CEO Regulatory Focus and Competitive Action Frequency

Abstract
Using regulatory focus, the CEO-TMT interface, and upper echelons theories, the present study casts additional light on the competitive action frequency of firms, as determined by their CEOs’ regulatory focus under the contingent effect of the CEO-TMT dissimilarity of informational demographics. Applying regulatory focus and upper echelons theory, this study first hypothesizes how CEO regulatory focus influences competitive action frequency. Next, leveraging CEO-TMT interface research, this study suggests moderating effects on the part of CEO-TMT dissimilarity, across functional background and tenure, on the relationship between CEO regulatory focus and competitive action frequency. Drawing on a sample of 218 firms from India for a five-year period (2010–2015), we find that a CEO promotion focus enhances a firm’s competitive action frequency and that a prevention focus diminishes the same. Furthermore, dissimilarities in terms of both CEO-TMT functional background orientation and tenure in the organization moderate this relationship. This study concludes with a discussion of the paper’s theoretical and practical implications.

Keywords: CEO regulatory focus, upper echelons theory, TMT, competitive dynamics
Introduction

Research on strategic leadership has explored how the psychological attributes of chief executive officers (CEOs) impact their strategic decisions (Fan, Zhou, Wang, & Chang, 2019; Jiang, Wang, Chu, & Zheng, 2019; Li & Jones, 2019). In this regard, upper echelons theory has moved beyond using the demographic characteristics of a CEO as a proxy for psychological attributes to more direct measures of psychological attributes (Hambrick & Mason, 1984). Chief executive officers’ motivational attributes, such as a regulatory focus, have been found to significantly influence CEOs’ strategic choices (Lanaj, Chang, & Johnson, 2012), such as acquisitions (Gamache, McNamara, Mannor, & Johnson, 2015) and strategic change (Jiang et al., 2019). However, several gaps exist in the CEO regulatory focus and firm strategic action literature.

In today’s hypercompetitive environment, a key goal of firms is to excel by initiating frequent competitive actions against their rivals (Chen & Miller, 2012). As a key decision-maker, a CEO is a primary actor in configuring a firm’s competitive behavior (Ndofor, Sirmon, & He, 2015). However, the role of a CEO’s regulatory focus in this regard remains only scantily explored.

Furthermore, the CEO-TMT informational demographic dissimilarity literature suggests that although CEOs are decision-makers, TMT demographics influence their decisions (Hambrick, 2007). Thus, the impact of CEO regulatory focus on the competitive dynamics of a firm is likely to be contingent on the dynamics of CEO-TMT trait dissimilarity, yet this aspect has not been explored in the extant literature. Scholars have also called for more research on the CEO-TMT interface (Ling, Wei, Klimoski, & Wu, 2015).

Finally, in fast-paced emerging economies, the role of a CEO’s regulatory focus is even more critical because in a volatile and dynamic macro environment, flexible and timely competitive actions are critical in determining a firm’s competitive performance (Chang & Park, 2012; Mutlu,
Zhan, Peng, & Lin, 2015). However, despite competitive dynamics’ importance in such contexts, few researchers have explored it in emerging economies (Yang & Meyer, 2019).

We address these gaps in the literature by investigating the impact of CEO regulatory focus on the competitive action frequency of firms – a key competitive dimension and fundamental aspect of a firm’s competitive dynamics (Connelly, Tihanyi, Ketchen, Carnes, & Ferrier, 2017) – under the boundary conditions of dissimilarity between CEO and TMT demographic characteristics, in India, an emerging economy. We assert that promotion and prevention regulatory focuses on the part of CEOs have positive and negative impacts on competitive action frequency, respectively. Furthermore, dissimilarities between CEO and TMT functional orientations (output orientation versus throughput orientation) and tenures, by virtue of presenting a fit with the regulatory focus of a promotion-focused CEO and inculcating a sense of responsibility in a prevention-focused CEO, encourages them to take more frequent competitive actions.

We make several contributions to the management literature with this research project. The upper echelons theory has recently been extended to incorporate several psychological mechanisms influencing CEO decisions (Chatterjee & Pollock, 2017). Regulatory focus, in this regard, represents a motivational trait that has been found to influence CEO’s strategic decisions, such as acquisitions (Gamache et al., 2015) or strategic change (Jiang et al., 2019). By extending the literature on regulatory focus to the field of competitive dynamics, we respond to calls from upper echelons theorists to investigate the role of CEO psychology in driving a firm’s strategy (Bilgili, Campbell, O’Leary-Kelly, Ellstrand, & John, 2020). We also contribute to the CEO regulatory focus literature by investigating the boundary conditions under which the impact of a CEO’s regulatory focus is further triggered or its effect on strategy is further mitigated. As a corollary, we also extend the CEO-TMT interface literature, where the extant literature has largely
separated CEOs’ and TMTs’ demographic characteristics while exploring the moderating effect of TMT traits (Heyden, Reimer, & Van Doorn, 2017). By integrating a psychological trait (regulatory focus) of CEOs with CEO-TMT informational demographic dissimilarity, we add to the CEO-TMT interface literature.

Our contribution also adds to the competitive dynamics literature, which has primarily relied on CEOs’ demographic characteristics (Chen & Miller, 2012) to explain the competitive aggressiveness of firms. By extending the literature on CEO regulatory focus and examining the CEO-TMT interface as a boundary condition, we not only introduce CEO psychological motives to the competitive dynamics literature but also explore the contingent factors that moderate the impact of CEO regulatory focus on competitive action frequency.

**Theoretical Framework and Hypothesis**

*Competitive Dynamics*

The competitive dynamics literature conceptualizes a *competitive strategy* as a collection of strategic actions used by firms to enhance their market positions (Ferrier, Smith, & Grimm, 1999). *Strategic action* refers to an “externally directed, specific, and observable competitive move initiated by a firm to enhance its relative competitive position” (Smith, Ferrier, & Ndofor, 2001, p.12). Competitive dynamics research has occurred in two streams, namely the dyadic approach and repertoire approach. The *dyadic approach* examines the attack and response behavior between two rival firms (Sirmon, Gove, & Hitt, 2008). The *repertoire approach*, in contrast, explores the exhaustive set of competitive actions of a given firm (Chen & Miller, 2012). The present research, utilizing the repertoire approach of competitive dynamics, focuses on competitive action frequency among firms, that is, the number of externally directed competitive moves made by firms (Andrevski & Ferrier, 2019).
Regulatory Focus of Individuals

Regulatory focus pertains to motivations involved in regulating “affect, cognition, and behavior in pursuit of goals” (Johnson, Chang, & Lord, 2006). The literature on regulatory focus asserts that more specifically, goals are obtained via a promotion focus or a prevention focus (Higgins, 1997).

A promotion focus sensitizes people to the presence and absence of positive impetus (i.e., gains and non-gains) and leads to their responsiveness to opportunities for achievement and growth. Promotion-focused individuals aim to “insure hits and insure against errors of omission (i.e., a loss of accomplishment)” (Crowe & Higgins, 1997, p. 120). Promotion-focused individuals, therefore, take actions that maximize gains and minimize non-gains. Such individuals are not only prompt in responding to opportunities but also have high quantities of action because they attempt to move closer to the ideal state, even if they must assume risk and experiment to achieve the goal (Higgins & Spiegel, 2004).

A prevention focus, in contrast, sensitizes individuals to the presence and absence of negative stimuli (i.e., losses and nonlosses). Thus, such individuals value safety, responsibility, and security while making decisions. Consequently, individuals with a prevention focus “insure correct rejections and insure against errors of commission” (i.e., making a mistake) (Crowe & Higgins, 1997, p. 120).

Promotion and prevention foci do not lie on the opposite ends of a single continuum and exist independently (Lanaj et al., 2012). For example, an individual can attain a performance goal by striving hard to achieve the goal (having a high promotion focus) or avoid work that is unrelated to the goal (having a high prevention focus). Crowe and Higgins (1997) assert that “different approaches and avoidance strategies can be used in the service of the same general approach system” (p. 117). In a meta-analytic study, Lanaj et al. (2012) observed a relatively small
correlation between promotion focus and prevention focus (ρ = 0.11). Thus, an individual can be high in both, one, or none of the regulatory foci (Jiang et al., 2019).

Regulatory focus differs from other psychological traits, such as personality or self-concept, because these latter traits influence the goals that individuals set, whereas regulatory focus represents a motivational aspect influencing goal achievement; hence, the latter are more proximal to the actions of individuals (Barrick, Park & Mount, 2005; Lanaj et al., 2012). In the organizational context, recently, scholars have begun to explore the impact of the regulatory focus of CEOs on various strategic actions, such as acquisitions (Gamache et al., 2015) and strategic change (Jiang et al., 2019), but competitive aggressiveness remains unexplored.

**CEO Promotion Regulatory Focus**

We assert that CEOs with a promotion regulatory focus are more likely to compete aggressively by taking more frequent competitive actions for the following reasons. First, promotion focus entails a concern for accomplishments and aspirations, as well as the motivation to grow and advance (Brockner, Higgins, & Low, 2004; Higgins, 1997; Gamache et al., 2015). Concurrently, CEOs with a strong promotion focus also have higher aspirations for the growth and advancement of their firms, such as increased market power. Frequent market-based competitive actions imply that firms will launch more new versions of products, give more sales incentives, and present several advertising campaigns, as well as entering new markets (Andrevski & Ferrier, 2019).

Second, promotion-focused CEOs have higher risk-taking propensities when making decisions (Crowe & Higgins, 1997). Frequent competitive actions are not only resource-intensive but risky as well because they create only short-term competitive advantages if rival firms counterattack quickly (D’Aveni, 1994).
Third, promotion-focused CEOs are more likely to positively evaluate frequent competitive moves because they are likely to focus on “potential gains than possible losses” from such moves (Gamache et al., 2015, p. 1266). In other words, their tendency to “insure hits and insure against errors of omission” (Crowe & Higgins, 1997, p. 117) sensitizes them to the positive aspects of frequent competitive moves (Lanaj et al., 2012). For instance, a promotion-focused CEO is more likely to focus on the attainment of temporary monopolistic positions through frequent competitive actions than on the risk of resource losses. Hence, we hypothesize as follows:

**Hypothesis 1a:** CEO promotion focus is positively associated with the frequency of competitive actions.

**CEO Prevention Regulatory Focus**

Prevention-focused CEOs favor defensive, security-oriented objectives. These CEOs are highly watchful and tend to prevent mistakes at all costs, thus attending to their obligations and security (Crowe & Higgins, 1997). Because they have a low tolerance for lapses or mistakes, their ability to take frequent competitive actions and hence compete aggressively is constrained (Crowe & Higgins, 1997).

Because of their apprehensive approach, CEOs with a prevention focus are more likely to focus on aspects that can go wrong while competing aggressively. Frequent competitive actions may engender operational inefficiencies because CEOs have less time to analyze and execute competitive attacks in a hypercompetitive environment. As the perils of committing expensive mistakes increase, customer preferences may be misinterpreted (Brown & Eisenhardt, 1997). Thus, prevention-focused CEOs are less likely to launch competitive actions frequently.

Second, frequent competitive actions require interdepartmental cooperation and coordination across departments, including engineering, manufacturing, and marketing. However, frequent
competitive actions increase the risk of interdepartmental tensions and may also create impediments to organizational routine development, thus increasing the cost of coordination (Brown & Eisenhardt, 1997). Voluminous actions may also make rivals retaliate more aggressively, putting the focal firm under profit and resource constraints (Andrevski, Brass, & Ferrier, 2016). These risks associated with frequent competitive actions may deter prevention-focused CEOs from competing aggressively.

Third, to compete aggressively with frequent competitive actions, CEOs must develop new actions within shorter periods, which could exponentially increase total costs for the firm. Given the inefficiencies associated with frequent competitive actions, a prevention-focused CEO is likely to remain apprehensive about competing aggressively. Hence, we hypothesize as follows:

**Hypothesis 1b:** CEO prevention focus is negatively associated with the frequency of competitive actions.

**CEO Regulatory Focus and CEO-TMT Interface with Informational Demographic Dissimilarity**

The upper echelons perspective initially assumed that strategic leadership was ‘unitarily’ exercised by the entire group of senior executives (Carpenter, Geletkanycz, & Sanders, 2004). Therefore, early studies did not segregate a CEO from the rest of the TMT. Later, Hambrick (1994) stressed differentiating the roles performed by TMT members from the role of the CEO.

Following this premise, scholars have initiated research into the CEO-TMT interface, centered on role-specific boundaries and interactions through which top managers influence CEO decisions but are not directly responsible for such decisions and do not have the authority to make such decisions themselves (Bromiley & Rau, 2016). Extending this notion of the CEO-TMT interface, we explore how dissimilarities in CEO-TMT demographic characteristics influence the impact of CEO regulatory focus on the competitive action frequency of firms.
Demographic Characteristics

Demographic measures act as proxies for the ‘real’ cognitive and social processes of the upper echelons (Kor, 2006). Regarding trait effects, the extent to which a TMT member has a certain demographic characteristic signifies his or her perspectives and interpretations. As we explore the CEO-TMT interface, we primarily focus on dissimilarity in a given demographic trait in a CEO-TMT group.

Upper echelon demographics can be categorized either as ‘informational demographics,’ such as functional background or tenure, or as ‘readily available demographics,’ such as gender and age (Ling et al., 2015). In this study, we focus on informational demographics because upper echelons researchers assert that informational demographics better capture the experiences and perspectives that are essential for complex, job-related cognitive tasks (Mihalache, Jansen, Van Den Bosch, & Volberda, 2012).

In fact, CEO-TMT dissimilarity enhances information and knowledge sharing between the CEO and the TMT, and hence, better integrative learning takes place (Kurtulus, 2011). Though relational demography research suggests negative relationship outcomes, such as greater turnover, when demographic dissimilarity exists between employees, the same may not apply for work-related outcomes. This is because informational demographics, such as tenure, are not relations-oriented but task-oriented attributes (Pelled et al., 1999). Moreover, because competitive-oriented strategies are likely to promote openness to new ideas and information, as well as tolerance toward ambiguity, such strategies promote the value that a dissimilar workforce brings (Jehn & Bezrukova, 2004).

When making a decision related to competitive dynamics, a CEO who is demographically dissimilar from other TMT members is more likely to encourage the TMT to coordinate, integrate,
and share information about the competition (Ling et al., 2015). A dissimilar CEO may also act as an informed facilitator in that they effectively promote communication between TMT members regarding competitive issues through intensive and insightful inquiry. Finally, when TMT members operate to generate synergy and integrate information under the leadership of a CEO whose demographic characteristics are dissimilar to those of the TMT, the TMT may try even harder to offer better and unique insights to the CEO to enrich the pool of information at the CEO’s disposal and enable them to better address competitive challenges (Ling et al., 2015). We explain the implications of CEO-TMT dissimilarity for each of the informational demographic characteristics below.

*Functional Background*

The functional background of executives influences their orientation towards business. Some executives emphasize the efficient utilization of resources, while others believe in searching for and exploiting new opportunities. This has significant implications for competitive actions. Accordingly, scholars have categorized the functional experience of TMTs in terms of output-versus-throughput orientations. *Output-orientation functions* are defined as those functions that “emphasize growth and the search for new domain opportunities and are responsible for monitoring and adjusting products and markets” (Hambrick & Mason, 1984, p. 199). Output orientations stem from expertise in functions such as marketing, sales, and product R&D; customer demands; or search for new opportunities on the market side that are more growth and competition focused.

In contrast, the focus of the *throughput-orientation functions* is improving the organization’s internal operations because they “work at improving the efficiency of the transformation process” (Hambrick & Mason, 1984, p. 199). Throughput orientations include production, process
engineering and accounting, as well as other activities that emphasize improving efficiencies as the organization turns inputs into output (Hambrick & Mason, 1984; Koyuncu, Firfiray, Claes, & Hamori, 2010).

The functional experience represented in TMTs influences the stimuli to which they are sensitive, the opportunities they recognize and prioritize after environmental scanning, the interpretations they bring to competition-related discussions, and their preferences regarding how to improve competitiveness (Hambrick, 2007). Thus, a TMT with more output-oriented members is likely to provide interpretations that advocate for market-side activities and are more attentive to market-based sources of value creation, such as novel products and services.

Planning competitive actions involves strong market orientation, as well as insights into budgeting, feasibility, and deliverables to implement those competitive actions (Reimer, Van Doorn, & Heyden, 2018). Given that throughput-oriented executives can help with implementation trajectories (Reimer et al., 2018), dissimilarity in the CEO-TMT functional orientation could complement the agenda-setting task of the CEO. For instance, throughput-oriented TMTs, such as those in finance or operations, may help in implementing competitive strategies, such as reducing the price of the product by enhancing process efficiencies. Similarly, if the CEO is throughput oriented and the TMT is output-oriented, while the TMT can do a better job of scanning the competitive environment, the CEO can guide the firm through the efficient implementation of competitive actions.

Furthermore, although the functional background dissimilarity between the CEO and TMT may yield greater relational conflict (Pelled et al., 1999), such a negative influence in task-related contexts (competitive decisions, in this case) may be outweighed by the benefits derived from a cognitive conflict between the CEO and TMT. These benefits include a comprehensive
understanding of information and competitive issues (Cao, Gedajlovic, & Zhang, 2009). Overall, the functional dissimilarity between the CEO and the remainder of the TMT fosters an extensive evaluation and comprehension of competition-related information and strategic solutions.

Because CEOs with a high level of promotion focus are motivated to achieve maximal goals (Idson, Liberman, & Higgins, 2000), dissimilarity in the functional orientation of the CEO and TMT would make promotion-focused CEOs more attentive to potential opportunities and thus motivate them to “explore new markets [and] find novel ways to compete” (Zahra, 1993, p. 325). For these reasons, we expect CEOs with high levels of promotion focus to even more actively engage in competitive aggressive behavior when CEO-TMT dissimilarity exists in functional orientation. Hence, we hypothesize as follows:

**Hypothesis 2a:** CEO-TMT functional orientation dissimilarity moderates the CEO’s promotion regulatory focus and competitive action frequency relationship, such that the positive impact of a CEO’s promotion focus on competitive actions is greater when CEO-TMT functional dissimilarity is higher.

Because CEOs with higher levels of prevention focus are attentive to the likelihood of failure and punishment, they invest in activities that promise to avoid the presence of negative outcomes. The primary hesitation of prevention-focused CEOs in implementing competitive moves is the risk and cost of mistakes associated with them (Souder & Moenaert, 1992). However, with enriched and diverse information on the competitive environment and potential competitive strategies attained through discussion with the TMT, who share a complementary functional orientation with the CEO, the risks of making mistakes can be minimized, and the more effective implementation of competitive actions can occur (Souder & Moenaert, 1992).
When the CEO and TMT have different functional orientations, discussion originating from comprehensive information related to competitive opportunities and challenges helps a prevention-focused CEO better recognize competitive threats that could impede the performance of the focal firm. To avoid this loss, a prevention-focused CEO will become more willing to take competitive actions and avoid any adverse consequences for the firm. Thus, a CEO-TMT functional orientation dissimilarity is likely to make a prevention-focused CEO pursue new opportunities by competing aggressively through frequent competitive actions. In other words, the negative impact of prevention focus on the frequency of competitive actions would be mitigated. Hence, we hypothesize as follows:

**Hypothesis 2b:** CEO-TMT functional orientation dissimilarity moderates the CEO’s prevention regulatory focus and competitive action frequency relationship, such that the negative impact of a prevention-focused CEO on competitive action frequency is diminished when CEO-TMT functional dissimilarity is high.

**TMT Tenure**

Among the upper echelons, tenure reflects the accumulated, executive-level working experience of senior executives (Camelo-Ordaz, Hernández-Lara, & Valle-Cabrera, 2005). As CEOs and TMTs work together over the years, that is, during their tenure, they develop shared norms and clear role expectations that make interactions between them more efficient and harmonious (Wiersema & Bantel, 1992). Given this harmony, their discussions narrow in scope as knowledge exchange becomes increasingly rooted in collectively mutually accepted group understandings (Finkelstein & Hambrick, 1990; Michel & Hambrick, 1992). Thus, when CEO-TMT tenure similarity is high, they are more likely to engage in consensus-seeking behaviors to preserve intragroup cohesion.
Frequent competitive actions require CEOs and TMTs to have both quality and depth of knowledge about the firm and its competitors (Barnett, 1997; Barnett & Hansen, 1996). The greater the difference in tenure between a CEO and their TMT, the more likely the chances of a discussion of such information between the CEO and TMT are. For example, if a low-tenured CEO is complemented by a high-tenured TMT, then more creative strategies against competitors can be formulated and implemented by the CEO. This is because a low-tenured CEO will not be fixated by organizational rigidity and high-tenured TMT members will have extensive knowledge about organizational procedures and work processes (Ng and Feldman, 2013). A high-tenured TMT is also likely to have stronger connections with relevant colleagues in the organization (van de Brake et al., 2019). The social capital thus developed can help in an appropriate audit of the existing resources of the firm that can be deployed against competitors through frequent competitive actions. In contrast, when a CEO has high tenure and the TMT has low tenure, then based on the enriched information that the CEO has about the internal resources of the firm, she may encourage TMT members to suggest creative and innovative ideas to use in competing against competitors. This is because low-tenured members will be more creative in problem-solving (Ng and Feldman, 2013).

Thus, when a dissimilarity in CEO-TMT tenure exists, this results in the sharing of information and insights about the competitive environment with the CEO. A promotion-focused CEO is thus likely to have a deeper understanding of the pursuit of competitive actions. Hence, we hypothesize as follows:

**Hypothesis 3a:** CEO-TMT tenure dissimilarity moderates the relationship between CEO promotion focus and competitive action frequency, such that the positive impact of CEO
promotion focus on competitive action frequency is greater when CEO-TMT tenure dissimilarity is high.

A prevention regulatory focused CEO is less inclined to make high-stakes decisions in novel and creative competitive actions. This is because prevention focus is associated with the need to regulate negative emotions (Bridgett, Oddi, Laake, Murdock, & Bachmann, 2013) and a preference for stability and routine behavior (Lanaj et al., 2012; Liberman, Idson, Camacho, & Higgins, 1999). Prevention-focused CEOs are likely to change this behavior if conditions exist that help them to conserve and effectively focus on the task at hand. Comprehensive information on the competitive environment, which is likely to be generated by conversations sparked by the dissimilar tenures of the CEO and the TMT, can provide such a condition. Thus, prevention-focused CEOs, based on enriched information, can take risky, competitive actions because they are likely to be the only viable option for preventing negative outcomes, such as losing market share to a competitor (Scholer, Zou, Fujita, Stroessner, & Higgins, 2010).

Work in the psychology literature suggests prevention-focused individuals can be motivated to indulge in creative problem-solving through appropriate information and knowledge about the issue at hand (Byron, Khazanchi, & Nazarian, 2010). Research also suggests that those with a prevention focus are better able to evaluate the quality of information presented in detail (Kao, 2012). Because tenure dissimilarity between a CEO and TMT can generate better-quality information, prevention-focused CEOs are likely to become motivated to compete aggressively after receiving enriched information about the competitive environment and the firm’s internal resources. Hence, we hypothesize as follows:

**Hypothesis 3b:** CEO-TMT tenure dissimilarity moderates the relationship between CEO prevention focus and competitive action frequency, such that the negative impact of CEO
prevention focus on competitive action frequency is diminished when CEO-TMT tenure dissimilarity is high.

Method

Sample

We focused on A & B category Bombay Stock Exchange-listed business to consumer (B2C) firms in India from 2010 to 2015. We focused on A&B listed B2C firms as media covers their competitive activities more intensely. Firms in these two categories have more liquid stock and the chances that a firm’s financial, top management information, and annual reports are publicly available is relatively high (Mishra, 2018).

We obtained data on firms and CEOs from multiple sources, including Prowess (the Centre for Monitoring Indian Economy financial database of Indian firms), company websites, annual reports, CEO interviews, press releases, speeches, Bloomberg, and MarketScreener, among others. Following previous studies, we did not include public or foreign sector firms (Stucchi, Pedersen, & Kumar, 2015). After using all these filtering criteria, we were finally left with a sample of 218 firms and 218*5=1090 firm-year observations.

Data on TMT demography, such as tenure, was collected from several sources, including the firm's annual reports, Bloomberg, MarketScreener, The Wall Street Journal, etc.

Operationalization of Variables

Competitive Action Frequency. As we define competitive actions as “externally directed competitive moves” following Andrevski et al. (2016), we focused on only product-market actions focused on four categories (pricing, which included price cuts or sales incentives; marketing, which included advertising and promotional campaign; new product introduction, which included product improvement; and market expansion, which included internationalization, capacity enhancement, or new distribution channels).
We employed structured content analysis to capture firms’ competitive actions (Smith et al., 2001). First, two postgraduate students from a university in England, over two weeks, identified the complete range of brands for each firm in the study sample as available on the company’s website. Next, over four weeks, the postgraduate students used Google search to pull all published news articles and announcements of competitive actions that firms carried out over five years (2010-2015). We used the following search criteria in Google search: company names, brand names, and panel time markers (January 1, 2010, through December 31, 2015). This first-stage data collection process yielded an initial pool of more than 10,351 news items (after deleting repeated news articles). Next, two postgraduate students, different from those employed earlier, read each article over four weeks and coded them into one of the four action types. Table 1 provides examples of each action type. The correlation between the two postgraduate students during this process of coding the firm’s competitive move into four action types ranged between 0.91 to 0.93.

To further test the coding process reliability, 1% of the articles were randomly selected and independently recoded by the two co-authors. The estimated Perreault and Leigh’s (1989) interrater coding reliability was 0.91, exceeding the 0.70 convention (Ryan & Bernard, 2000). We measured competitive action frequency as the total number of market-based competitive actions conducted by a firm in a given year (Andrevski & Ferrier, 2019).

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**Insert Table 1 about here**

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*Independent variables*

Regulatory Focus (Prevention and Promotion) of CEOs. This was content analyzed based on their statements reported in Letter to Shareholders, speeches, interviews, and press releases (Nadkarni
and Chen, 2014). Content analysis is based on the central assumption that “the analysis of texts lets the researcher understand other people’s cognitive schemas” (Duriau, Reger, & Pfarrer, 2007, p. 6). The Linguistic Inquiry and Word Count (LIWC) software is the most used textual analysis program (Pennebaker et al., 2015). We used the dictionaries developed by Gamache et al. (2015), which included 27 promotion words and 25 prevention words. Promotion words included accomplish, achieve, advancement, aspiration, aspire, attain, desire, earn, expand, gain, grow, hope, hoping, ideal, improve, increase, momentum, obtain, optimistic, progress, promoting, promotion, speed, swift, toward, velocity, and wish. Prevention words included accuracy, afraid, careful, anxious, avoid, conservative, defend, duty, escape, escaping, evade, fail, fear, loss, obligation, ought, pain, prevent, protect, responsible, risk, safety, security, threat, and vigilance. Alternative tenses and synonyms of these words were also taken into consideration in the dictionary employed. Measures for CEO promotion focus and prevention focus were then calculated using the LIWC software. Following Gamache et al. (2015), the values that we used in our analysis for CEO promotion focus and prevention focus were the percentage of promotion and prevention focus words within each Letter to Shareholders.

CEO-TMT dissimilarity scores: Following Pelled et al. (1999), the CEO-TMT dissimilarity score was calculated as the distance between a CEO and all TMT members on a specific attribute (functional orientation and tenure) using Euclidean distance. The formula used was

$$D_i = \left[ \sum_{j=1}^{n} \left( S_i - S_j \right)^2 / (n - 1) \right]^{1/2}$$

where $S_j$ is the score of the attribute of the CEO and $S_i$ is the attribute of TMT member and $n$ represents the total number of TMT members. (For CEO-TMT functional dissimilarity $S_i - S_j$ was
zero when CEO and TMT shared the same functional background and 1 when they had a different functional background.)

**Moderating Effects**

The interaction effect of each of the CEO-TMT demographic dissimilarity variables (which are Output-oriented Functional Experience and Tenure) with Regulatory Focus was taken after mean centering of variables and multiplying the mean-centered values (Shieh, 2010).

**Control Variables**

We controlled for several CEO and firm-level variables. CEO level factors included *CEO compensation*, measured as total salary, *CEO duality* with dummy code “1” if the CEO was also the board chair in the same year, and “0” otherwise (Zhang, 2006). *CEO age* was also captured from annual reports. *CEO change* was also controlled for and was coded as “1” if there was a change in CEO for the firm in that year and “0” otherwise (Seo, Gamache, Devers, & Carpenter, 2015). Among firm-level factors, we controlled for *Firm size*, captured as the natural log of the number of employees, *firm age* (Tan & Peng, 2003), and the *firm's prior aspirational performance*. We measured the aspirational performance gap as the difference between a firm's financial performance each year and its historical performance. Performance was calculated as the average return on assets performance for the two prior years (Chittoor, Aulakh, & Ray, 2015). *Firm age* was operationalized as the natural log of a firm's total number of years since its inception. Among governance variables, we controlled for board size (Goodstein, Gautam, & Boeker, 1994). *Board size* was measured as the board's total number of directors (Seo et al., 2015; Zhang, 2006). Among industry-level factors, we controlled for *industry munificence*, operationalized as growth in industry sales over 5 years, where the industry referred to a 3-digit NIC codes system in India. Industry and year dummies were also controlled for.
Controlling for Endogeneity

A host of factors could influence CEO regulatory focus and competitive action frequency of a firm. To correct for this endogeneity, we followed the procedures recommended by Chatterjee and Hambrick (2007). Accordingly, we regressed the CEO’s promotion and prevention regulatory focus on the firm’s slack resources, advertising intensity, and R&D intensity variables one year prior to the CEO's promotion and prevention regulatory focus. Next, we calculated CEO's promotion and prevention predicted regulatory focus scores based on the regression coefficients of antecedents and included those scores as endogeneity controls in our analyses (Nadkarni & Chen, 2014).

Analysis

Our data represent panel data of 218 firms for 5 years (n = 1090 firm-years), with our dependent variable (Competitive action frequency) measured by count data. Hence, we used negative binomial regression analysis (Wooldridge, 2002). Since a violation of equi-dispersion property happened (Baltagi, 2013), negative binomial regression was more suitable than Poisson regression analysis.

We included year dummies to control for time effects. Unobserved firm heterogeneity was controlled using the random-effects model as the Hausman specification test results were not significant (Hausman, 1978). Also, there was no significant first-order serial autocorrelation in the errors. Furthermore, results based on firm fixed effects were similar to the random effects regression results.
Results

Table 2 presents the descriptive statistics of the variables and their bivariate correlations. The means of competitive action frequency, CEO promotion, and prevention regulatory focus are 12.3, 1.61, and 0.28, respectively. Also, VIF scores for all variables ranged from 1.01 to 2.85, indicating multicollinearity was unlikely to be present.

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Insert Table 2 about here

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The results of the negative binomial regression analysis are presented in Table 3. In this Table, we display the estimates of competitive action frequency in Models 1 to 3. Among control variables (Model 1 of Table 3), firm’s prior aspirational performance (β =0.038, p<0.05), and CEO Age (β=-0.043; p<0.05) were found to be significant and thereby influencing competitive action frequency. The beta coefficients of CEO promotion and prevention prediction regulatory scores were not significant, indicating that endogeneity was not an issue.

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Insert Table 3 about here

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In Model 2, the effect of CEO promotion focus on competitive action frequency was positive and significant (β = 0.091, p<0.001), and the effect of CEO prevention focus was negative and significant (β =-0.076, p<0.001), supporting Hypotheses 1 a and 1b. In Model 3 of Table 3, the interaction between CEO promotion focus and CEO-TMT functional dissimilarity was positive and significant (β = 0.084, p<0.001), and the interaction between CEO prevention focus and CEO-TMT functional dissimilarity was also positive and significant (β = 0.051, p < .01), supporting
Hypotheses 2a and 2b. Since moderating effects are best explained graphically, Figures 1 and 2 present the moderating effect of the CEO-TMT functional orientation dissimilarity on promotion / prevention focus and competitive action frequency relationship, respectively.

As can be observed from Figure 1, when CEO-TMT functional dissimilarity is high, the impact of CEO promotion focus on competitive action frequency increases more than when CEO-TMT functional dissimilarity is low. We also performed slope tests for low and high values of CEO-TMT functional orientation dissimilarity and it was significantly different from zero ($t_{\text{Low Functional Dissimilarity}} = 3.28, p < 0.01; t_{\text{High Functional Dissimilarity}} = 3.56, p < 0.01$). Similarly, Figure 2 indicates that when CEO-TMT functional dissimilarity is high, the negative impact of prevention regulatory focus on competitive action frequency is diminished as compared to when CEO-TMT functional dissimilarity is low. We again performed slope tests for low and high values of CEO-TMT functional orientation dissimilarity and it was significantly different from zero ($t_{\text{Low Functional Dissimilarity}} = -3.83, p < 0.001; t_{\text{High Functional Dissimilarity}} = -3.14, p < 0.01$).

In Model 3, of Table 3, the interaction between CEO promotion focus and CEO-TMT tenure dissimilarity was positive and significant ($\beta = 0.063, p < .001$), and the interaction between CEO prevention focus and CEO-TMT tenure dissimilarity was positive and significant ($\beta = 0.067, p < .01$), supporting Hypotheses 3a and 3b. We again present our results graphically. As can be
observed from Figure 3, when CEO-TMT tenure dissimilarity is high, the positive impact of CEO promotion focus on competitive action frequency increases, thus giving evidence in support of H3a. Slope tests for low and high values of CEO-TMT tenure dissimilarity were also significantly different from zero ($t_{\text{Low Tenure Dissimilarity}} = 3.43, p < 0.001$; $t_{\text{High Tenure Dissimilarity}} = 4.27$, $p < 0.001$). Similarly, Figure 4 depicts that for high CEO-TMT tenure dissimilarity, a decrease in competitive action frequency by a prevention-focused CEO is less. Hence, we receive evidence in support of Hypothesis 3b. Slope tests for low and high values of CEO-TMT tenure dissimilarity was also significantly different from zero ($t_{\text{Low Tenure Dissimilarity}} = -3.51$, $p < 0.001$; $t_{\text{High Tenure Dissimilarity}} = -3.02$, $p < 0.01$).

Insert Figure 3 about here

Insert Figure 4 about here

Robustness Checks

We conducted robustness checks to examine the validity of our results. As the costs for developing competitive actions vary across action types (Chen, Smith, & Grimm, 1992), we tested all models with weighted measures of competitive actions where a) higher weights were assigned to new products and market/capacity expansions and b) lower weights were assigned to price cuts and promotion actions (Ferrier, 2001, p. 876). Qualitatively, the results remained unchanged.
Alternative Moderator

A CEO’s decision-making ability depends on his power in the organization. Hence, it is vital to test the moderating impact of CEO power. Following Zhu and Chen (2015), CEO power was operationalized with six variables, namely the CEO’s board appointments in other companies, percentage of inside directors, percentage of outside directors appointed after the CEO, outside director ownership, CEO’s stock ownership, and CEO duality.

We measured a CEO’s total number of board appointments by the focal CEO’s total number of board appointments at other A and B category Bombay Stock Exchange-listed firms. The percentage of inside directors was measured as the ratio of the number of inside directors and the total number of directors on the board. The percentage of outside directors appointed was operationalized as the percentage of outside directors appointed during the CEO’s tenure. Outside directors’ ownership was calculated as the percentage of shares held by outside directors. CEO’s stock ownership was calculated as the percentage of shares held by the CEO in the focal firm. CEO duality was measured as a dummy variable, with a value of one if the CEO was also the board chairman. These six indicators standardized and summed into a single index of CEO power (Zhu & Chen, 2015). CEO power was found to be a significant moderator, however, CEO-TMT dissimilarity for functional orientation and tenure also retained their moderating effect in the presence of CEO power as a moderator, thus highlighting their significance as moderator.

We also employed a robustness test with diversity in TMT demographics and not considering CEO-TMT dissimilarity as a moderator. Following Knight et al. (1999), functional diversity was operationalized in terms of Blau’s (1977) heterogeneity index: \(1 - S_i^2\), where \(S\) was the proportion of the group in the \(i\)th category. The categories considered were marketing, human resources, information systems, finance and accounting, legal, and general administration. Tenure
diversity was the coefficient of variation on the number of months each team member had been employed in the focal company. Again, though the beta coefficient of the interaction effect of functional and tenure diversity with the regulatory focus was found to be significant, values were lower than the interaction effects of CEO-TMT dissimilarity coefficients.

**Discussion**

Regulatory focus is a critical motivational aspect that influences the strategies CEOs pursue to achieve goals (Lanaj et al., 2012). In this study, we seek to examine the influence of CEO regulatory focus on the competitive action frequency adopted by firms under the boundary conditions set by dissimilarity in the CEO TMT interface. We hypothesized regarding the direct effect of CEO regulatory focus on competitive action frequency and the moderating effect of CEO-TMT demographic dissimilarity traits. Our findings demonstrate that the regulatory focus of the CEO, i.e., both promotion and prevention, have a significant impact on the frequency of competitive actions by a firm. More specifically, our results suggest that CEO promotion focus is positively associated with, and prevention focus is negatively associated with, the frequency of competitive actions taken by firms. Our findings also suggest that two CEO-TMT informational demographic dissimilarity traits, i.e., functional orientation and tenure, moderate this relationship.

We selected India as a sample country for two reasons. First, it is one of the fastest-growing emerging markets (Kothari, Kotabe, & Murphy, 2013). Second, studies on the impact of upper echelons’ psychological traits on firms’ outcomes, specifically competitive outcomes in emerging markets, are only scantily explored. However, our hypothesis, which was driven by theory, was particular to the traits of promotion-focused and prevention-focused individuals, not country-specific cultural aspects. For example, the fact that promotion-focused individuals focus on growth and prevention-focused individuals are more concerned with safety and security has been
consistently used across studies of various countries, including China (Zhou, Hirst, & Shipton, 2012), the US (Smith, Craig Wallace, & Jordan, 2016), and Switzerland (Kammerlander, Burger, Fust, & Fueglistaller, 2015). Thus, the generalizability of our findings regarding the impact of CEO regulatory focus on firms’ competitive dynamics is not hindered by our focus on India.

Research Implications

Our findings have several research implications and contributions. Our first contribution is to upper echelons’ theory. The theory is predicated on the assumption that the psychological traits and behavioral preferences of senior executives are reflected in firms’ strategic processes and outcomes (Hambrick & Mason, 1984). Indeed, research suggests that CEOs’ influence on their firms is consequential (Quigley & Graffin, 2017).

This study explores a vital motivational attribute of a CEO, i.e., regulatory focus, to explain a firm’s competitive action frequency. Initially, upper echelons theory largely relied on the demographic characteristics of CEOs to predict their behaviors, assuming certain underlying psychological processes. However, these psychological processes largely remained unexplored, and that is why upper echelons theory was proverbially referred to as the “black box” (Hambrick, 2007). Later, by exploring CEOs’ personalities, such as CEO narcissism (Gerstner, König, Enders, & Hambrick, 2013), and other behavioral traits, such as CEO temporal focus (Nadkarni & Chen, 2014), the upper echelons perspective was expanded to incorporate these psychological mechanisms. In fact, CEO regulatory focus represents the motivational attributes of CEOs and further opens the upper echelons’ “black box” because it is a more “proximal driver of firm action” via its direct impact on CEO behavior (Nadkarni & Chen, 2014). Thus, by exploring the role of CEO regulatory focus on firm outcomes, we further extend the scant research on the upper
echelons perspective that explores executives’ motivational attributes and firm outcomes (Gamache et al., 2015; Jiang et al., 2019; Kammerlander et al., 2015).

Second, this study contributes to the literature on regulatory focus, which has been largely explored from employees’ perspectives. This theory has been found to predict a variety of work-related outcomes, such as task performance, organizational citizenship behaviors, perceptions, and attitudes, including job satisfaction and workplace commitment (Lanaj et al., 2012). However, only limited work has explored the regulatory focus of senior executives, such as CEOs, despite calls for more research on regulatory focus in an organizational context (Lanaj et al., 2012).

This study also contributes to the literature on competitive dynamics, where comparatively scant effort has been made in identifying upper echelon factors as predictors of competitive attributes (Chen & Miller, 2012). An impressive stream of research in the field of competitive dynamics, despite relying on the upper echelons approach, largely operates under a one-size-fits-all assumption, in which the explorations of the demographic characteristics of a CEO and the demographic characteristics of the remainder of the TMT happen in conjunction (Hughes-Morgan, Kolev, & Mcnamara, 2018), with only scant literature differentiating the role of the CEO from that of the TMT (Li & Jones, 2019). The current work addresses this concern by examining CEO motivational traits under the boundary condition of the TMT demographic interface.

Our findings also contribute to the CEO-TMT interface literature by establishing the importance of CEO-TMT dissimilarity in improving firm-level outcomes (Ling et al., 2015). Research on the dynamics of CEO-TMT dissimilarity has begun to increase in pace (Ling et al., 2015). We add to this stream of literature on the CEO-TMT interface by exploring CEO motivational aspects, i.e., regulatory focus and its interaction with the dissimilarity between CEO and TMT informational traits in the context of the competitive actions taken by firms. Specifically,
regarding the CEO-TMT interface, studies integrating CEOs’ motivational traits and CEO-TMT demographic characteristics dissimilarity are nonexistent to the best of our knowledge.

Furthermore, the extant literature contains mixed results regarding the impact of TMT on the competitive aggressiveness of a firm (Hambrick, Cho, & Chen, 1996; Hughes-Morgan et al., 2018; Hughes-Morgan, Ferrier, & Labianca, 2010). One plausible reason for this mixed evidence is that TMTs play an advisory role because decision-making power is vested in CEOs. Thus, scholars proposed the CEO-TMT interface as a plausible mechanism explaining the effects of TMTs on firms’ strategic decisions. We thus extend this stream of the CEO-TMT interface literature, in which TMTs’ dissimilarity with CEOs in terms of functional output-oriented function and tenure were found to have a significant influence on the relationship between CEO regulatory foci and the frequency of competitive action. Overall, our study represents an important first step toward linking upper echelons and competitive dynamics under the boundary conditions of the CEO-TMT demographic dissimilarity interface.

Managerial Implications

Our findings have important implications for CEOs and boards of directors. Chief executive officers should understand their natural tendencies regarding competing against competitors. Thus, promotion-focused CEOs should be able to leverage the positive aspects of their regulatory foci and compete aggressively. Those CEOs with a prevention focus can intentionally surround themselves with informational demographically dissimilar TMT members to balance out their more risk-taking tendencies. Boards of directors may also consider CEO regulatory focus in directing and guiding the CEO. They may provide more cautious oversight of the competitive activity of promotion-focused CEOs, while being more encouraging and prompting competitive behavior among prevention-focused CEOs.
Limitations and Directions of Future Research

Our findings suggest several avenues for future research. First, we show that CEO regulatory focus influences the competitive action frequency of a firm. Future research could extend this logic to examine whether and how regulatory focus influences a competitively aggressive firm’s performance. This could include the development of arguments regarding environmental conditions under which high levels of both promotion and prevention may lead to performance improvement. Alternatively, it may be that CEOs with a high promotion orientation compete aggressively. This benefits the firm in different ways than actions taken by CEOs with a high prevention focus. Additionally, future research could delve more deeply into the different aspects of competitive actions pursued by CEOs with differing levels of promotion and prevention focus, such as attack duration, complexity, and unpredictability.

Future studies should also consider the integration of upper-echelons and competitive dynamics theories by probing other CEO-TMT dynamics, such as personality fit (Grant, Gino, & Hofmann, 2011) or perception-based competition (Menon, 2018). Second, because research exploring corporate governance and the competitive dynamic mechanism is gaining pace (Chen & Miller, 2012), future research can explore the interactive effects of governance variables, such as board-of-director (BOD) composition, with the CEO and the TMT, as well as their implications for inter-firm competition (Connelly et al., 2017). The awareness, motivation, and capability (AMC) framework has been vastly used in competitive dynamics research (Chen, Tribbitt, Yang, & Li, 2017). Future studies can apply this framework to more holistically articulate the antecedents of competitive dynamics by considering the framework under boundary conditions of TMT or corporate governance. Last, our study sample was from a single country, India. Consequently, the
generalizability of the findings is limited. Future research can review our findings in different cultural contexts to enhance the generalizability of the results.

Conclusion

To conclude, based on the upper echelon theory, we found evidence supporting our hypotheses. That is, both the promotion and prevention regulatory foci were positively and negatively associated, respectively, with the competitive action frequency of firms. Furthermore, corroborating the CEO-TMT dissimilarity literature, we also found that CEO-TMT functional orientation and tenure dissimilarity moderated the relationship between CEO regulatory focus and competitive action frequency in a differentiated manner. The findings thus contribute to the leadership and strategic management literature.
References


Table 1
Sample of Competitive Actions

<table>
<thead>
<tr>
<th>Action</th>
<th>News</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market expansion</td>
<td>Ajanta Pharma Ltd (APL), a Rs 81-crore company, is setting up a bulk drugs plant at Waluj, near Aurangabad. Spread over 16 acres, the plant is being set up at a cost of Rs 50 crore.</td>
</tr>
<tr>
<td>Advertising</td>
<td>Relaxo, India’s leading footwear manufacturer has signed Katrina Kaif as the brand ambassador for FLITE, one of the most fashionable, colorful, trendy and comfortable footwear brands in the Indian market.</td>
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<tr>
<td>Pricing</td>
<td>Struggling to increase the volumes and market share of its premium edible oil brand Saffola, Marico has decided to introduce two different sets of pricing based on the variants of the brand across regions.</td>
</tr>
<tr>
<td>New product launch</td>
<td>FMCG firm Godrej Consumer Products Ltd NSE -0.82 % (GCPL) today expanded its mosquito repellent portfolio with the launch its fifth product 'Good Knight Fast Card'.</td>
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Table 2
Descriptive Statistics and Correlation Matrix of Family Firms (n= 1090)

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***p<0.001; **p<0.01; *p<0.05; #,p<0.10
<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
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<tr>
<td><strong>CEO Promotion Focus</strong></td>
<td>0.091***</td>
<td>0.092***</td>
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<td>(0.024)</td>
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<td><strong>CEO Prevention Focus</strong></td>
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<td>-0.077***</td>
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<td>(0.021)</td>
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<td><strong>CEO-TMT Functional Dissimilarity</strong></td>
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<td>0.0744***</td>
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<td></td>
<td>(0.019)</td>
<td>(0.020)</td>
<td></td>
</tr>
<tr>
<td><strong>CEO-TMT Tenure Dissimilarity</strong></td>
<td>-0.042***</td>
<td>-0.043***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.012)</td>
<td>(0.012)</td>
<td></td>
</tr>
<tr>
<td><strong>CEO Promotion Focus * CEO-TMT Functional Dissimilarity</strong></td>
<td>0.084***</td>
<td>0.063***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.023)</td>
<td>(0.018)</td>
<td></td>
</tr>
<tr>
<td><strong>CEO Promotion Focus * CEO-TMT Tenure Dissimilarity</strong></td>
<td>0.081***</td>
<td>0.067***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.023)</td>
<td>(0.022)</td>
<td></td>
</tr>
<tr>
<td><strong>CEO Promotion Focus * CEO-TMT Education Dissimilarity</strong></td>
<td>0.046</td>
<td>0.051**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td>(0.016)</td>
<td></td>
</tr>
<tr>
<td><strong>CEO Prevention Focus * CEO-TMT Functional Dissimilarity</strong></td>
<td>0.051**</td>
<td>0.067**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td>(0.022)</td>
<td></td>
</tr>
<tr>
<td><strong>CEO Prevention Focus * CEO-TMT Tenure Dissimilarity</strong></td>
<td>0.051**</td>
<td>0.067**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td>(0.022)</td>
<td></td>
</tr>
<tr>
<td><strong>CEO Promotion Focus * CEO-TMT Education Dissimilarity</strong></td>
<td>0.032</td>
<td>0.032</td>
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<tr>
<td></td>
<td>(0.021)</td>
<td>(0.021)</td>
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<tr>
<td><strong>CEO Duality</strong></td>
<td>0.041</td>
<td>0.043</td>
<td>0.045</td>
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<tr>
<td></td>
<td>(0.035)</td>
<td>(0.036)</td>
<td>(0.037)</td>
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<tr>
<td><strong>CEO Compensation</strong></td>
<td>0.031</td>
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<td>(0.025)</td>
<td>(0.026)</td>
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<tr>
<td><strong>CEO Age (Ln)</strong></td>
<td>-0.043*</td>
<td>-0.044*</td>
<td>-0.047*</td>
</tr>
<tr>
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<td>(0.019)</td>
<td>(0.020)</td>
<td>(0.022)</td>
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<tr>
<td><strong>Firm Age (Ln)</strong></td>
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<td>0.087</td>
<td>0.085</td>
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<tr>
<td><strong>Firm Size (Ln)</strong></td>
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<td>(0.075)</td>
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<td><strong>Prior Aspirational Performance</strong></td>
<td>0.038*</td>
<td>0.042*</td>
<td>0.044*</td>
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<tr>
<td></td>
<td>(0.018)</td>
<td>(0.019)</td>
<td>(0.021)</td>
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<tr>
<td><strong>Industry Munificence</strong></td>
<td>0.031</td>
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<td>(0.016)</td>
<td>(0.027)</td>
</tr>
<tr>
<td><strong>CEO Change</strong></td>
<td>0.04</td>
<td>0.041</td>
<td>0.043</td>
</tr>
<tr>
<td></td>
<td>(0.025)</td>
<td>(0.026)</td>
<td>(0.025)</td>
</tr>
<tr>
<td><strong>Board Size</strong></td>
<td>0.041</td>
<td>0.047</td>
<td>0.049</td>
</tr>
<tr>
<td></td>
<td>(0.033)</td>
<td>(0.035)</td>
<td>(0.037)</td>
</tr>
<tr>
<td><strong>CEO Promotion Predicted Score</strong></td>
<td>0.061</td>
<td>0.065</td>
<td>0.066</td>
</tr>
<tr>
<td></td>
<td>(0.045)</td>
<td>(0.051)</td>
<td>(0.052)</td>
</tr>
<tr>
<td><strong>CEO Prevention Predicted Score</strong></td>
<td>0.065</td>
<td>0.061</td>
<td>0.062</td>
</tr>
<tr>
<td></td>
<td>(0.047)</td>
<td>(0.043)</td>
<td>(0.044)</td>
</tr>
<tr>
<td><strong>Industry and Year Dummies</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Wald Chi Square</strong></td>
<td>1368.5***</td>
<td>1452.4***</td>
<td>1488.7***</td>
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***p<0.001; **p<0.01; *p<0.05
Figure 1

Moderating Effect of CEO-TMT Functional Dissimilarity on Competitive Action Frequency and Promotion Focus Relationship

![Graph showing the relationship between competitive action frequency and promotion focus. The x-axis represents low and high promotion focus, and the y-axis represents competitive action frequency. The graph includes two lines: one for low functional dissimilarity and one for high functional dissimilarity.]
Figure 2

Moderating Effect of CEO-TMT Functional Dissimilarity on Competitive Action Frequency and Prevention Focus Relationship
Figure 3

Moderating Effect of CEO-TMT Tenure Dissimilarity on Competitive Action Frequency and Promotion Focus Relationship
Figure 4

Moderating Effect of CEO-TMT Tenure Dissimilarity on Competitive Action Frequency and Prevention Focus Relationship