (https://www.cnbc.com/2018/04/20/tesla-shares-fall-on-news-of-new-probe-into-workplace-injury.html)
2. Tesla workers say they pay the price for Elon Musk's big promises | Tesla | The Guardian (https://www.theguardian.com/technology/2018/jun/13/tesla-workers-pay-price-elon-musk-failed-promises)
3. Safety+Health Magazine 2020 CEOs: James D. Hoffman. (https://www.safetyandhealthmagazine.com/articles/19301-ceos-who-get-it-2020?page=6#jump)
4. Our review of the literature motivated our decision to use letters to shareholders over other sources such as conference transcripts. The seminal work on CEO regulatory focus by Gamache and colleagues (Gamache et al., 2015) uses letters to shareholders to capture CEOs' regulatory foci. Further, studies on CEO regulatory focus have largely used letters to shareholders as their data source for text analysis (Gamache et al., 2020; Kashmiri, Gala, & Nicol, 2019; Mount & Baer, 2022). Where studies have used CEOs' language in earnings call transcripts (e.g., Shi et al., 2019, who explore language matching between CEOs and CFOs), there are contextual reasons for doing so. Further, as conference calls and Q&As cover more spontaneous reactions so that they may be less appropriate for capturing stable CEO characteristics.
5. We thank an anonymous reviewer for this suggestion.
6. We thank an anonymous reviewer for this suggestion.

TABLE 1
Descriptive Statistics and Correlations

		Mean	S.D.	Min	Max	Median	1	2	3	4	5
1	Employee injury rate	6.67	6.28	0.00	63.63	1.82					
2	CEO Prevention focus	0.15	0.17	0.00	1.19	0.11	-.12				
3	CEO Promotion focus	2.07	0.72	0.00	4.67	2.01	.15	-.16			
4	Analyst downgrades	0.25	0.14	0.00	0.88	0.25	-.03	-.01	.00		
5	Industry munificence	0.07	0.06	-0.68	0.34	0.07	.06	-.02	.04	.03	
6	Employee workload	7.55	0.18	4.57	11.36	7.58	-.13	.15	-.09	.05	.09
7	Firm size	9.94	1.03	6.67	14.63	10.09	-.02	.05	-.03	-.12	.04
8	CAPX	0.06	0.04	0.00	0.30	0.05	.35	-.29	.13	.04	.21
9	Leverage	0.19	0.10	0.00	1.13	0.18	-.16	.08	-.20	.12	-.13
10	ROA	0.07	0.05	-0.58	0.43	0.07	.12	-.08	.32	-.12	.26
11	CEO age	55.02	5.94	39.00	78.00	56.00	.00	.14	.01	.04	-.02
12	Female CEO	0.01	0.12	0.00	1.00	0.00	.03	.01	-.04	-.07	.18
13	Strikes	0.00	0.05	0.00	1.00	0.00	-.00	.01	-.01	.01	-.01
14	Shutdowns	0.07	0.25	0.00	1.00	0.00	-.10	.05	-.06	.09	.00
15	Number of employees (establishment)	5.07	1.08	2.30	9.88	4.95	-.01	.05	-.04	.02	.02

		6	7	8	9	10	11	12	13	14	
6	Employee workload										
7	Firm size	-.11									
8	CAPX	-.25	.09								
9	Leverage	.16	.11	-.18							
10	ROA	-.07	.01	.25	-.50						
11	CEO age	.10	-.12	-.27	.05	-.05					
12	Female CEO	.12	.05	.03	-.03	.15	-.06				
13	Strikes	.01	.01	.02	.02	-.03	.00	-.00			
14	Shutdowns	.05	-.04	-.15	.09	-.11	.03	-.02	.04		
15	Number of employees (establishment)	-.06	.07	-.03	-.02	-.04	.03	-.05	.04	.02	

Note: *N*= 14,986 establishment-years.

TABLE 2
Multilevel Regression Analyses of CEO Regulatory Foci on Employee Injury Rate

	Main and moderating effects				
Variables	Model 1a	Model 1b	Model 1c	Model 1d	Model 1e
Hypotheses testing					
CEO prevention focus (H1)		-0.72	-3.12	-0.75	-2.96
		(.31)	(.52)	(.31)	(.52)
		[.020]	[.000]	[.015]	[.000]
CEO promotion focus (H2)		0.61	0.58	0.34	0.36
		(.07)	(.07)	(.10)	(.10)
		[.000]	[.000]	[.001]	[.000]
CEO prevention			10.23		9.45
focus*Analyst downgrades			(1.77)		(1.79)
(H3)			[.000]		[.000]
CEO promotion focus *				3.97	3.16
Industry munificence (H4)				(1.04)	(1.05)
				[.000]	[.003]
Firm-level variables					
Analyst downgrades		-0.80	-2.29	-0.62	-2.03
		(.28)	(.38)	(.28)	(.39)
		[.004]	[.000]	[.028]	[.000]
Industry munificence		4.37	4.49	-3.48	-1.77
		(.76)	(.76)	(2.20)	(2.23)
		[.000]	[.000]	[.114]	[.426]
Firm size	-0.67	-0.65	-0.67	-0.61	-0.63
	(.16)	(.16)	(.16)	(.16)	(.16)
	[.000]	[.000]	[.000]	[.000]	[.000]
CAPX	9.42	7.10	7.19	5.59	5.98
	(2.30)	(2.35)	(2.35)	(2.38)	(2.38)
	[.000]	[.003]	[.002]	[.019]	[.012]
Leverage	-1.39	-1.13	-1.05	-1.25	-1.15
	(.73)	(.73)	(.73)	(.73)	(.73)
	[.056]	[.118]	[.149]	[.085]	[.114]
ROA	2.75	-0.35	-0.26	0.11	0.10
	(1.04)	(1.07)	(1.07)	(1.08)	(1.08)
	[.008]	[.747]	[.807]	[.916]	[.927]
CEO age	0.13	0.13	0.13	0.13	0.13
	(.01)	(.01)	(.01)	(.01)	(.01)
	[.000]	[.000]	[.000]	[.000]	[.000]
Female CEO	-1.20	-1.58	-2.11	-1.54	-2.04
	(.48)	(.49)	(.49)	(.49)	(.49)
	[.012]	[.001]	[.000]	[.002]	[.000]
Establishment-level variables					
Strikes	0.89	0.81	0.82	0.84	0.84
	(.80)	(.80)	(.79)	(.80)	(.79)
	[.266]	[.308]	[.300]	[.293]	[.288]
Shutdowns	0.41	0.36	0.36	0.36	0.36
	(.15)	(.15)	(.15)	(.15)	(.15)
	[.008]	[.020]	[.019]	[.019]	[.018]
Number of employees	-0.14	-0.15	-0.15	-0.14	-0.15
(establishment)	(.05)	(.05)	(.05)	(.05)	(.05)
	[.004]	[.003]	[.003]	[.003]	[.003]
Constant	-0.77	-0.86	-0.97	-0.38	-0.58
	(2.70)	(2.71)	(2.73)	(2.71)	(2.72)
	[.775]	[.750]	[.723]	[.889]	[.832]
Wald chi2	2472.96	2648.18	2683.91	2667.52	2696.69
Log likelihood	-43992.64	-43922.27	-43905.60	-43915.07	-43901.12

Note: N=14,986 establishment-years. Industry and year fixed effects are included in all models. Standard errors are in parentheses and p-values are in brackets.

TABLE 3
Mediating Effects of Employee Workload on the Relationship between CEO Regulatory Focus and Employee Injury Rate

	Model 1a	Model 1b
Variables	DV: Employee workload	DV: Employee injury rate
Hypotheses testing		
CEO prevention focus	0.01	0.03
	(.01)	(.30)
	[.304]	[.932]
CEO promotion focus	0.01	0.67
	(.00)	(.07)
	[.000]	[.000]
Employee workload		1.09
		(.29)
		[.000]
Firm-level variables		
Analyst downgrades	0.00	-0.02
	(.01)	(.32)
	[.808]	[.957]
Industry munificence	0.13	2.88
	(.02)	(.78)
	[.000]	[.000]
Firm size	0.01	0.18
	(.00)	(.08)
	[.014]	[.017]
CAPX	-0.12	23.93
	(.06)	(2.26)
	[.066]	[.000]
Leverage	0.02	-2.99
	(.02)	(.54)
	[.106]	[.000]
ROA	-0.06	-1.35
	(.03)	(1.05)
	[.028]	[.199]
CEO age	0.00	0.06
	(.00)	(.01)
	[.000]	[.000]
Female CEO	0.10	-2.61
	(.01)	(.41)
	[.000]	[.000]
Establishment-level variables		
Strikes	0.00	1.32
	(.03)	(.92)
	[.871]	[.151]
Shutdowns	-0.02	0.39
	(.00)	(.17)
	[.000]	[.022]
Number of employees (establishment)	-0.01	0.00
	(.00)	(.04)
	[.000]	[.962]
Constant	7.50	-9.16
	(.06)	(2.99)
	[.000]	[.002]
R-squared	0.38	0.35
Wald chi2	9027.10	8199.37
Log likelihood		-37453.32

Note: N=14,986 establishment-years. Industry and year fixed effects are included in all models. Standard errors are in parentheses and p-values are in brackets.

TABLE 4
Robustness Check: Multilevel Tobit Analysis for Main and Moderating Effects

	Main and moderating effects				
Variables	Model 1a	Model 1b	Model 1c	Model 1d	Model 1e
Hypotheses testing					
CEO prevention focus		-0.63	-3.18	-0.66	-3.08
(H1)		(.34)	(.57)	(.34)	(.57)
		[.064]	[.000]	[.053]	[.000]
CEO promotion focus		0.61	0.57	0.40	0.43
(H2)		(.07)	(.07)	(.11)	(.11)
		[.000]	[.000]	[.000]	[.000]
CEO prevention			10.89		10.37
focus*Analyst downgrades			(1.95)		(1.97)
(H3)			[.000]		[.000]
CEO promotion focus *				3.01	2.09
Industry munificence (H4)				(1.17)	(1.18)
				[.010]	[.076]
Firm-level variables					
Analyst downgrades		-0.88	-2.45	-0.74	-2.28
		(.31)	(.42)	(.31)	(.43)
		[.004]	[.000]	[.017]	[.000]
Industry munificence		5.37	5.51	-0.65	1.33
		(.86)	(.86)	(2.49)	(2.51)
		[.000]	[.000]	[.795]	[.597]
Firm size	-0.67	-0.65	-0.66	-0.61	-0.63
	(.19)	(.20)	(.20)	(.20)	(.20)
	[.001]	[.001]	[.001]	[.002]	[.001]
CAPX	5.66	2.66	2.73	1.53	1.95
	(2.54)	(2.59)	(2.59)	(2.63)	(2.63)
	[.026]	[.305]	[.292]	[.560]	[.459]
Leverage	-0.88	-0.67	-0.60	-0.77	-0.68
	(.81)	(.81)	(.81)	(.81)	(.81)
	[.275]	[.406]	[.453]	[.341]	[.403]
ROA	2.99	-0.41	-0.31	-0.07	-0.08
	(1.17)	(1.20)	(1.20)	(1.21)	(1.21)
	[.010]	[.731]	[.794]	[.956]	[.948]
CEO age	0.14	0.13	0.13	0.13	0.13
	(.01)	(.01)	(.01)	(.01)	(.01)
	[.000]	[.000]	[.000]	[.000]	[.000]
Female CEO	-1.08	-1.56	-2.15	-1.53	-2.09
	(.52)	(.53)	(.54)	(.53)	(.54)
	[.037]	[.003]	[.000]	[.004]	[.000]
Establishment-level variables					
Strikes	1.10	1.03	1.05	1.05	1.06
	(.86)	(.85)	(.85)	(.85)	(.85)
	[.202]	[.227]	[.219]	[.219]	[.214]
Shutdowns	0.45	0.40	0.40	0.40	0.40
	(.17)	(.17)	(.17)	(.17)	(.17)
	[.009]	[.020]	[.019]	[.020]	[.019]
Number of employees	0.30	0.29	0.29	0.29	0.29
(establishment)	(.06)	(.06)	(.06)	(.06)	(.06)
	[.000]	[.000]	[.000]	[.000]	[.000]
Constant	-4.25	-4.25	-4.35	-3.85	-4.07
	(3.19)	(3.19)	(3.21)	(3.19)	(3.21)
	[.183]	[.184]	[.175]	[.228]	[.204]
Log likelihood	-41528.41	-41462.72	-41447.18	-41459.40	-41445.61

Note: N=14,986 establishment-years. Industry and year fixed effects are included in all models. Standard errors are in parentheses and p-values are in brackets.

TABLE 5
Robustness Check: Firm and CEO-Establishment Nesting for Multilevel Analyses

	Main and moderating effects				
Variables	Model 1a	Model 1b	Model 1c	Model 1d	Model 1e
Hypotheses testing					
CEO prevention focus (H1)		0.03	-2.13	-0.05	-1.96
		(.31)	(.52)	(.31)	(.52)
		[.917]	[.000]	[.867]	[.000]
CEO promotion focus (H2)		0.47	0.45	0.14	0.17
		(.07)	(.07)	(.10)	(.10)
		[.000]	[.000]	[.152]	[.086]
CEO prevention			9.10		8.07
focus*Analyst downgrades			(1.74)		(1.75)
(H3)			[.000]		[.000]
CEO promotion focus *				4.80	4.06
Industry munificence (H4)				(1.05)	(1.06)
				[.000]	[.000]
Firm-level variables					
Analyst downgrades		-0.91	-2.23	-0.70	-1.91
		(.28)	(.37)	(.28)	(.38)
		[.001]	[.000]	[.012]	[.000]
Industry munificence		2.84	2.97	-6.70	-5.12
		(.81)	(.81)	(2.23)	(2.26)
		[.000]	[.000]	[.003]	[.023]
Firm size	-0.37	-0.37	-0.38	-0.33	-0.34
	(.16)	(.16)	(.16)	(.16)	(.16)
	[.019]	[.019]	[.016]	[.037]	[.030]
CAPX	7.21	6.15	6.18	4.31	4.62
	(2.28)	(2.32)	(2.32)	(2.35)	(2.35)
	[.002]	[.008]	[.008]	[.067]	[.050]
Leverage	-1.67	-1.20	-1.11	-1.30	-1.21
	(.77)	(.77)	(.77)	(.77)	(.77)
	[.029]	[.119]	[.150]	[.091]	[.117]
ROA	2.83	0.60	0.63	1.23	1.17
	(1.05)	(1.08)	(1.08)	(1.09)	(1.09)
	[.007]	[.580]	[.558]	[.257]	[.284]
CEO age	0.1	0.10	0.11	0.10	0.11
	(.01)	(.01)	(.01)	(.01)	(.01)
	[.000]	[.000]	[.000]	[.000]	[.000]
Female CEO	-1.22	-1.31	-1.76	-1.29	-1.69
	(.58)	(.58)	(.59)	(.58)	(.59)
	[.034]	[.025]	[.003]	[.028]	[.004]
Establishment-level variables					
Strikes	0.91	0.83	0.85	0.88	0.89
	(.79)	(.79)	(.79)	(.79)	(.79)
	[.250]	[.290]	[.283]	[.263]	[.261]
Shutdowns	0.34	0.33	0.33	0.34	0.34
	(.15)	(.15)	(.15)	(.15)	(.15)
	[.027]	[.031]	[.030]	[.027]	[.026]
Number of employees	-0.10	-0.10	-0.10	-0.10	-0.10
(establishment)	(.05)	(.05)	(.05)	(.05)	(.05)
	[.035]	[.034]	[.033]	[.037]	[.036]
Constant	0.10	-0.26	-0.32	0.32	0.18
	(2.65)	(2.65)	(2.66)	(2.65)	(2.66)
	[.971]	[.921]	[.905]	[.903]	[.945]
Wald chi2	1560.30	1640.48	1665.25	1663.13	1681.93
Log likelihood	-43955.85	-43918.53	-43904.81	-43908.01	-43897.44

Note: N=14,986 establishment-years. Industry and year fixed effects are included in all models. Standard errors are in parentheses and p-values are in brackets.

TABLE 6
Robustness Check: Generalized Structural Equation Modeling (GSEM) Analysis for Mediation Test

Panel A	Model 1a	Model 1b
	DV: Employee workload	DV: Employee injury rate
CEO prevention focus	0.03	-0.65
	(.02)	(.57)
	[.122]	[.249]
CEO promotion focus	0.02	0.52
	(.01)	(.24)
	[.095]	[.029]
Employee workload		2.27
		(.54)
		[.000]
Firm size	-0.01	-0.68
	(.01)	(.44)
	[.563]	[.126]
CAPX	-0.09	4.51
	(.19)	(6.72)
	[.628]	[.503]
Leverage	0.01	-0.21
	(.03)	(2.12)
	[.777]	[.920]
ROA	-0.08	1.32
	(.08)	(1.74)
	[.323]	[.450]
CEO age	0.00	0.13
	(.00)	(.06)
	[.283]	[.046]
CEO gender	0.06	-0.64
	(.02)	(.52)
	[.007]	[.212]
Strikes	-0.02	1.20
	(.01)	(.82)
	[.168]	[.142]
Shutdowns	-0.02	0.54
	(.01)	(.17)
	[.000]	[.002]
Number of employees (establishment)	-0.01	-0.05
	(.01)	(.13)
	[.074]	[.710]
Log likelihood	-36012.23	

Panel B The effects of CEO regulatory focus on workplace injuries mediated via employee workload	
CEO prevention focus mediated via employee workload	0.06
	(.04)
	[.111]
CEO promotion focus mediated via employee workload	0.04
	(.02)
	[.030]
Total mediated effect of CEO prevention focus	-0.59
	(.57)
	[.293]
Total mediated effect of CEO promotion focus	0.56
	(.25)
	[.027]

Note: N=14,986 establishment-years. Industry and year fixed effects are included in all models. Standard errors are in parentheses and p-values are in brackets.

Table 7
Robustness Check: Alternative Source-Transcripts Data

	Main and moderating effects				
Variables	Model 1a	Model 1b	Model 1c	Model 1d	Model 1e
Hypotheses testing					
CEO prevention focus (H1)		-0.98	-1.36	-1.07	-1.53
		(.43)	(.73)	(.43)	(.73)
		[.023]	[.062]	[.012]	[.037]
CEO promotion focus (H2)		0.04	0.04	-0.21	-0.21
		(.13)	(.13)	(.15)	(.15)
		[.759]	[.746]	[.149]	[.152]
CEO prevention focus*Analyst			1.32		1.57
downgrades (H3)			(1.97)		(1.97)
			[.503]		[.425]
CEO promotion focus * Industry				4.87	4.90
munificence (H4)				(1.32)	(1.32)
				[.000]	[.000]
Firm-level variables					
Analyst downgrades		-0.03	-0.17	-0.09	-0.25
		(.36)	(.44)	(.36)	(.44)
		[.927]	[.696]	[.812]	[.568]
Industry munificence		-0.80	-0.82	-8.38	-8.44
		(.93)	(.94)	(2.38)	(2.39)
		[.389]	[.384]	[.000]	[.000]
Firm size	0.05	0.03	0.04	0.04	0.04
	(.07)	(.07)	(.07)	(.07)	(.07)
	[.489]	[.613]	[.591]	[.599]	[.573]
CAPX	11.08	11.09	11.15	11.23	11.30
	(3.68)	(3.68)	(3.68)	(3.68)	(3.68)
	[.003]	[.003]	[.002]	[.002]	[.002]
Leverage	0.54	0.42	0.42	0.55	0.54
	(.61)	(.61)	(.61)	(.61)	(.61)
	[.375]	[.489]	[.496]	[.367]	[.373]
ROA	1.97	1.77	1.75	1.84	1.82
	(.98)	(.99)	(.99)	(.99)	(.99)
	[.044]	[.075]	[.079]	[.062]	[.066]
CEO age	0.04	0.04	0.04	0.04	0.04
	(.01)	(.01)	(.01)	(.01)	(.01)
	[.000]	[.000]	[.000]	[.000]	[.000]
Female CEO	-1.41	-1.33	-1.33	-1.42	-1.42
	(.60)	(.60)	(.60)	(.60)	(.60)
	[.019]	[.028]	[.028]	[.018]	[.018]
Establishment-level variables					
Strikes	2.02	2.05	2.06	2.11	2.11
	(1.70)	(1.71)	(1.71)	(1.69)	(1.70)
	[.234]	[.230]	[.230]	[.213]	[.213]
Shutdowns	0.15	0.15	0.15	0.15	0.15
	(.17)	(.17)	(.17)	(.17)	(.17)
	[.372]	[.353]	[.354]	[.370]	[.371]
	-0.08	-0.07	-0.07	-0.08	-0.08
Number of employees (establishment)	(.07)	(.07)	(.07)	(.07)	(.07)
	[.279]	[.302]	[.305]	[.240]	[.242]
Constant	0.23	0.24	0.25	0.42	0.43
	(1.38)	(1.38)	(1.38)	(1.38)	(1.38)
	[.865]	[.861]	[.856]	[.759]	[.754]
R square	0.2661	0.2668	0.2669	0.2676	0.2677

Note: N=6,580 establishment-years. Industry and year fixed effects are included in all models. Standard errors are in parentheses and p-values are in brackets.

FIGURE 1
Generalized Structural Equation Modeling Results