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Understanding the Situational Antecedents of CEO Regulatory Focus

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ABSTRACT Despite the impact of CEO regulatory focus on a wide range of organizational outcomes, most research does not consider how regulatory focus can vary based on situational factors. Taking an interactionist perspective rooted in industrial-organizational psychology, we propose that CEO regulatory focus exhibits variance driven by situational factors, namely, a CEO's job demands. Integrating this perspective with regulatory focus theory and research on executive job demands, we theorize and test the extent to which CEO regulatory focus is influenced by relative firm performance, with stakeholder activism and CEO tenure as moderators of this relationship. Using a sample of large U.S. companies, our tests offer evidence for how situational factors cause CEO regulatory focus to vary. We conclude our work by developing a research agenda regarding situational antecedents of CEOs' intrapersonal constructs more broadly.

Keywords: CEO, regulatory focus, executive job demands, tenure, stakeholder activism

INTRODUCTION

Regulatory focus reflects an individual's motivational orientation and shapes the nature of their goal pursuit via the two different neurocognitive systems of prevention and promotion focus (Crowe and Higgins, 1997; Higgins, 1998; Lanaj et al., 2012). This intrapersonal construct is deemed particularly significant for CEOs because it 'has a more proximal influence on [CEO] behavior' than values and personality traits, which are mediated through motivational processes such as how a CEO is oriented to approach

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strategic decisions (Barrick et al., 2005; Gamache et al., 2020, p. 1309; Hoyle, 2010). As such, strategic leadership scholars have increasingly turned their attention to studying CEO regulatory focus and have demonstrated its influence on various firm outcomes such as strategic alliances, acquisitions, workplace safety, investments in corporate social responsibility (CSR), and receptivity to stakeholder activism (Das and Kumar, 2011; Gamache et al., 2015, 2020; Qian et al., 2023).

While research has generated a wealth of insight on CEO regulatory focus in general, there is a substantial research gap regarding its situational variability. CEO regulatory focus is known to have effects on firm outcomes and CEOs have an ever-increasing influence over their firms (Quigley and Graffin, 2017; Quigley and Hambrick, 2015). Consequently, situational variability in CEO regulatory focus – whether small or substantial – may present considerable economic and social consequences for business and society. Thus, there is a need to assess which situational factors lead to fluctuations in this pivotal CEO characteristic. At the same time, while regulatory focus theory acknowledges that prevention and promotion focus vary situationally (Brockner and Higgins, 2001; Cesario et al., 2008), it offers limited guidance on the specific types of situational features that might cause such variability, particularly for CEOs. As such, research on CEO regulatory focus can be further advanced not only by considering its situational variability but also by identifying key situational determinants of this variability and potential interactions between them.

Our aim is to develop and test a theory that examines key antecedents of situational variance in CEO regulatory focus. To do so, we draw on a core insight from the interactionist perspective in industrial-organizational psychology, which indicates that *job demands* are the 'most obvious' (Tett and Burnett, 2003, p. 505) situational influencers for all organizational members. According to this perspective, job demands and their underlying determinants, can strengthen or weaken organizational members' prevention and promotion focus (Kenrick and Funder, 1988). Applying this logic to CEOs, we argue that CEO regulatory focus can vary situationally due to performance, task and aspirational challenges that reflect their own job demands (Hambrick et al., 2005). Performance challenges refer to the pressure that CEOs feel to deliver expected performance and are effectively captured by considering a firm's performance relative to its competitors (Drnevich and Kriauciunas, 2011; Zhu et al., 2022). Task challenges determine how easy or hard it is for CEOs to deliver expected performance, such as facing increasing pressure from key stakeholders (Zhu et al., 2022). Finally, aspirations relate to how motivated CEOs might be to lead their firm to superior performance, which can be shaped by tenure, as tenure impacts the type of goals that CEOs may have for their careers (Lee et al., 2018).

Integrating these ideas with regulatory focus theory, we first consider the principal influence of relative firm performance on CEO regulatory focus. CEOs enjoy some measure of control over their firm's relative performance – unlike over other aspects that shape their job demands – such that it naturally lends itself as an impetus for adopting different manners of goal pursuit (i.e., prevention versus promotion) and acts as the most salient indicator of a CEO's performance and sense of job security. As such, we expect a negative relationship between relative firm performance and CEO prevention focus and a positive relationship with CEO promotion focus. However, we further argue that these relationships are amplified by stakeholder activism, which heightens the salience of oughts/ideals such that the main relationships between relative firm performance and CEO prevention/promotion focus become stronger. Finally, we contend that the relative performance–regulatory focus relationship is attenuated by CEO tenure, owing to its impact on making CEOs less attuned to fluctuations in relative firm performance. We test our hypotheses on annual panel data of 594 CEOs of U.S. public corporations and find evidence suggesting situational factors explain fluctuations in CEO regulatory focus in substantial ways.

We make three noteworthy contributions. First, we advance the emerging stream of research on CEO regulatory focus by illuminating and deepening our understanding of the situational variation in this influential construct. In doing so, we directly respond to calls for the exploration of real-world antecedents of regulatory focus (Brockner and Higgins, 2001) by identifying the executive job demands of relative firm performance, stakeholder activism, and tenure as situational influences on CEO regulatory focus. Second, we advance strategic leadership research by highlighting and empirically demonstrating that CEOs' intrapersonal constructs like regulatory focus are more influenced by situational factors than has previously been considered (Hambrick, 2007; Wowak et al., 2017). In this regard, our research represents an initial effort to understand the complex forces that shape the attributes of business leaders and their strategic decisions, addressing recent calls for 'focused theorizing about why CEOs … possess the attributes they do' (Hambrick and Wowak, 2021a, p. 346). Finally, we use our findings as a springboard to develop a research agenda and 'reenergize the conversation' (Healey et al., 2023, p. 1640) on situational antecedents of intrapersonal constructs in strategic leadership research. This is a critical contribution given the 'great potential in examining executive attributes as outcomes' and that 'virtually all … of the research in the [strategic leadership] literature has focused on executive characteristics as independent variables' (Hambrick and Wowak, 2021a, p. 338). Taken together, this research speaks directly to growing consensus around the need for strategic leadership scholars 'to consider environmental conditions' and the challenge associated with understanding how contextual factors shape the 'cognitive and relational processes' that inform CEOs' decisions (Neely et al., 2020, p. 1043).

THEORY AND HYPOTHESES

CEO Regulatory Focus

Regulatory focus theory explains that people are motivated to pursue goals through two coexisting internal mechanisms: a *prevention focus* and a *promotion focus* (Higgins, 1998; Higgins et al., 1997; Lanaj et al., 2012). A person high in prevention focus is driven by security needs, by what 'should' be based on a sense of duty and responsibility and strives toward their 'ought self' (Crowe and Higgins, 1997; Higgins, 2011). A high prevention focus is associated with the sensitivity to the presence (or absence) of negative outcomes, the desire to ensure correct rejections and insure against committing errors, and a tendency to view choices through a loss/non-loss frame (Higgins, 1997).

People high in prevention focus 'keep their feet on the ground – thinking about their ought self with its demands, expectations and requirements' (Kark and Van Dijk, 2019, p. 509). Conversely, a person high in promotion focus is driven by a need for growth, by desirable end-states or what 'could' be, and pursues goals based on a striving toward their 'ideal self' (Higgins et al., 1997; Johnson et al., 2015). A high promotion focus is associated with a desire to ensure 'hits', insure against errors of omission, and a tendency to view situations in a gain/non-gain frame (Crowe and Higgins, 1997; Higgins, 1997). As such, people high in promotion focus 'keep their head in the sky – thinking about their ideal self, hopes, and wishes' (Kark and Van Dijk, 2019, p. 509). Both prevention and promotion focus shape decision-making but do so through different means of strategic goal pursuit (Burmeister-Lamp et al., 2012; Kammerlander et al., 2015).

Importantly, regulatory focus reflects a 'preferred manner of goal pursuit' such that it 'has a more proximal influence on [CEO] behavior' (Gamache et al., 2020, p. 1309) than personality traits (e.g., emotional stability) or other individual attributes (e.g., functional background; Barrick et al., 2005; Hoyle, 2010). For these and other reasons, interest in studying regulatory focus in CEOs has increased dramatically in recent years. This interest has yielded a robust stream of work pointing to the important strategic consequences of CEO regulatory focus for firms (e.g., Das and Kumar, 2011; Kammerlander et al., 2015; McMullen et al., 2009). For example, Gamache and colleagues demonstrate that prevention and promotion focus influence acquisition activities (2015) as well as the nature of firms' stakeholder strategies (2020). Table I provides an overview of recent empirical research on CEO regulatory focus.

As Table I shows, while important insights have been generated, empirical research on CEO regulatory focus has predominantly examined this attribute as one that remains relatively stable. Across this body of work, there is no comprehensive theorization on the situational antecedents of this consequential attribute and – to our knowledge – no study that examines CEO regulatory focus as a dependent variable. While some studies acknowledge CEO regulatory focus' situational variability in principle (e.g., Zhang et al., 2022), or address it tangentially in conceptual work focused on other phenomena (e.g., Jaskiewicz and Luchak, 2013), scholars have yet to account for its situational variability comprehensively.

These omissions are surprising considering that regulatory focus theory explicitly indicates that although people's prevention and promotion focus are *generally* stable, they are jointly shaped by internal and external influences. For instance, Brockner and Higgins explain: 'Whether people adopt more of a promotion focus or prevention focus is a function of situational and dispositional factors' (2001, p. 40). In other words, although people's prevention- and promotion-oriented tendencies stem in part from biological differences and develop in early childhood (Elliot and Thrash, 2010; Higgins, 1997; Lanaj et al., 2012), they are also shaped by situational cues within a person's surrounding environment (Förster et al., 1998; Higgins, 2000). This is because different situations can present positive (gains) and negative (losses) outcomes such that different manners of goal pursuit are elicited to strive toward positive outcomes (i.e., promotion) or avoid negative outcomes (i.e., prevention) (Brockner and Higgins, 2001). Regulatory focus scholars argue that people's regulatory focus will

Table I. Overview of empirical studies on CEO regulatory focus

References	*Prevention focus findings*	*Promotion focus findings*	*Variability assumptions*
Wallace et al. (2010)	Decreased firm performance, weakened by environmental dynamism	Increased firm performance, strengthened by environmental dynamism	'Regulatory focus in the workplace is moderately stable over time' (p. 583)
Gamache et al. (2015)	Decreased number of acquisitions and value of acquisitions undertaken by firms, weakened by the level of options granted	Increased number of acquisitions and value of acquisitions undertaken by firms, strengthened by the level of options granted	'Regulatory foci … are somewhat stable within a specific domain' … 'Regulatory focus is more malleable than dispositional traits and individual differences … yet more stable than transient states' (p. 1264)
Kammerlander et al. (2015)	Decreased firm engagement in exploration in small or medium-sized enterprises	Increased firm engagement in exploration and exploitation in small or medium-sized enterprises, strengthened by competitive intensity	'The focus of this paper is on the more stable, chronic regulatory focus' (p. 583)
Kashmiri et al. (2019)	No statistically significant findings	Increased advertising intensity, R&D intensity, and likelihood of marketing controversies	'CEO regulatory focus is an innate psychological attribute of CEOs that tends to remain stable over time' (p. 236)
Gamache et al. (2020)	Increased engagement in governance-oriented initiatives and receptivity to governance-oriented stakeholder activism	Increased engagement in socially oriented initiatives	'Within a specific context … regulatory focus is generally stable over time' (p. 1309)
Jiang et al. (2020)	Decreased strategic change, strengthened by prior firm performance and weakened by environmental dynamism	Increased strategic change, weakened by prior performance and strengthened by environmental dynamism	Assumes stability in regulatory focus, but variability in outcomes: 'The effects of regulatory focus are contingent upon… situational characteristics' (p. 388)
Huang et al. (2021)	Increased ambidexterity when CEO tenure is high and market turbulence is present; prevention has an interactive effect with promotion on ambidexterity	Increased ambidexterity when CEO tenure is low and environmental turbulence is present; promotion has an interactive effect with prevention on ambidexterity	'CEO regulatory focus is itself at least partly dependent on situational conditions because they also influence the types of goals that individuals set and the actions they take to achieve them' (p. 27)

(Continues)

Table I. (Continued)

References	*Prevention focus findings*	*Promotion focus findings*	*Variability assumptions*
Scoresby et al. (2021)	Decreased R&D increase	No statistically significant findings	Makes no explicit assumptions about stability but discusses variability in outcomes: 'fixed income negatively moderate the relationship between CEO prevention focus and R&D increase' (p. 416)
Mount and Baer (2022)	Increased (decreased) risk-taking when firm performance is above (below) aspirations	Increased (decreased) risk-taking when firm performance is below (above) aspirations	Considers regulatory focus as an 'approach tendency' but notes how 'the effects of an individual's regulatory focus are influenced by situational characteristics that are salient' (p. 1981)
Zhang et al. (2022)	No statistically significant findings	Increased environmental misconduct	'Regulatory focus can be chronic or situationally induced' (p. 1300)
Andrus et al. (2023)	Decreased strategic change during the first 3 years of tenure	Increased strategic change during the first 3 years of tenure	Considers regulatory focus as 'often chronic' (p. 5), but allows for variability in outcomes: 'job demands … alter the regulatory fit new CEOs experience, thus eliciting unique reactions depending on their regulatory foci' (p. 1)

change to match situational requirements through self-regulation; a process in which people seek to align themselves, their behaviours, and self-conceptions, with the goals or standards a given situation presents (Brockner and Higgins, 2001; Higgins, 1997, 1998). Moreover, regulatory focus theorists argue that valence and nature of people's emotional states varies based on whether their manner of goal pursuit adequately matches a given situation, in which a promotion focus may lead to cheerfulness in the achievement of gains and a promotion focus may lead to quiescence in the avoidance of losses (Brockner and Higgins, 2001).

In this regard, experimental findings demonstrate that prevention and promotion focus can be induced through task instructions (Freitas et al., 2002), priming instructions prompting thoughts about ideals and oughts, respectively (Higgins, 1998), performance feedback (Van Dijk and Kluger, 2004, 2011), or by triggering certain memories (Lockwood et al., 2002). For example, a prevention focus can be induced by telling individuals that they *won't lose* compensation by performing a certain task well whereas a promotion focus can be induced by telling individuals that they *can gain* additional compensation by performing a task well (Higgins et al., 1997). Furthermore, several studies show that situational cues in a work environment can have a substantial impact on individuals' regulatory focus. Such situational cues include, for instance, general organizational context characteristics like dynamism/stability, change orientation/noncreativity, organic/mechanistic features, and a clan mode of governance/bureaucracy (Kark and Van Dijk, 2007), work group characteristics like group safety climate (Wallace and Chen, 2006), or superiors' leadership styles such as servant leadership and initiating structure (Neubert et al., 2008). In CEOs, situational factors such as values and norms, past performance, and interpersonal interactions may influence the emergence or intensity of prevention and promotion focus (Brockner and Higgins, 2001; Gamache et al., 2015; Johnson et al., 2010; Wallace and Chen, 2006). It is therefore possible for manners of goal pursuit – that is, prevention and promotion – to change in accordance with varying circumstances for the general population and CEOs.

Overall, we know that CEO regulatory focus has important strategic consequences for firms (see Table I). At the same time, the growing body of evidence associating CEO regulatory focus with strategic outcomes, placed against robust reasons for its situational variability, provides the motivation for our efforts to understand the situational variability of CEO regulatory focus. Given these aims, we first must understand which factors are likely to influence such variability.

Situational Variability of CEO Regulatory Focus: The Role of Job Demands

While regulatory focus theory acknowledges that prevention and promotion focus can be situationally induced (or strengthened/weakened), it offers less guidance on the specific types of situational features that might be expected to do so. Fortunately, interactionist research in industrial-organizational psychology and the executive job demands framework (Hambrick et al., 2005) offer us means to organize our efforts.

Person-situation interactionism and job demands. The interactionist perspective in industrial-organizational psychology focuses on how situational features, such as facets of the context in which an individual makes decisions, can activate individuals' cognitive and motivational attributes (Lievens et al., 2006; Tett and Guterman, 2000). For example, 'someone high in sociability behaves sociably only when other people are available with whom to engage' (Tett et al., 2021, p. 201). The guiding argument that motivates the interactionist perspective is that a situation must provide specific cues for a given attribute to be activated (Tett and Guterman, 2000). In the case of regulatory focus, this means that when an individual encounters relevant situational features, prevention and promotion focus might be stimulated to influence behaviour.

While numerous situational features might influence organizational members, the consensus in prior research is that the 'most obvious' (Tett and Burnett, 2003, p. 505) situational activator is a *job demand*, which refers to tasks and duties found in one's job description, as well as less formal prescriptions and expectations contained in-group norms and organizational features. This suggests that for CEOs, their own job demands are important situational influencers of regulatory focus. However, the job environments of CEOs differ considerably from those of other organizational members, 'making the known antecedents of employee job demands irrelevant to top executives' (Zhu et al., 2022, p. 608). Recognizing this, Hambrick et al. (2005) introduced the concept of *executive job demands* to reflect the reality that executives' job demands are distinct.

CEO job demands and the challenges that shape them. Hambrick et al. 'consider executive job demands to be a variation of the broader, well-established construct of job demands' such that they could alternatively be referred to as 'job demands at the executive level' (2005, p. 473). Thus, as with the general concept of job demands, executive job demands reflect key features of the objective job environment (Zhu et al., 2022).

In developing their framework of executive job demands Hambrick et al. (2005) explain that performance challenges, task challenges and executive aspirations are key determinants of job demands for executives. Performance challenges refer to the pressure that executives feel – especially from a company's investors and the board of directors – to deliver expected performance. Thus, performance challenges are high when executives cannot meet expectations. Building on this, Zhu et al. (2022) argue that performance challenges are effectively captured by considering a firm's performance relative to its competitors. Task challenges refer to conditions that may determine how easy or hard it is for executives to deliver performance according to expectations. Task challenges often increase as the operating environment of the firm becomes more hostile and top executives face increasing levels of pressure from key stakeholders (Zhu et al., 2022). Finally, executive aspirations relate to how motivated executives might be to lead their firm to superior performance. For instance, CEOs who have a stronger need for achievement (Miller and Dröge, 1986) are expected to have higher aspirations and place more demands on themselves (Hambrick et al., 2005). One key determinant of aspirations is tenure, as it impacts the type of goals that executives may have for their careers (Lee et al., 2018). For example, as CEOs' tenures progress, they are generally more risk averse (McClelland et al., 2012; Simsek, 2007) and focused on conserving their legacies (Krause and Semadeni, 2014; Matta and Beamish, 2008) such that they shy away from pursuing ambitious strategic initiatives such as CSR or mergers and acquisitions (Chen et al., 2019; Shi et al., 2017).

While attention to executive job demands and their consequences for executives and firms is increasing (e.g., Chen, 2015; Wang and Yen, 2015; Zhu et al., 2022), this work has generally considered the overall effect of executive job demands – that is, whether job demands are low or high – on outcomes such as CEO compensation and firm innovation. It is less clear how the discrete challenges – performance, task and aspirational – and attributes of executives' job environments that reflect them, influence top executives. As such, an opportunity is present to assess whether the challenges that are associated with CEOs' job demands and their interrelatedness influence situational variance in CEO regulatory focus in nuanced ways.

Overall, the foregoing suggests that CEO regulatory focus varies situationally and the challenges that shape their job demands are important antecedents of such situational variance. With this in mind, we extend research on CEO regulatory focus by investigating how it varies as a function of relative firm performance, stakeholder activism, and tenure.

The Influence of Relative Firm Performance on CEO Regulatory Focus

Likely the most important performance challenge for a CEO is their firm's relative performance (Zhu et al., 2022). Relative performance refers to the current financial performance of a firm compared to a reference group of peers (Drnevich and Kriauciunas, 2011; Ordanini and Rubera, 2008; Zhu et al., 2022). Intuitively, the most salient and relevant reference group – both from the perspective of the firm's CEO and its stakeholders – is a firm's direct competitors. Such peers operate under a similar set of environmental conditions, resource availability, and regulatory constraints as a focal firm, creating a context in which performance comparisons are relevant and meaningful (Cyert and March, 1963; Fiegenbaum et al., 1996; Greve, 1998, 2003). Additionally, the performance evaluation of executives typically takes place in context, factoring in the specific environment, challenges, and constraints in which a firm must operate (Short and Hubbard, 2023). In other words, while absolute performance matters, contextualized performance – performance relative to one's competitors – matters most (Zhang, 2021; Zhu et al., 2022). Thus, we conceptualize relative firm performance as a continuous construct, implying that a focal firm can exhibit different magnitudes of performance – both positive and negative – compared to its industry peers.

Compared to other situational features (e.g., stakeholder activism and tenure), we believe that relative firm performance acts as the main situational influencer of CEO regulatory focus. This is not only because CEOs must be expected to have at least some degree of control over relative firm performance, but also because it may be a natural impetus to adopt different manners of goal pursuit (i.e., 'should/ought self' versus 'could/ideal self') since it is the most salient indicator of a CEO's performance in their job and hence their job security. Accordingly, CEOs' regulatory focus will change to match situational requirements tied to relative firm performance outcomes through self-regulation (Brockner and Higgins, 2001; Higgins, 1997, 1998). Stated otherwise, relative firm performances naturally 'fits' with whether a CEO adopts a prevention- or promotion-oriented focus and 'feels right' about doing so (Higgins, 2005; Spiegel et al., 2004). Additionally, in competitive contexts, relative firm performance does much to clarify the plausibility of hopes and ambitions or a need to focus on duties, obligations and responsibilities. Therefore, we argue that relative firm performance will influence CEO regulatory focus through two main interlinked mechanisms suggested by regulatory focus theory: changing the nature of goal pursuit and influencing the salience of their needs for security and growth, respectively.

Relative firm performance influences a CEO's prevention focus via changes in the CEO's focus on minimum goals and oughts. As relative performance declines, the CEO's goals are likely to shift toward not letting the performance differential between their firm and their peers become too large. This can be considered a 'minimal goal' given its focus on preventing a worst-case scenario (Kammerlander et al., 2015), which is a type of goal typically associated with prevention focus (Brendl and Higgins, 1996). In this regard, meta-analytic evidence suggests that as individuals experience a greater need to demonstrate competence, they are increasingly motivated to avoid future losses, which corresponds with a prevention focus (Gorman et al., 2012). In line with security needs, CEO dismissal research demonstrates that lacklustre firm performance is the main reason why boards discharge CEOs (Gibbons and Murphy, 1990; Zhang, 2021). As Finkelstein et al. put it: 'the research is abundantly clear; poor organizational performance tends to precede executive departure' (2009, p. 168) and relative firm performance is a straightforward way to assess this (Zhu et al., 2022). We must expect CEOs to seek to avoid dismissal, which naturally aligns with a prevention focus. Consequently, poor relative firm performance may activate prevention focus given the 'fit' between declining relative performance and a more prevention-oriented approach to avoid further damage (Avnet and Higgins, 2006). Overall, declining relative firm performance can signal the forfeiture of ideal outcomes and a need for security, thereby activating or strengthening prevention focus in CEOs (Higgins, 1997, 1998). We hypothesize:

> *Hypothesis 1a:* Relative firm performance is negatively associated with CEO prevention focus.

Conversely, as relative firm performance increases, CEOs are placed in situations where they can strive for their ideal self and focus on achieving future positive outcomes (Idson et al., 2000). As relative performance improves, CEOs have the latitude to pursue more ambitious strategies; for instance, investing in strategic change (Jiang et al., 2020), exploration, (Kammerlander et al., 2015), mergers and acquisitions (Gamache et al., 2015), or corporate social responsibility (Chin et al., 2013). When placed in a position to pursue a broader set of ideal goals for the company that include but may extend beyond financial performance, a promotion focus and its association with a broader scope of attention is likely to become increasingly suited as a motivational orientation that allows CEOs to tackle these opportunities (Gamache et al., 2020). In terms of strengthening a need for growth, as relative firm performance increases, CEOs are also likely to feel more established in their roles. Improved relative firm performance enhances CEO status and power, augmenting their position in the firm (Finkelstein and D'Aveni, 1994). Given how boards of high performing firms are more likely than other boards to retain incumbent CEOs (Fredrickson et al., 1988), such CEOs can continue to institutionalize their power over time (Pfeffer, 1981), allowing their growth needs to come to the fore. Thus, increasing relative firm performance can signal gains, the attainment of ideal outcomes, and a need for growth, thereby activating or strengthening promotion focus in CEOs (Higgins, 1997, 1998). We posit:

> *Hypothesis 1b:* Relative firm performance is positively associated with CEO promotion focus.

In Hypothesis 1, we considered the baseline effect of relative firm performance on CEO regulatory focus. However, if our theoretical rationale is correct, this baseline relationship should also be subject to the influence of other situational features that determine a CEO's job demands. Although prior work does not expound on the possible interactions between the three main determinants of executive job demands and their joint influence on executive characteristics, Hambrick et al. suggest that interactions between these determinants may have important consequences when they postulate there 'is an interactive effect between [other] executive job demands and performance on subsequent executive self-confidence and risk-taking' (2005, p. 482). Accordingly, we theorize and test the moderating influences of stakeholder activism (a key task challenge) and CEO tenure (decisive for aspirations) on the relationship between relative firm performance and CEO regulatory focus. In the context of a CEO's job demands, stakeholder activism – especially in the form of proxy proposals – represents an important task challenge for CEOs because it is reflective of environmental hostility (e.g., Zhu et al., 2022). At a minimum, stakeholder activism may be a distraction, but it can also pressure CEOs to substantially change their strategies to achieve desired relative performance outcomes. Indeed, Lee et al. explain that stakeholder activism can 'affect how CEOs – both incumbent and incoming CEOs – view the difficulty of a given post, which may affect their behaviors and expectations' (2022, p. 191). CEO tenure embodies the accumulation of experiences, knowledge and familiarity a CEO has with the firm's processes, stakeholders and challenges, thereby playing a pivotal role in shaping their aspirations and orientation toward goal pursuit. These aspirations are a key determinant of a CEO's job demands (Hambrick et al., 2005; Zhu et al., 2022). We believe that these two factors – stakeholder activism and CEO tenure – are most accurately positioned as moderators of the relative performance–regulatory focus relationship. This is because while CEOs are expected to have at least some degree of control over their firm's relative performance, stakeholder activism is externally imposed by the firms' stakeholders and tenure is external to the CEO in the sense that the passage of time is inevitable.

The Amplifying Role of Stakeholder Activism

Navigating stakeholder relationships is central to the role of a CEO and is associated with key strategic outcomes (Gamache et al., 2020; Hambrick and Wowak, 2021b; Neville, 2022). When stakeholders grow dissatisfied with the firm and its leaders' efforts, they often turn to activism (DesJardine and Shi, 2023; Lee et al., 2022). Stakeholder activism constitutes instances in which stakeholders mobilize to place pressure on a firm to adopt certain policies and practices they believe advance their, the firm's, or society's interests (Eesley et al., 2016; Vasi and King, 2012). In this process, activist stakeholders deploy various tactics to influence the firm's decision-makers and the wider public: boycotts, negative media campaigns, and, as will be our empirical focus, proxy proposals (Gamache et al., 2020; Gupta and Briscoe, 2020; McDonnell et al., 2015). Proxy proposals, which continue to grow in prevalence, involve written proposals submitted to the firm by activists who purchase at least a minimal level of share ownership (Goranova and Ryan, 2014). For example, the Interfaith Center on Corporate Responsibility (ICCR) recently targeted 18 companies via proxy proposal asking them to publish quantitative data on their workforce composition, recruitment, retention and promotion rates by gender, race and ethnicity. Companies receiving this resolution included American Express, Hasbro, Lululemon, Netflix, PayPal, and Salesforce (ICCR, 2022). Relative to starting a petition or participating in a boycott, which requires relatively little effort, filing proxy proposals relies on 'the quality of resources that a small number of highly dedicated activists bring into the protest' (i.e., 'elite' participation; den Hond and de Bakker, 2007, p. 911), such that this particular form of activism is a highly salient form of activism likely to influence a CEO's job.

Although activist stakeholders make a wide array of demands and some of these may seem difficult to tie directly to relative firm performance, engagement with a broad array of stakeholders has increasingly been viewed as 'a legitimate part of corporate strategy' in the eyes of both shareholders and other influential firm constituents (Herremans et al., 2009; Ioannou and Serafeim, 2015, p. 1058). Further, the relationship between how a firm engages with stakeholders (and the issues it focuses on) and financial performance remains unclear (Garcia-Castro and Francoeur, 2016; Hafenbrädl and Waeger, 2017). For these reasons, it is possible to see how an array of stakeholder issues *could* be tied to relative firm performance in the eyes of the CEO. As such, we believe that stakeholder activism will amplify the main relationship between relative firm performance and CEO regulatory focus.

On the one hand, when relative firm performance is lower and changes the nature of goal pursuit, stakeholder activism may further highlight problems inherent in firms that are already doing poorly relative to their competitors. Activism, therefore, can act as the impetus a CEO needs in terms of justifying what 'should' be done to correct their course of action (King, 2008). In terms of how declining relative firm performance increases security needs, stakeholder activism can also be viewed as a public rebuke of a company's leaders (Lee et al., 2022), drawing negative attention to the firm (Briscoe and Gupta, 2016; King and Soule, 2007). In doing so, stakeholder activism can exert a reputational toll on the firm and its leadership, at times placing boards in a position to penalize CEOs (Lee et al., 2022). Recognizing this, CEOs' security needs are expected to be further heightened. Thus, given the negative baseline relationship between relative firm performance and prevention focus, stakeholder activism may reinforce an apparent failure in goal pursuit and further induce a prevention focus due to added situational pressure (Worthy et al., 2009). In other words, stakeholder activism can heighten the salience of 'shoulds' and CEOs' security needs such that the main relationship between relative firm performance and CEO prevention focus becomes stronger. As such, we hypothesize:

> *Hypothesis 2a:* The negative relationship between relative firm performance and CEO prevention focus becomes stronger (more negative) as stakeholder activism increases.

On the other hand, as higher relative performance activates a promotion focus, stakeholder activism can reinforce the 'coulds' that CEOs strive for by explicitly identifying areas in which the firm can improve its environmental, social and governance policies and thus tap into the 'ideal self' goals consistent with a promotion focus (Gamache et al., 2020). For example, stakeholder activism can reveal opportunities for product and process innovation, accessing key resources and capabilities, improving the firm's reputational standing with critical audiences, and generally creating more favourable nonmarket conditions for the firm (Austin and Seitanidi, 2012; McDonnell, 2016; Odziemkowska, 2022). In doing so, stakeholder activism is consistent with promotion focus' willingness to change and to 'deviate from established paths' (Kammerlander et al., 2015, p. 586). As such, stakeholder activism can also further strengthen the relationship between relative firm performance and promotion focus by increasing CEOs' sense of insuring against errors of omission by not wanting to miss these opportunities. In other words, stakeholder activism will be viewed as an opportunity for a CEO to excel in their role and achieve ideal outcomes (Worthy et al., 2009), enhancing the positive relationship between relative firm performance and CEO promotion focus. As such, we hypothesize:

> *Hypothesis 2b:* The positive relationship between relative firm performance and CEO promotion focus becomes stronger (more positive) as stakeholder activism increases.

The Attenuating Role of CEO Tenure

As discussed above, a CEO's tenure is connected to their aspirations. Importantly, because of tenure's link to aspirations, a CEO's time in office can influence their receptiveness to performance feedback (Hambrick and Fukutomi, 1991; Hou et al., 2017). For example, recently appointed CEOs may feel they have more to prove and greater motivation to demonstrate their efficacy and to establish their reputations. Conversely, those who have long tenures and records are expected to be more complacent (Hambrick and Fukutomi, 1991; Hambrick et al., 2005). This underscores how, as tenure increases, both the nature of goals CEOs set for their firms and their own needs for security/growth are less influenced by relative firm performance and external factors – they simply have a reduced motivation to prove their quality as it becomes self-evident with time (Short and Hubbard, 2023). In line with these arguments, we theorize that CEO tenure will attenuate the relationship between relative firm performance and regulatory focus. In other words, our general expectation is that increasing tenure will make it such that CEOs 'experience only the bare demands presented by contextual conditions (and may even selectively ignore or avoid those demands)' (Hambrick et al., 2005, p. 477).

First, when relative firm performance declines, the diminishing aspirations that come with increasing tenure are likely to make CEOs less concerned with performance feedback as a situational trigger influencing the nature of their motivational orientation and goal pursuit. In other words, as CEOs advance in their tenure, they are likely to become desensitized to negative performance feedback as a result of having been exposed to it – perhaps often – before. This notion is extensively documented in research in developmental psychology, which shows how individuals become increasingly desensitized to even extreme negative stimuli as their exposure to them increases over time (e.g., Gaylord-Harden et al., 2017; Kennedy and Ceballo, 2016; Krahé et al., 2011; Smith and Donnerstein, 1998). Thus, in terms of a CEO's strategic goal pursuit, declining relative firm performance is viewed as less of a forfeiture of a desired outcome as tenure increases. Further, as it relates to lower relative firm performance and heightened CEO security needs, tenure again buffers against this effect. This is because CEOs are aware that 'CEO-turnover sensitivity to firm performance declines over a CEO's tenure', i.e., the objective likelihood of forced turnover decreases with tenure because boards typically become increasingly confident in a CEO's abilities over time (Dikolli et al., 2014, p. 282). While lower relative performance is thus a situational antecedent of prevention focus that increases the salience of dismissal risk at any stage of tenure, increasing tenure lessens the severity of this risk and thus dampens the degree to which its salience increases. As such, we predict:

> *Hypothesis 3a:* The negative relationship between relative firm performance and CEO prevention focus becomes weaker (less negative) as CEO tenure increases.

Second, we similarly propose that the positive effect of relative firm performance on CEO promotion focus becomes weaker with increasing CEO tenure. If relative firm performance is favourable, it aligns with CEOs' growth needs and stimulates their desire to achieve their own ambitions and ideals, which, in turn, activates or strengthens promotion focus. However, prior research suggests that increasing CEO tenure reduces CEOs' personal ambition levels and thus task interest (Finkelstein et al., 2009, p. 88). Indeed, there is ample evidence that as CEO tenure increases, CEOs become more 'comfortably ensconced' (Hambrick and Fukutomi, 1991, p. 726), inclined to 'rest on their laurels' (Hambrick et al., 2005, p. 478), and increasingly reluctant to change (Musteen et al., 2006). Underscoring this, Huang et al. note how as CEO tenure increases, 'CEOs will become more reluctant to deviate' and that such long-tenured executives will 'favor the status quo' (2021, p. 29). Thus, while tenure is likely to act as a force that desensitizes CEOs to negative performance feedback, it also acts as a driver of complacency in the face of positive performance feedback. Consequently, in the presence of these reduced ambitions, we predict that a CEO's promotion focus will fluctuate less in response to relative performance increases.

> *Hypothesis 3b:* The positive relationship between relative firm performance and CEO promotion focus becomes weaker (less positive) as CEO tenure increases.

METHODS

Empirical Setting and Sample

Our sample is based on firms listed in the S&P 500 and includes data on these firms from 2004 through 2014. To ensure comparability of performance measures, we follow prior literature on CEOs and firm performance and exclude financial services firms (Graf-Vlachy et al., 2020). We selected the 2004–2014 timeframe because the breadth of economic conditions ensures that our outcomes are generalizable throughout the economic cycle (NBER, 2023).

To test our hypotheses, we first assembled a comprehensive dataset from a number of sources, including Compustat, Execucomp, and Institutional Shareholder Services (ISS; formerly RiskMetrics). We then gathered data on CEOs' letters to shareholders through a combination of reputable annual report aggregators (e.g., Mergent Online and Thomson One) as well as a large volume of targeted searches specific to each CEO-year combination in our sampling frame. When shareholder letter data was incomplete or missing across any of these datasets, we conducted specific web searches to improve the accuracy and comprehensiveness of our sample to the greatest extent possible. Notably, some firms did not publish letters to shareholders as a matter of principle, leading to their exclusion from the sample. After accounting for missing data, our data set was comprised of 2537 firm-year observations from 377 firms and 594 CEOs.

Dependent Variable

CEO regulatory focus. To measure CEOs' regulatory focus, we content-analysed CEOs' letters to shareholders (Gamache et al., 2015). Letters to the shareholders offer a consistent, comparable, and annual form of communication ideal for longitudinal research (Eggers and Kaplan, 2009). Prior work provides strong evidence that the CEO is the primary author of the letter or is at least highly involved in its creation (Duriau et al., 2007; Eggers and Kaplan, 2009; Gamache et al., 2015, 2020). Existing research also demonstrates repeatedly that the content of letters to shareholders predicts important firm-level outcomes, which is most readily explained by the fact that CEOs indeed disclose material information corresponding with their motivations in these letters (e.g., Barr et al., 1992; Daly et al., 2004; Nadkarni and Barr, 2008; Nadkarni and Narayanan, 2007; Yadav et al., 2007). Likewise, the words CEOs use in letters to shareholders are closely related to the words they use in press releases, public speeches, and when answering questions in interviews (correlated at $r \geq 0.75$; Nadkarni and Chen, 2014). Furthermore, because a leader's regulatory focus tends to spill over onto their followers (Johnson et al., 2017; Kark and van Dijk, 2007), we expect that if other executives are involved in the creation of the letters, the ultimate ideas and writing will still reflect the CEO's regulatory focus.

To measure CEO prevention and promotion focus, we analyse CEO letters to shareholders using Gamache et al.'s (2015) dictionaries that were previously validated for content, convergent, and discriminant validity. To ensure that our shareholder letter data was coded reliably, we used the content analysis software Linguistic Inquiry Word Count (Pennebaker et al., 2015). Our final measures for *CEO prevention* and *CEO promotion focus* were the proportion of prevention/promotion-related words within each letter (Gamache et al., 2015, 2020). CEOs' regulatory focus varied noticeably across these letters, as the average per cent change in either focus exceeded 10 per cent across 10 of the study's 11 years when words from either dictionary were used (with the greatest single-year change exceeding 30.5 per cent). We provide a sample of quotations from CEOs high in prevention or promotion focus, respectively, in Table II.

Table II. Sample quotes from CEOs high in prevention or promotion focus

Regulatory focus	*Example quotations*
Prevention focus	
Example 1	'Our near-term goals include: Aggressive and vigilant pursuit of our RMBS cases [and] proactive and urgent focus on risk and loss management and mitigation across the enterprise'
Example 2	'There is more focus on safety and greater urgency around ensuring that safety concerns are quickly and fully disclosed, thoroughly explored and considered, and aggressively recognized in setting payment and usage policy. The implication for [Company] and our industry colleagues is that we must focus even more intently on safety risk management'
Promotion focus	
Example 1	'Our achievements in 2014 paint a picture of [Company's] strong momentum and speak to our progress as we work towards our long-term goal of becoming a four-billion-dollar business at retail'
Example 2	'Our focus in 2004 will be on executing our growth strategies with continuous improvements in quality and cost. I believe the stage is set for our company to achieve record results again in the coming year'

Independent Variable and Moderators

Relative firm performance. Following prior work (e.g., Chen and Miller, 2007; Huson et al., 2004; Lim and McCann, 2014; Miller and Chen, 2004), we measured firm performance relative to a firm's peers in the same industry (defined at the two-digit SIC level). To do so, we calculated relative firm performance as firm ROA in the focal year minus the median ROA of its peers based on Compustat data. We measured relative firm performance using ROA for four key reasons: (1) it is a predominant measure used in behavioural work that assesses relative performance and aspirations, (2) it signals a company's ability to find and capture opportunities in relation to its underlying assets, which is conceptually linked to goal pursuit, (3) it is aligned with how CEOs and key evaluators such as security analysts benchmark company performance, and (4) it is often less susceptible to manipulation than other performance metrics (Bromiley, 1991; Bromiley and Harris, 2014; Shinkle, 2012; Titus et al., 2020).

Stakeholder activism. We measured stakeholder activism directed toward a firm using the annual count of shareholder proxy proposals submitted per ISS (Gamache et al., 2020; Lee et al., 2022; McDonnell et al., 2015). Shareholders with a minimum threshold of ownership ($2000 or 1 per cent of shares outstanding) can submit nonbinding proposals for vote at the firm's annual meeting (Goranova and Ryan, 2014). Given the low threshold of ownership required, many proxy proposals originate from a broad array of stakeholders that are not necessarily traditional owners (i.e., those that seek to maximize long-term value). Thus, by using an annual count of all shareholder proxy proposals, we take a broad perspective on stakeholder activism that accounts for the added pressure a

CEO might face from both traditional shareholders and other stakeholders attempting to exert their influence via proxy proposals.

CEO tenure. Based on Execucomp and BoardEx data, we measure tenure as the number of consecutive years a CEO has been in office at the focal firm (Hubbard et al., 2017).

Control variables. We control for several variables at the level of the CEO, the firm, the industry, and the language of the individual letter to shareholder. At the CEO level, we control for CEO power and option pay. We operationalize CEO power as the sum of the standardized values of three common measures of CEO power: CEO stock ownership, duality, and the share of directors that joined the board after the CEO took office (Wiersema and Zhang, 2011). CEO option pay (Gamache et al., 2015) is included as the value of vested and unvested options held by the CEO as per Execucomp.

At the firm-level, we control for firm size and leverage. Firm size is measured as the natural logarithm of total assets, and firm leverage, i.e., potential slack, as the debt-to-equity-ratio (Bourgeois, 1981) based on Compustat data. At the industry-level, we control for industry performance, dynamism, munificence, and complexity. Controlling for industry performance is important because boards may not adjust completely for peer-group performance when evaluating CEOs. We measure industry performance as the two-digit SIC median ROA (Jenter and Kanaan, 2015). We control for industry dynamism, munificence, and complexity using the operationalizations of Keats and Hitt (1988) to capture industry effects (Wallace et al., 2010).

Finally, we control for various characteristics of the language used in the individual letter to the shareholder, specifically its valence, extremity, and emotionality. This is to address the possibility that, despite their extensive validation, the regulatory focus measures may be influenced by positivity or negativity in a CEO's language resulting from favourable or unfavourable firm performance. We therefore used the software package Evaluative Lexicon 2.0 (Rocklage et al., 2018) to capture the mean valence (i.e., positivity/negativity), extremity, and emotionality of the words used in every letter to the shareholder. The software package measures the properties of text using human-rated scores for more than 1500 words that indicate evaluations and which were each rated by approximately 30 different human raters. It was validated extensively, for instance by demonstrating that the scores derived from product evaluation texts predicted product users' self-reported ratings of products, and that words rated as more emotional tended to be used jointly with more emotional reactions (e.g., 'feel') rather than unemotional reactions (e.g., 'think') (Rocklage et al., 2018). The ratings in the software further correlate strongly with those in an earlier version, which has been additionally validated using both laboratory experiments and natural archival texts (Rocklage and Fazio, 2015, 2016; Rocklage et al., 2018). Given the elaborate process of dictionary construction and validation underlying the Evaluative Lexicon, it is not surprising that it was found to explain a much greater proportion of variance in valence, extremity, and positivity than competing approaches, e.g., the comparably short positive/negative emotion dictionaries supplied with the software LIWC (Pennebaker et al., 2015; Rocklage et al., 2018).

Econometric Approach and Consideration of Endogeneity

We performed panel regression analyses and accounted for potential endogeneity in several ways. First, and most importantly, we addressed simultaneity, (i.e., the fact that regulatory focus may drive relative firm performance; Wallace et al., 2010), by including a one-year lag of our dependent variable as a predictor. Since doing so introduces bias to traditional panel fixed-effects models (Nickell, 1981) – a problem that is increasingly recognized in management research (e.g., Gupta et al., 2017; Pollock et al., 2015) – we employ a system GMM estimator (Blundell and Bond, 1998) with Windmeijer-corrected standard errors, and apply an orthogonal deviations transformation to minimize losses due to gaps in the data (Arellano and Bover, 1995; Roodman, 2009). In all models, neither the AR(2) test for autocorrelation of the residuals nor the robust Hansen test of overidentifying restrictions are significant, suggesting joint validity of the instrument structure created by the estimator. Similarly, none of the Difference-in-Hansen tests of exogeneity of instrument subsets was significant, indicating mean-stationarity and hence justifying the use of a system GMM model. Also, the number of instruments was much lower than the number of observations, alleviating overfitting concerns (Roodman, 2009).

Second, we addressed unobserved heterogeneity through the GMM estimator's first-differencing within CEOs. This is akin to introducing CEO fixed effects into our models, controlling for all time-invariant CEO characteristics without incurring the abovementioned bias in the model. In addition, we explicitly include industry dummies to account for persistent industry effects. Third, we addressed the potential issue of contemporaneity by including year dummies (Certo and Semadeni, 2006).

To simplify interpretation, we standardized all variables in the regression analyses. As prevention and promotion focus are theoretically independent (Lanaj et al., 2012), we estimated them in separate models. When doing so, we also controlled for the respective other regulatory focus (i.e., we control for prevention focus in the models predicting promotion focus, and vice versa; Gamache et al., 2015, 2020). All analyses were performed using Stata 17.

RESULTS

Table III presents means, standard deviations, and correlations among the unstandardized variables. Within-CEO variance was a substantial part of total variance for prevention focus (34 percent) and for promotion focus (41 percent). The correlation between prevention and promotion focus was $r = -0.11$, echoing the results of Gamache et al. (2015, 2020). Variance inflation factors were all below 2.88, well below the common cutoff value of 10, suggesting that multicollinearity was not a substantive concern in our analyses (Cohen et al., 2003).

Table IV shows the results of our analyses. Models 1 and 5 include only control variables. Models 2 and 6 add the direct effect of relative firm performance, Models 3 and 7 additionally include the interaction of relative firm performance with stakeholder activism, and Models 4 and 8 include the interaction of relative firm performance with CEO tenure.

Models 2, 3 and 4 show the expected negative coefficient for the direct effect of relative firm performance on prevention focus, but it is not significant in any model ($\beta = -0.071$,

Table III. Correlations and descriptive statistics

Variable		Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	CEO promotion focus$_t$	0.020	0.007																	
2	CEO prevention focus$_t$	0.002	0.003	−0.112																
3	CEO promotion focus$_{t-1}$	0.020	0.007	0.546	−0.092															
4	CEO prevention focus$_{t-1}$	0.002	0.003	−0.086	0.602	−0.102														
5	Relative firm performance	6.875	10.522	0.040	0.026	0.059	0.030													
6	Stakeholder activism	1.738	2.799	−0.105	0.121	−0.101	0.104	0.021												
7	CEO tenure	6.127	5.537	−0.026	−0.031	−0.018	−0.022	0.076	−0.042											
8	CEO- power	0.066	0.981	−0.042	−0.031	−0.038	−0.036	0.018	−0.040	0.434										
9	CEO option pay ($M)	23.321	39.963	0.005	−0.021	0.013	−0.035	0.113	0.081	0.187	0.178									
10	Firm size	9.400	1.189	−0.156	0.166	−0.139	0.156	−0.041	0.589	−0.112	−0.117	0.121								
11	Leverage	2.135	10.601	−0.004	−0.009	−0.020	0.005	−0.019	0.059	0.025	−0.018	0.001	−0.017							
12	Industry performance	−0.122	7.952	−0.011	−0.075	−0.023	−0.062	−0.788	−0.070	−0.023	0.057	−0.006	−0.047	0.022						
13	Industry dynamism	1.003	0.005	0.090	−0.045	0.070	−0.053	−0.097	−0.072	−0.009	−0.044	−0.066	−0.100	−0.001	0.111					
14	Industry munificence	1.050	0.066	−0.071	0.080	−0.036	0.058	0.107	0.058	0.002	0.070	0.077	0.065	−0.023	−0.047	−0.260				
15	Industry complexity	0.852	0.177	0.049	−0.028	0.034	−0.026	0.032	0.008	0.048	0.003	0.078	0.045	0.002	0.010	−0.043	−0.003			
16	Language valence	6.625	0.529	0.084	−0.108	0.075	−0.063	0.048	−0.047	−0.050	0.042	0.107	−0.022	0.024	0.060	−0.011	−0.030	0.047		
17	Language extremity	2.563	0.249	−0.024	−0.055	0.019	−0.046	0.080	−0.051	−0.023	0.036	0.101	−0.036	0.015	0.009	−0.001	−0.004	0.052	0.563	
18	Language emotionality	3.637	0.378	−0.089	−0.087	−0.034	−0.068	0.076	0.029	−0.025	0.109	0.080	−0.007	0.006	−0.010	0.019	0.015	0.056	0.202	0.465

Note: N = 2537. Correlations greater than |0.039| exhibit p-values below 0.05. Year and industry dummies not included in this table.

Table IV. Results of system GMM estimation of CEO prevention focus (models 1–4) and CEO promotion focus (models 5–8)

	CEO prevention focus											
	(1)			*(2)*			*(3)*			*(4)*		
Variable	β	*SE*	*p*	β	*SE*	*p*	β	*SE*	*p*	β	*SE*	*p*
CEO prevention focus$_{t-1}$	0.179	0.046	0.000	0.179	0.046	0.000	0.188	0.053	0.000	0.208	0.051	0.000
CEO promotion focus$_{t-1}$												
CEO prevention focus$_t$												
CEO promotion focus$_t$	−0.175	0.159	0.271	−0.059	0.082	0.470	−0.074	0.075	0.320	−0.082	0.068	0.228
CEO power	0.012	0.024	0.623	0.024	0.020	0.243	0.030	0.020	0.126	0.033	0.023	0.154
CEO option pay	−0.020	0.027	0.474	−0.007	0.025	0.764	0.009	0.030	0.763	−0.005	0.032	0.888
Firm size	0.086	0.078	0.273	0.090	0.037	0.015	0.052	0.038	0.176	0.080	0.038	0.034
Leverage	−0.001	0.028	0.979	−0.007	0.023	0.769	−0.011	0.020	0.574	−0.017	0.025	0.508
Industry performance	−0.105	0.199	0.598	−0.099	0.074	0.177	−0.053	0.066	0.421	−0.064	0.074	0.390
Industry dynamism	0.034	0.028	0.230	0.033	0.019	0.078	0.037	0.019	0.051	0.032	0.021	0.124
Industry munificence	0.035	0.030	0.241	0.022	0.021	0.309	0.015	0.021	0.483	0.022	0.023	0.346
Industry complexity	0.001	0.022	0.954	0.003	0.017	0.877	−0.014	0.016	0.376	−0.001	0.016	0.972
Language valence	−0.058	0.031	0.063	−0.059	0.030	0.050	−0.080	0.035	0.024	−0.058	0.030	0.057
Language extremity	0.007	0.031	0.820	−0.001	0.027	0.984	0.019	0.031	0.538	0.017	0.029	0.542
Language emotionality	−0.036	0.031	0.248	−0.017	0.023	0.473	−0.031	0.024	0.194	−0.030	0.026	0.255
Relative firm performance				−0.071	0.102	0.243	−0.066	0.100	0.256	−0.067	0.086	0.219
Stakeholder activism							0.041	0.029	0.078			
Relative firm performance × Stakeholder activism							0.048	0.030	0.054			
CEO tenure										−0.019	0.027	0.242
Relative firm performance × CEO tenure										0.024	0.031	0.220
Constant	−0.269	0.567	0.634	−0.063	0.205	0.759	0.033	0.211	0.874	−0.002	0.202	0.991
Observations		2537			2537			2537			2537	
AR(1) p		0.000			0.000			0.000			0.000	
AR(2) p		0.402			0.304			0.311			0.270	
Hansen p		0.503			0.747			0.662			0.441	

Note: Robust standard errors. All models include year and industry dummies. One-tailed tests for hypothesized variables, two-tailed tests for control variables. Standardized coefficients reported.

CEO promotion focus											
(5)			(6)			(7)			(8)		
β	SE	p	β	SE	p	β	SE	p	β	SE	p
0.245	0.042	0.000	0.240	0.043	0.000	0.268	0.040	0.000	0.296	0.039	0.000
−0.089	0.133	0.504	0.031	0.088	0.721	−0.047	0.085	0.578	−0.040	0.078	0.603
−0.050	0.026	0.056	−0.072	0.029	0.012	−0.041	0.028	0.136	−0.068	0.030	0.023
0.005	0.027	0.865	0.008	0.025	0.753	0.002	0.023	0.943	0.039	0.023	0.089
−0.133	0.069	0.054	−0.151	0.041	0.000	−0.150	0.040	0.000	−0.151	0.034	0.000
0.010	0.026	0.688	0.024	0.030	0.433	0.018	0.030	0.554	0.008	0.027	0.757
0.010	0.156	0.949	0.189	0.081	0.020	0.125	0.072	0.084	0.096	0.068	0.160
0.038	0.032	0.224	0.046	0.034	0.176	0.041	0.032	0.201	0.039	0.033	0.246
−0.023	0.026	0.363	−0.046	0.028	0.097	−0.040	0.027	0.144	−0.036	0.025	0.145
−0.019	0.021	0.370	−0.031	0.024	0.206	−0.020	0.024	0.389	−0.011	0.020	0.575
0.071	0.028	0.012	0.075	0.025	0.003	0.071	0.027	0.008	0.045	0.024	0.063
−0.054	0.032	0.091	−0.080	0.028	0.005	−0.079	0.029	0.006	−0.069	0.027	0.010
−0.069	0.028	0.015	−0.082	0.027	0.002	−0.074	0.027	0.005	−0.101	0.025	0.000
			0.170	0.060	0.003	0.116	0.055	0.018	0.112	0.053	0.017
						0.006	0.029	0.414			
						−0.007	0.026	0.395			
									−0.037	0.029	0.105
									−0.095	0.028	0.001
0.174	0.420	0.679	0.296	0.186	0.112	0.268	0.183	0.143	0.356	0.182	0.051
	2537			2537			2537			2537	
	0.000			0.000			0.000			0.000	
	0.386			0.609			0.620			0.763	
	0.545			0.272			0.233			0.498	

$p = 0.243$, $\beta = -0.066$, $p = 0.256$ and $\beta = -0.067$, $p = 0.219$), failing to offer support for Hypothesis 1a. Model 6 shows a positive coefficient for the effect of performance on promotion focus ($\beta = 0.170$, $p = 0.003$), directly supporting Hypothesis 1b. Models 7 and 8 retain this significant direct effect ($\beta = 0.116$, $p = 0.018$ and $\beta = 0.112$, $p = 0.017$), even in the presence of either moderator, offering strong support for Hypothesis 1b.

Turning our attention to our hypothesized interactions, we see mixed results. Looking at Model 3, the coefficient for the interaction term between relative firm performance and stakeholder activism is positive ($\beta = 0.048$, $p = 0.054$). While this was unexpected in view of Hypothesis 2a, we believe that this finding can best be explained by the likelihood that stakeholder activism substitutes for the effect of relative firm performance in terms of how it influences CEO prevention focus. Indeed, in this model, the main effect of stakeholder activism is also positive ($\beta = 0.041$, $p = 0.078$), consistent with this perspective. Figure 1 plots this interaction. In looking at Model 7, we note that the coefficient for the interaction term between relative firm performance and stakeholder activism is non-significant ($\beta = -0.007$, $p = 0.395$), indicating that Hypothesis 2b is not supported in the main model.

Finally, in considering the moderating influence of CEO tenure, we see that the interaction term in Model 4 between relative firm performance and tenure is non-significant ($\beta = 0.024$, $p = 0.220$), failing to offer support for Hypothesis 3a. Lastly, the coefficient for the interaction term in Model 8 between relative performance and tenure is negative ($\beta = -0.095$, $p = 0.001$), offering strong support for Hypothesis 3b. Figure 2 plots this interaction.

To better understand the nature of the relationship between relative firm performance, stakeholder activism, and tenure on CEO regulatory focus, we employed a marginal effects approach, also known as extended simple slopes analysis, which involves looking simultaneously at the parameter estimates for the independent variable and interaction

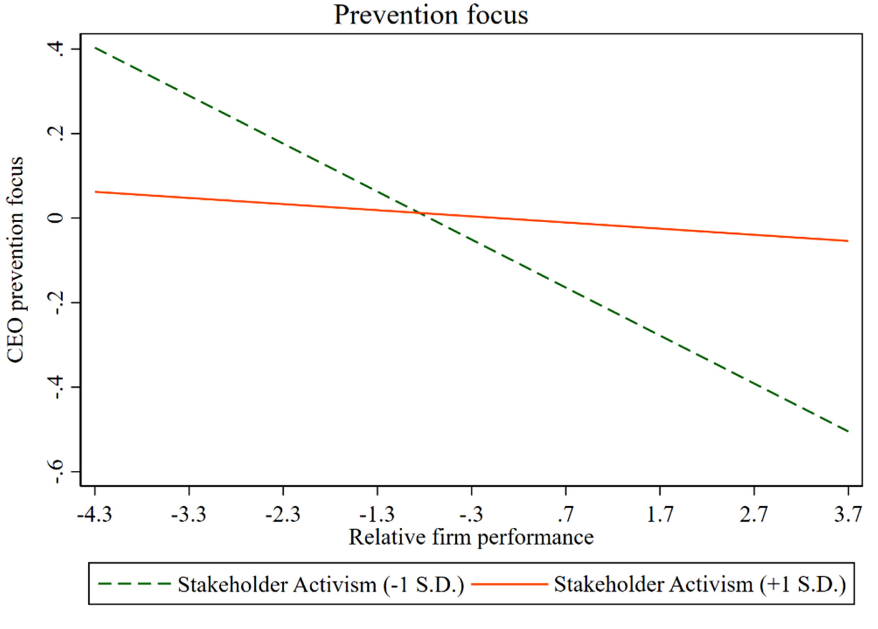

Figure 1. Interactive effects of relative firm performance and stakeholder activism on prevention focus

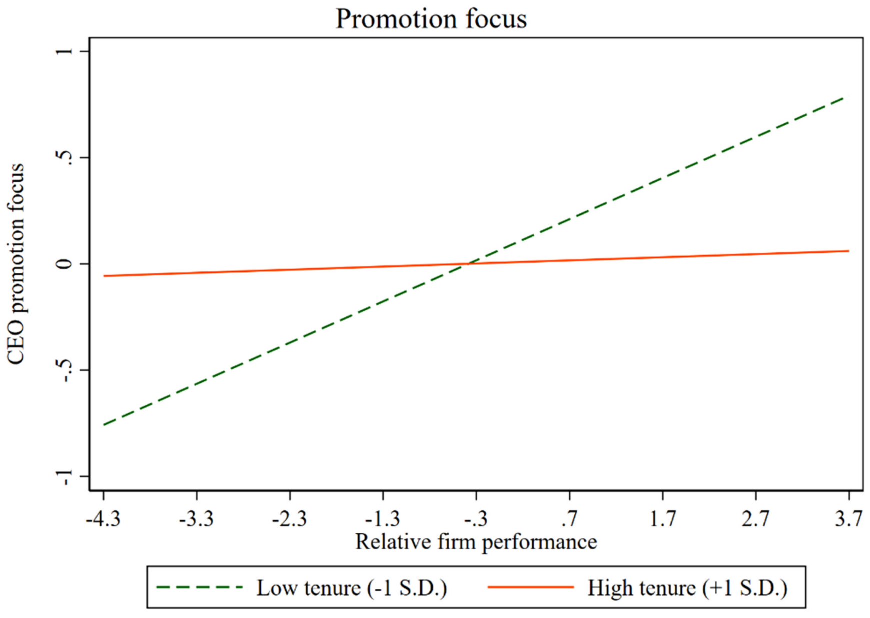

Figure 2. Interactive effects of relative firm performance and CEO tenure on promotion focus

Table V. Marginal effects of relative performance and stakeholder activism interaction for CEO prevention focus

Percentile level of stakeholder activism	*Marginal effect of firm performance at different levels of stakeholder activism*	
	dy/dx	*95% confidence interval*
25th	−0.095	−0.303, 0.114
50th	−0.077	−0.277, 0.123
75th	−0.059	−0.254, 0.135
90th	−0.006	−0.197, 0.184
99th	0.135	−0.134, 0.405

Note: N = 2537. *dy/dx* refers to the marginal effect.

terms from our models (Busenbark et al., 2022). The marginal effects approach has been described as a 'precise way to interpret a main effect in the presence of a moderator because it addresses the disadvantages of looking at only the main effect in isolation as well as of using just conventional simple slopes analyses' (Busenbark et al., 2022, p. 152). Practically speaking, this approach leverages the *margins* and *marginsplot* commands in Stata to estimate and graph any significant interactions. To implement this approach, we specified values for stakeholder activism and tenure representing their values at the 1st, 10th, 25th, 50th, 75th, 90th, and 99th percentiles (Busenbark et al., 2022).[1] We report marginal effects and confidence intervals in Tables V–VIII and visually display all four interactions in Figures 3–6.

Table VI. Marginal effects of relative performance and stakeholder activism interaction for CEO promotion focus

Percentile level of stakeholder activism	*Marginal effect of firm performance at different levels of stakeholder activism*	
	dy/dx	*95% confidence interval*
25th	0.121	0.007, 0.234
50th	0.118	0.009, 0.228
75th	0.115	0.007, 0.224
90th	0.108	−0.016, 0.231
99th	0.087	−0.150, 0.324

Note: N = 2537. *dy/dx* refers to the marginal effect.

Table VII. Marginal effects of relative performance and CEO tenure interaction for CEO prevention focus

Percentile level of CEO tenure	*Marginal effect of firm performance at different levels of CEO tenure*	
	dy/dx	*95% confidence interval*
1st	−0.090	−0.270, 0.089
10th	−0.086	−0.263, 0.090
25th	−0.082	−0.256, 0.092
50th	−0.070	−0.239, 0.100
75th	−0.058	−0.228, 0.113
90th	−0.041	−0.222, 0.140
99th	0.020	−0.257, 0.297

Note: N = 2537. *dy/dx* refers to the marginal effect.

Table VIII. Marginal effects of relative performance and CEO tenure interaction for CEO promotion focus

Percentile level of CEO tenure	*Marginal effect of firm performance at different levels of CEO tenure*	
	dy/dx	*95% confidence interval*
1st	0.203	0.083, 0.324
10th	0.187	0.071, 0.303
25th	0.171	0.059, 0.283
50th	0.122	0.018, 0.227
75th	0.074	−0.029, 0.177
90th	0.009	−0.104, 0.122
99th	−0.233	−0.445, −0.022

Note: N = 2537. *dy/dx* refers to the marginal effect.

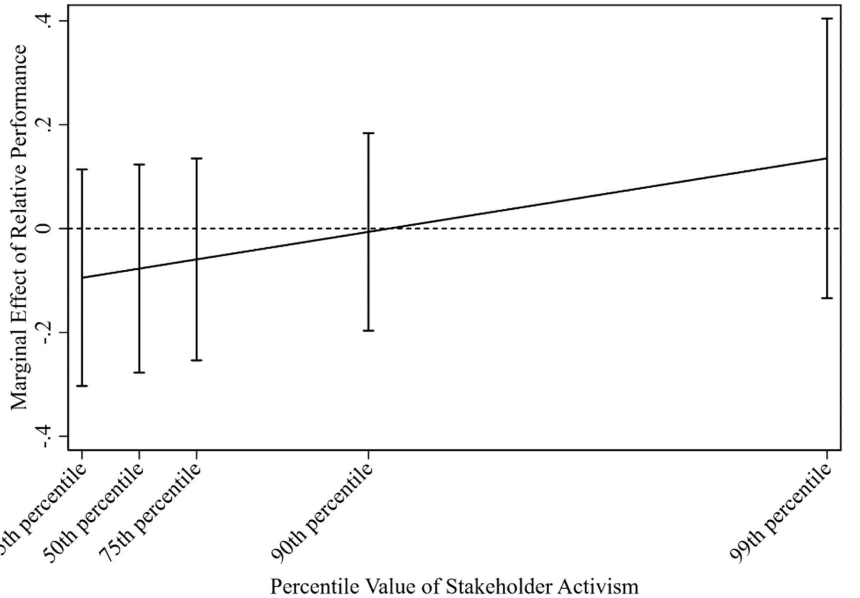

Figure 3. Marginal effects of relative performance and stakeholder activism interaction on CEO prevention focus

Note: The vertical lines represent the 95% confidence intervals for the marginal effects presented.

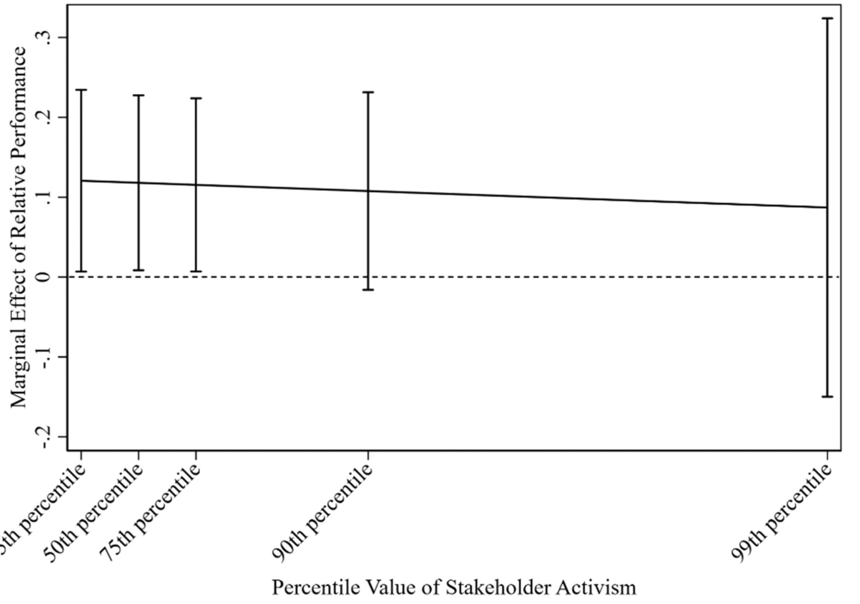

Figure 4. Marginal effects of relative performance and stakeholder activism interaction on CEO promotion focus

Note: The vertical lines represent the 95% confidence intervals for the marginal effects presented.

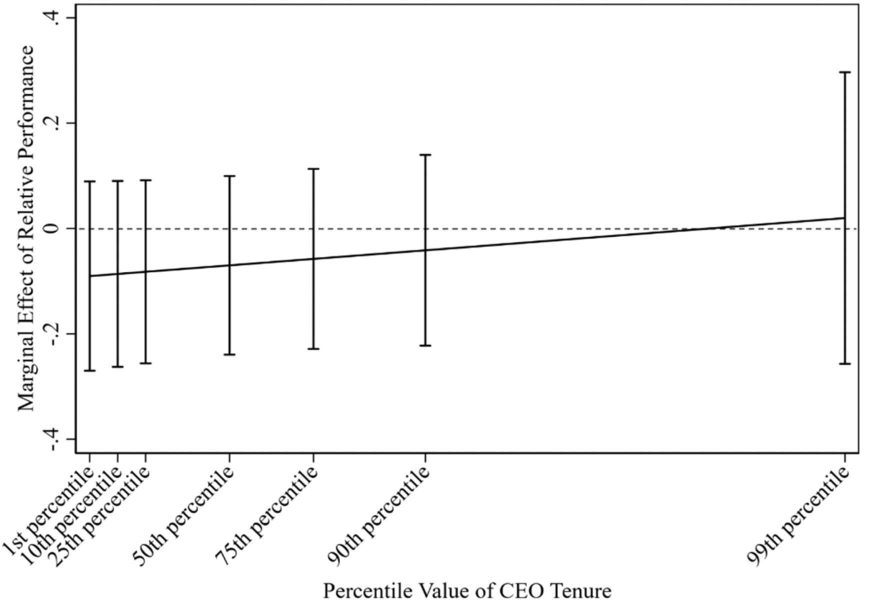

Figure 5. Marginal effects of relative performance and CEO tenure interaction on CEO prevention focus
Note: The vertical lines represent the 95% confidence intervals for the marginal effects presented.

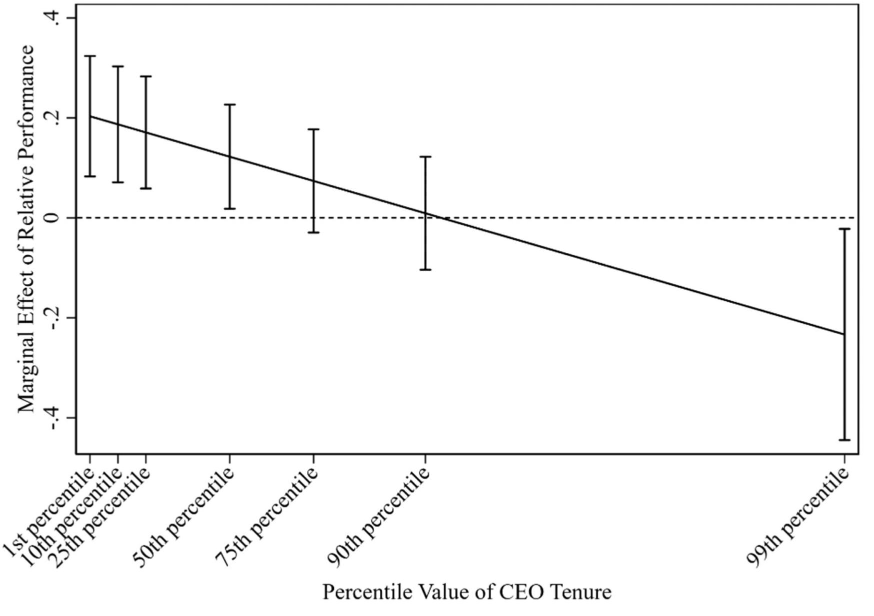

Figure 6. Marginal effects of relative performance and CEO tenure interaction on CEO promotion focus
Note: The vertical lines represent the 95% confidence intervals for the marginal effects presented.

First, as Figure 3 shows – consistent with our explanation above – the effect of relative performance on CEO prevention focus is non-significant across low, moderate, and high levels of stakeholder activism (between the 25th and 99th percentiles).

Second, as Figure 4 shows, the effect of relative performance on CEO promotion focus is significant across the 25^{th}, 50^{th}, 75^{th}, and 90^{th} percentiles of stakeholder activism before losing significance at the 99^{th} percentile. Third, as Figure 5 shows, the effect of relative performance on CEO prevention focus is non-significant across low, moderate, and high levels of CEO tenure (between the 1^{st} and 99^{th} percentiles). Lastly, as Figure 6 shows, the effect of firm performance on CEO promotion focus is positive and significant between low and moderate levels of tenure (between the 1^{st} and 50^{th} percentile) and is negative and statistically significant at high levels of CEO tenure (the 99^{th} percentile and above).[2]

Taken together, our results offer general support for our theoretical framework in demonstrating that CEO regulatory focus can indeed vary situationally, and that this variation is rooted, at least in part, in certain aspects of CEOs' job demands. These efforts lay the groundwork for future inquiry into the complex forces that shape the attributes of business leaders and their strategic decisions, which 'virtually all' research on CEO characteristics overlooks (Hambrick and Wowak, 2021a, p. 338). We expand upon these contributions, address limitations associated with our work, and propose a novel agenda for future research on situational antecedents of CEOs' intrapersonal constructs in our Discussion section below.

Supplementary Analyses and Robustness

Accounting for endogeneity. To assess the likelihood of an omitted variable invalidating our findings, we followed recent work (e.g., Busenbark et al., 2017; Harrison et al., 2018) and computed the Impact Threshold of a Confounding Variable (ITCV) for each hypothesized relationship that received at least marginal support (Busenbark et al., 2022). For each model, this test indicates the degree to which an omitted variable would need to be correlated with the endogenous independent variable and our dependent variable to overturn our reported results (i.e., make a significant finding non-significant). The correlational results of each ITCV test – in view of observed correlations between all study variables – offered broad evidence that the presence of such an omitted variable was unlikely (Busenbark et al., 2022).

Alternate models and measures. Despite having developed our hypotheses separately for prevention and promotion focus, we performed an additional analysis using a combined measure. This combined measure was operationalized as the standardized difference between each CEO's promotion and prevention focus. This approach is common in the psychology literature that often operationalizes regulatory focus as a single continuum from promotion to prevention focus (e.g., Galinsky et al., 2005). In these analyses, we find significant support for the direct effect of relative firm performance ($\beta = 0.291$; $p = 0.007$), its interaction with tenure ($\beta = -0.127$; $p = 0.003$), and further evidence of its interaction with stakeholder activism ($\beta = -0.069$; $p = 0.082$). Marginal effects analyses for these interactions further corroborated these results. Finally, one might speculate that CEOs, being aware of the average tenure in large corporations, may adjust their behaviours and decisions. To address this, in a supplemental test, we controlled for the curvilinear effect of tenure and found fully consistent support with our primary predictions. Because the inclusion of this control aligned with our primary results and did not noticeably improve model fit, we omitted it from our reported models (Cohen et al., 2003).

DISCUSSION

Our study adds to the growing literature on CEO regulatory focus and strategic leadership research at the nexus of psychology and management. By identifying specific situational factors that impact CEO regulatory focus, we respond to Brockner and Higgins' 'important mandate for future research' (Brockner and Higgins, 2001, p. 57) regarding real-world workplace antecedents of regulatory focus. Whereas prior research either only theorized about such antecedents without testing them (e.g., Jaskiewicz and Luchak, 2013; McMullen et al., 2009) or induced situational changes in highly controlled laboratory settings (e.g., Galinsky et al., 2005), we empirically demonstrate systematic relationships in a real-world context. This is critical because CEO regulatory focus substantially influences important individual- and firm-level outcomes.[3]

By integrating regulatory focus theory with research on executive job demands, we first theorize and demonstrate that CEOs' regulatory focus is affected by relative firm performance. As regulatory focus relates to motivations and is thus very proximate to behaviour (Carver and Scheier, 1990), our findings contribute to a better understanding of the process linking external stimuli and strategic choice (Hambrick, 2007). Second, the fact that we further find support for the interactive effect of relative firm performance and tenure not only supports prior literature suggesting that CEOs grow increasingly unreceptive to outside stimuli as their tenure progresses (Hambrick and Fukutomi, 1991; Hou et al., 2017), but it is particularly meaningful as this effect – as well as evidence we see of the influence of stakeholder activism – corroborates our proposed theoretical perspective. Taken together, our efforts underscore the promise of future work designed 'to consider environmental conditions' and the challenge associated with understanding how contextual factors shape the 'cognitive and relational processes' that inform CEOs' decisions (Neely et al., 2020, p. 1043).

Limitations

As any study does, ours has limitations. First, we captured CEO regulatory focus using the established approach of analysing annual shareholder letters (e.g., Gamache et al., 2015, 2020). However, using annual shareholder letters to measure CEOs' socio-cognitive attributes unobtrusively is not without criticism and other approaches, such as earnings calls with analysts, might be preferable for some studies (Matsumoto et al., 2011). Although there is compelling evidence that the CEO is at least highly involved in its drafting and editing the annual shareholder letter (Duriau et al., 2007; Eggers and Kaplan, 2009) and that the words that CEOs use in the letters are very similar to the words they use in other forms of communication (e.g., press releases, public speeches and answering questions in interviews; Nadkarni and Chen, 2014), we recognize that measuring CEO regulatory focus via analysing the content of annual shareholder letters – while a reasonable proxy – is not a perfect approach.

Second, our focus strictly on CEOs could also constitute a limitation. Although there is evidence that a leader's regulatory focus shapes the regulatory focus of followers (Johnson et al., 2017; Kark and Van Dijk, 2007), the reality is that decision making in the corporate upper echelons is a shared activity (Hambrick and Mason, 1984). Thus, research on the situationally-induced variance in the shared mental models that develop in entire top management teams (TMTs) or boards of directors could be particularly useful and might augment our findings.

Finally, to measure stakeholder activism, we relied on shareholder proxy proposals as recorded in the ISS database. However, proxy proposals only constitute one form of activism. Furthermore, ISS relies on a crude classification of proxy proposals as being either governance- (i.e., 'GOV') or socially oriented (i.e., 'SRI'), making finer-grained analyses concerning the impacts of stakeholder activism on CEOs challenging. Although we believe that considering the broad role of stakeholder activism (i.e., a count of the proposals reported by ISS) reflects how a CEO's job demands may become increasingly complex, we lament the inability to dig deeper into this relationship due to a lack of readily available more specific information about the proposals themselves.

Research Agenda: Situational Antecedents of CEO Intrapersonal Constructs

Our advancements also offer opportunities for future researchers to discern how external factors inform CEOs' biases or decision tendencies. For instance, consider recent evidence that links a CEO's promotion focus with an increase in advertising intensity, research and development intensity, and a greater likelihood of marketing controversies (Kashmiri et al., 2019). How might these findings differ in the presence of a factor (e.g., such as low relative performance) that instead activates CEOs' 'ought' self-guides? Might such CEOs revert to a more myopic form of management, unnecessarily undercutting their budgets to preserve capital but avoid controversies in the process? Consider also the work of Kammerlander et al. (2015) who link CEO prevention and promotion focus to exploration and exploitation in small or medium-sized enterprises. What if these relationships are less time-invariant than presumed, enabling those around a CEO to better predict – based on outside factors – when a CEO may be more or less inclined to pursue ambidexterity?

Beyond the specific directions that could be taken to better understand CEO regulatory focus, our research opens more general avenues for research, which we visualize in Figure 7. Specifically, it demonstrates that intrapersonal constructs can meaningfully vary over time and that situational factors can exert considerable influence on them. While this is worthy of study in its own right, it also shows that when Hambrick and Wowak propose to develop more 'focused theorizing about why CEOs … possess the attributes they do' (2021a, p. 346), we are not restricted to studying antecedents of attributes such as professional experience or functional background. Instead, such theorizing can and should extend to deeper intrapersonal constructs as well. In addition, our research further highlights the utility of the executive job demands framework for studying the external influences that substantially affect such intrapersonal constructs in executives.

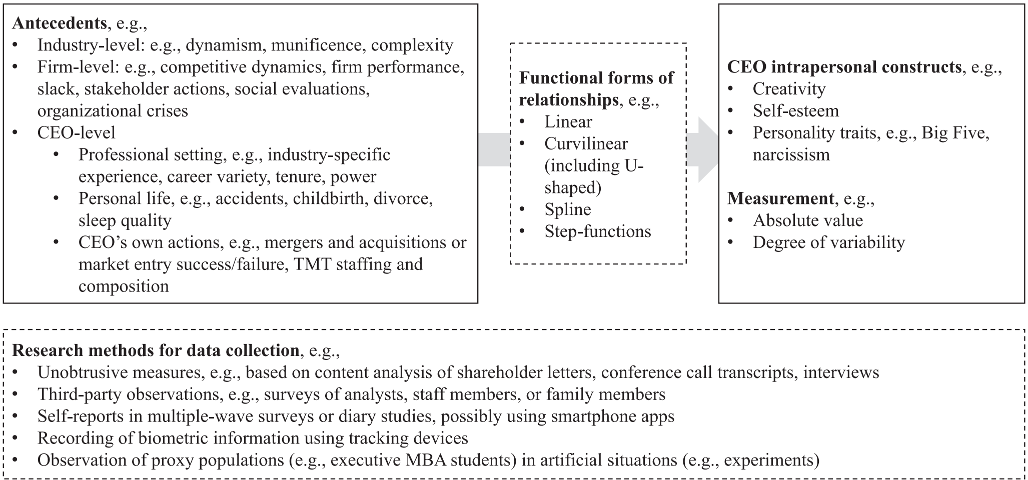

Figure 7. Agenda for future research

Further building on our empirical findings that a specific CEO characteristic that has thus far mostly been studied as a stable trait in fact shows systematically predictable intraperson variance, we extend Wowak et al.'s (2017) call for the study of motivations as dependent variables to all CEO (and other top executive) intrapersonal constructs, and we particularly emphasize situation-specific antecedents. Opportunity abounds regarding the choice of (1) dependent variables, (2) independent variables, (3) functional forms of relationships and observation time frames and (4) research methods. Below, we outline potential research opportunities along these categories.

Many intrapersonal constructs deserve greater scholarly attention, both those traditionally considered time-variant, such as temporal focus (Shipp et al., 2009) or goal focus (Freund et al., 2012), but also those that researchers have only more recently begun to treat as time-variant. Such constructs are, for instance, creativity (Weinberger et al., 2018) or self-esteem (Crocker and Wolfe, 2001), and personality traits like the Big Five (Judge et al., 2014) or narcissism (Giacomin and Jordan, 2016). Additionally, the *degrees* of variability in such constructs may serve as interesting dependent variables (Fleeson, 2001).

Situational antecedents may stem from various levels. At the industry level, changing characteristics like dynamism, munificence, or complexity may be relevant factors. At the firm level, competitive dynamics, firm performance, slack, stakeholder actions (e.g., from activist investors or social movements), social evaluations (e.g., from securities analysts or the media), and organizational crises are likely to be important antecedents. At the individual level, aside from CEOs' professional settings (e.g., industry-specific experience, career variety, tenure and power), their personal lives, too, can be a source of influential antecedents (e.g., accidents, childbirth, divorce and sleep quality). It should not be neglected that CEOs' characteristics may also change as a reaction to events caused by executives' own actions (Judge et al., 2014), like mergers and acquisitions or market entry processes (and the success or failure thereof), or TMT staffing and composition. In addition, all levels may also provide relevant moderators that play out via, for example, CEO discretion (Finkelstein et al., 2009) or situational strength (Mischel, 1977).

Beyond studies of linear effects using annual data, great opportunities lie in the analysis of alternative functional forms of relationships that play out over other time frames. Such functional forms may include curvilinear (including U-shaped), spline, or even step-functions and may be discovered leveraging not just annual (as in our study), but also using quarterly (Mayew and Venkatachalam, 2012), monthly (Westphal and Shani, 2016), or potentially daily and even more tightly-spaced observations (Huang and Ryan, 2011).

These opportunities can be seized using a variety of methods, regarding both independent and dependent variables. Unobtrusive measures based on archival data may be strategic leadership researchers' natural choice. Manual or computer-aided content analytic techniques can, for example, be applied to annual shareholder letters or quarterly conference call transcripts. Voice recordings from conference calls and interviews may similarly be fruitfully analysed (Mayew and Venkatachalam, 2012). Third-party observations (e.g., surveys of analysts, staff members, or family members) can be used to gather relevant data (Mannor et al., 2016). If executives' cooperation extends further, researchers may think about using self-reports in the form of multiple-wave surveys or even diary studies (Gunthert and Wenze, 2012), possibly implemented as smartphone apps to ease participation (Huang and Ryan, 2011). In exceptional cases, it may even be possible to record biometric information using tracking devices.[4] Since many of these methods may be challenging to apply to actual CEOs in their work environments, the use of proxy populations (e.g., executive MBA students) in carefully crafted artificial situations (e.g., multi-day business simulations, experiments, or even virtual reality) may prove an alternative or complementary path to valuable insights, especially regarding the micro-processes underlying changes in CEOs' intrapersonal constructs (e.g., Butt et al., 2005). We hope our findings and this research agenda will spur research toward a deeper understanding of the dynamics of intrapersonal constructs in top managers.

CONCLUSION

In the decades following the inception of strategic leadership research (Hambrick and Mason, 1984), a rich stream of work has established the link between CEOs' sociocognitive attributes, strategic decisions, and organizational outcomes. While this work does much to illuminate the link between CEO characteristics and their consequences, it also often disregards the variability of CEOs' characteristics. Our study is a response to this limitation and an effort to underscore the substantial influence outside factors can have on CEO attributes. It is our hope that this work will motivate others to fruitfully build on a view of CEO characteristics as fluid and jointly defined by dispositional and situational influences.

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NOTES

[1] In our sample, the 1st through 25th percentile values of stakeholder activism were equal due to the infrequency of shareholder proposals. Thus, our marginal effects analysis assessed the 25th, 50th, 75th, 90th and 99th percentile values of this variable.

[2] We note that the significance of the coefficients in the models and the confidence intervals of the marginal effects appear to suggest conflicting conclusions regarding Hypothesis 2a and Hypothesis 2b. This is a situation not uncommon when using marginal effects analysis, as coefficients and marginal effects are two distinct quantities, with marginal effects often being nonlinear combinations of the coefficients. Consequently, we follow Greene who recommends that in such situations the inference should be made based on the coefficients because marginal effects are "testing a hypothesis about a function of all the coefficients, not just the one of interest" (2009, p. 487).

[3] Relatedly, we respond to Johnson et al.'s call for research on 'temporal effects of priming regulatory focus' (2015, p. 1508) by showing situational patterns even in coarse annual data, suggesting that situational influences can persist much longer than the duration of a laboratory experiment.

[4] As the first author witnessed during a World Economic Forum Annual Meeting in Davos, top executives can be willing to wear trackers and share data—at least when the devices are gifts and the data sharing is time-limited.

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