

CEO Regulatory Foci, Environmental Dynamism, and Small Firm Performance

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This research proposes and tests that regulatory foci of small business chief executive officers (promotion focus and prevention focus) relate to firm performance differentially when levels of environmental uncertainty vary. Results suggest that a promotion focus is positively related to firm performance, whereas a prevention focus is negatively related to firm performance. Further, these relationships are moderated by the degree of environmental dynamism such that in more dynamic environments, the relationship between promotion focus and firm performance is strengthened, whereas the relationship between prevention focus and firm performance is negatively affected. The reverse was found for less dynamic environments. Theoretical and practical implications as well as future research avenues are offered.

Introduction

Much of the popular and academic management literature, particularly upper echelons theory (UET) (Hambrick and Mason 1984), suggests that top executives influence the performance of their firms by infusing various aspects of

themselves (their values, personality, motivations, and experiences) into multiple aspects of the firm and its functioning. The impact of these executive characteristics is particularly salient in small firms and dynamic environments in which the executive may have more discretion over decision-making (Hambrick

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and Finkelstein 1987). Though the effect of executive characteristics, particularly demographic characteristics, on firm performance has been well documented in UET literature (Carpenter, Geletkanycz, and Sanders 2004; Hambrick 2005), we do not have a complete understanding of how different chief executive officer (CEO) values, personalities, motivations, and experiences influence small firm performance (Hambrick 2007; Lawrence 1997). Though UET has traditionally been concerned with the entire top management team (Hambrick and Mason 1984), several pertinent extensions to UET have recognized the importance of considering the impact of CEO characteristics alone, or, as Hambrick (2007) notes, "the upper echelons perspective does not require a focus on TMTs, and a number of significant contributions have examined CEOs or other individual leaders" (p. 334). Hambrick (2007) is correct that many studies uncovering important relationships between CEO demographic characteristics and important firm outcomes have been published of late, including the impact on firm performance, organizational change, strategy, and structure (Cannella, Finkelstein, and Hambrick 2008; Carpenter, Geletkanycz, and Sanders 2004; Finkelstein and Hambrick 1996; Hage and Dewar 1973; Jensen and Zajac 2004; Marks and Mirvis 1998a, 1998b; Miller and Droge 1986). Despite the rich line of inquiry that illustrates the importance of CEO demographic characteristics, comparatively, little work has examined the impact of non-overt characteristics such as executive motivations that might relate to firm performance. We propose that CEOs' motivations influence organizational goals and, ultimately, whether or not the organization meets these goals within its operating environment. We believe this is particularly true in small firms where the CEO exercises more control over the firm (Lawrence and Lorsch 1967), and as such, their influ-

ence is particularly important in regard to the performance of their firm.

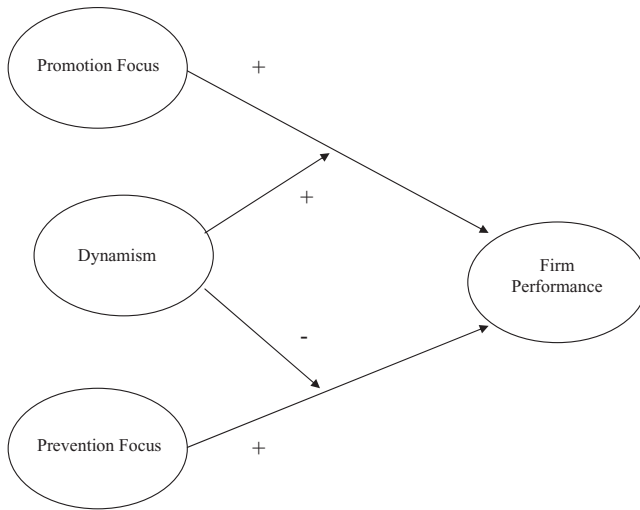
Regulatory focus theory (Higgins 2000, 1997) is a particularly apt framework to utilize in this context because it encompasses two distinct motivational dispositions that are known to differentially influence individual behavior: promotion focus (i.e., eager focus for gains and accomplishments) and prevention focus (i.e., vigilant focus for duty and responsibility) (Higgins 2000; Wallace and Chen 2006). Regulatory focus theory can help explain how executives influence firm performance, particularly for small firms in dynamic markets because uncertain environments and limited response times affect managerial decisions (Barr, Stimpert, and Huff 1992) and because top managers have, as well as exercise, more control in smaller firms (Lawrence and Lorsch 1967). However, it is not clear the reasons that one manager may be more successful than another in such uncertain situations.

This research addresses these issues by testing an interactional model of regulatory focus, environmental dynamism, and firm performance in small firms. In particular, we add to our knowledge of both upper echelons and regulatory focus theories by investigating the regulatory foci of CEOs, an important addition to the UET "black box problem" (Lawrence 1997). Further, extending Higgins's (2000, 1997) regulatory focus theory, we propose that the chronic regulatory foci of a CEO is a key individual difference that can influence firm performance and that this influence will be dependent upon the environment in which he/she operates. Figure 1 provides an overview of our theoretical model that we delineate below.

Theoretical Framework and Research Hypothesis **Executive Regulatory Focus**

Hambrick and Mason (1984) articulated a model in which top executives

Figure 1
Expected Theoretical Relationships



play a pivotal role in shaping major organizational outcomes. They suggest that executives act on the basis of their understanding of the circumstances they face and that these personalized interpretations are a function of the executives' personalities and prior experiences (Hambrick 2007). In this manner, the organization is a reflection of the upper management that directs the actions in which the organization engages. As the highest level manager in the firm, the CEO is most likely to possess discretion with the least restrictive oversight (Hambrick and Fukutomi 1991). The CEO occupies the key decision-making position, which provides the opportunity for their personal characteristics to have significant ramifications on organizational strategies, structure, and subsequent performance (Cannella, Finkelstein, and Hambrick 2008).

Supporting this view, CEO personality has been investigated for its relationship to strategic decision-making. Miller and colleagues (Miller and Toulouse 1986;

Miller, Kets de Vries, and Toulouse, 1982) found that though firms led by confident and aggressive CEOs pursued risky and innovative strategies, those led by CEOs given to feelings of "helplessness" tended to adopt more conservative strategies. More recently, CEO narcissism has been shown to engender extreme and fluctuating organizational performance (Chatterjee and Hambrick 2007). Furthermore, CEOs with an internal locus of control were associated with the success of small firms and new ventures (Brockhaus 1980; Van de Ven, Hudson, and Schroeder 1984). In this regard, it can be expected that the manner in which a CEO strives for desired goals could affect decision-making and therefore subsequent performance.

As highlighted above, we posit that regulatory focus theory (Higgins 2000, 1997) is a useful framework to utilize with CEOs and firm performance because it encompasses two distinct motivational dispositions that are known to differentially influence behavior: pro-

motion and prevention focus (Higgins 2000; Wallace and Chen 2006). Higgins (1997) proposed that regulatory focus is a tendency that influences how persons approach and strive for desired goals. A promotion focus eagerly matches behavior to a goal by focusing on attaining positive outcomes without regard for possible negative consequences. That is, "individuals in a promotion focus, who are strategically inclined to approach matches to desired end-states, should be eager to attain advancement and gains" (Higgins 1997, p. 1285). Thus, a promotion focus drives individuals to be careful to not make any errors of omission (i.e., lack of accomplishments), and as such, they are typically more efficient in decision-making and execution of decisions than those preferring a prevention focus (Higgins 2000, 1997). Those individuals employing a promotion focus are concerned with the attainment of aspirations and accomplishments by increasing the salience of positive outcomes and gains by looking for more efficient mechanisms to reach desired goals. They want to succeed, and to do so, will seek out multiple pathways and mechanisms that should allow for success, often times being very creative (Brockner, Higgins, and Low 2003). Higgins (1997) claimed that a promotion focus is engendered from the ideal self (striving to be all he/she can be); creative and investigative interests; self-direction to meet one's hopes, desires, and wishes; and situations framed in terms of opportunity, gain, and achievement.

A prevention focus approach is vigilant to avoid behaviors that mismatch a goal (Higgins 1997). Specifically, "individuals in a prevention focus, who are strategically inclined to avoid mismatches to desired end-states, should be vigilant to ensure safety and non-losses" (p. 1285). That is, a prevention focus drives a person to be vigilant to avoid errors of commission (i.e., making a mistake) by increasing the salience of

possible obstacles to goal attainment. In essence, those employing a prevention focus are concerned with the attainment of responsibility and safety by increasing the salience of negative outcomes and consequences in an effort to avoid potential pitfalls that would prohibit successful goal attainment. An executive with a prevention focus would be more inclined to engage in careful, systematic decision-making, which is characteristic of decision comprehensiveness (Fredrickson and Mitchell 1984). Higgins (1997) claimed that a prevention focus is engendered from the ought self (striving to be a responsible and dutiful person), conventional and conservative interests, self-direction to meet safety and security needs, and situations framed in terms of losses and security.

In the work motivation domain, there are two primary domains: approach and avoidance. Avoidance motivation increases the discrepancy between the current state and the goal state. Approach motivation reduces the discrepancy between the current state and the goal state (Kanfer 1990). Both promotion and prevention foci have been suggested and empirically supported to reside in the approach domain of motivation, not the avoidance domain of motivation (Higgins et al. 1994). This is because both promotion and prevention foci allow one to reduce discrepancies but use *different means* to lessen incongruence between the current state and the desired goal. Promotion seeks out "hits" and approaches such hits to maximize gains, whereas prevention seeks out "misses" and prevents such misses in an effort to obtain a goal while minimizing losses.

Furthermore, recent research (Wallace and Chen 2006) suggests that regulatory focus in the workplace is moderately stable over time, similar to other constructs in the workplace (e.g., work goal orientation, Vandewalle 1997). Given that regulatory focus stems from both

stable personal values and needs, and situational stimuli (e.g., leadership; see Förster, Higgins, and Bianco 2003; Higgins 2000, 1997), levels of promotion focus and prevention focus may change as situational stimuli change, such as when employees are exposed to changes in leadership, work climate, or task demands. Absent important changes in the work environment, regulatory focus at work is unlikely to change (Brockner and Higgins 1997). Even with the potential for influencing one's focus, Higgins (2000, 1997) suggests that individuals have a chronic preference for one focus or the other that is strongly rooted in one's developmental history (i.e., stable needs and values). Hence, individuals typically use one focus or the other across the majority of work activities and seek a fit between their regulatory focus and the environment within which they operate. Given our dynamic business environment, it is likely the case that higher dynamism will impact the relationships between one's regulatory foci and performance as individuals attempt to create regulatory fit, which we discuss in more detail below.

CEO Regulatory Focus and Firm Performance

When making decisions and setting goals for the organization, CEOs' choices can vary widely, and therefore, they insert multiple aspects of themselves into decisions (Finkelstein and Hambrick 1996; Hambrick and Mason 1984; House and Aditya 1997). Through the decisions made by top leaders (e.g., founder, owner, CEO), the organization's strategy, goals, and culture (direction-setting framework) are defined and in turn shape the organization in ways that resemble the executives' own direction-setting framework (Miller and Droge 1986; Schneider 1987). This is particularly true for small young firms (Boone, De Brabander, and Hellemans 2000; Boone, De Brabander, and Witteloostuijn

1996; George, Wiklund, and Zahra 2005; Giberson, Resick, and Dickson 2005).

Accordingly, in order to understand organizational outcomes, one must consider the personalities, dispositions, and biases of top executives (Cannella, Finkelstein, and Hambrick 2008; Finkelstein and Hambrick 1996; Hambrick 2007; Hambrick and Mason 1984; Schneider 1987). We believe that an important disposition to study on these terms is an executive's regulatory focus primarily because of its motivational nature and impact on individual performance and behavior across many social contexts (Higgins 2000, 1997; Wallace and Chen 2006). Cognitive, emotional, and financial resources are allocated toward aspects of achievements and gains for the organization with those CEOs who are promotion focused because such a tendency leads to a behavioral manifestation of eagerly searching for new methods to increase efficiency (and ultimately effectiveness). With regard to a prevention focus, resources are allocated toward duty and security because such a focus is concerned with identifying potential obstacles and therefore might miss some opportunities because of the highly vigilant nature of a prevention focus (focusing on what I know has led to success in the past, Wallace and Chen 2006).

Generally, we expect the same pattern of performance relationships to be found between promotion and prevention foci, and firm performance because of the overall approach and motivational aspect of both regulatory foci. It is likely that a promotion focus will lead to higher firm performance as the manifestation of a promotion focus leads to more accomplishments and gains for the entire firm because chief executives are looking for newer methods to help the firm succeed. However, a promotion focus is not a guarantee for success; it is also possible that more mistakes might be made in the process of striving for additional gains. A

promotion focus is not concerned with mistakes, only gains, and is therefore resilient to move on toward more gains after making a mistake (Higgins 2000, 1997). Hence, we believe that a promotion focus positively relates to firm performance. Similarly, a prevention focus will lead to increased firm performance. This is because such individuals will continue to engage and invest resources into aspects of the business that have been successful and likely continue to lead to success, but do so in a more vigilant and dutiful fashion to ascertain financial security and avoid potential mistakes. Thus, our first set of hypotheses:

H1: CEO promotion focus positively relates to firm performance.

H2: CEO prevention focus positively relates to firm performance.

Moderating Influence of Environmental Dynamism

Strategic management research has long dealt with industry dynamism (Barr, Stimpert, and Huff 1992; Dess and Beard 1984; Henderson, Miller, and Hambrick 2006; Hrebiniak and Snow 1980) and is one of the key environmental characteristics, among others (e.g., munificence and complexity), that Dess and Beard (1984) identified. Many previous investigations into UET have emphasized the role of dynamism and its effect on organizational actions (Henderson, Miller, and Hambrick 2006). Stable environments are characterized by minimal change in customer preferences, technologies, and competitive dynamics, whereas highly dynamic industries are characterized by a high rate of change and instability, increasing decision uncertainty. As a result of high uncertainty, the organization is required to respond more rapidly to unforeseen change in order to survive, and as such, the decision-making process is much more complex (Barr, Stimpert, and Huff

1992; Dess and Beard 1984; Lawrence and Lorsch 1967). As Eisenhardt (1989) showed, managers in high-velocity environments utilize more, rather than less, information and develop more alternatives than their counterparts that are confronted with less turbulent atmospheres. Operating in a more highly dynamic environment has been shown to affect managers' perceptions regarding the risk of organizational failure (Hambrick and Finkelstein 1987). Studies have shown the differential effects of dynamism on the relationship between corporate leadership and organizational performance (Shamir and Howell 1999; Waldman et al. 2001). Furthermore, Waldman et al. (2001) found that charismatic leadership positively related to firm financial performance only in highly uncertain environments, whereas it negatively related to performance in less uncertain environments. Thus, leader behaviors, as exemplified by charismatic leadership, differentially relate to firm performance. Though it is apparent that limitations on response time and facing uncertain environments affect managerial decisions, leader motivations (e.g., regulatory foci) that might be helpful to top managers, their behavior, and their firm's performance remain unstudied but may be quite influential in relation to performance (Kark and van Dijk 2007).

Small firms that do not align with shifts and changes in the market are quickly replaced by new business entries that are willing to adapt (Burke 2002; Foster and Kaplan 2001). Much of the emphasis on adaptation for small firms stems from the executive level, and as noted already, this is particularly the case in highly dynamic environments. Because of the necessity to react quickly, promotion focus is likely to lead to higher performance in dynamic environments than preventive focus, which is characterized by a slower, more deliberate approach to decision-making to avoid possible errors. As such, perhaps

the environment in which a firm operates can also change the magnitude between regulatory focus and firm performance.

Regulatory Fit

Higgins (2002, 2000) relates regulatory focus to a sense of “feeling right” about one’s approach to goal attainment for a given context (Higgins 2006; Higgins and Freitas 2007). Certain business environments can also just “feel right” for certain individuals (e.g., person–environment fit; Cable and Parsons 2001), and the fit should lead to higher effectiveness. For example, Greiner, Bhambri, and Cummings (2003) suggest that a CEO’s orientation toward action should be matched with certain opportunities in order to gain a competitive advantage. Therefore, we believe that the CEO’s orientation for promotion or prevention focus can be manifest differently in their direction-setting framework across different environments. Regulatory fit, in this case, is posited to result from congruence between a CEO’s regulatory focus and the stability, or lack thereof, in the operating environment. Integrating regulatory fit with environmental dynamism would suggest that a prevention focus, characterized by vigilant, secure, and stability focus utilizing comprehensive decision-making, is not the best strategy in an environment with high uncertainty, whereas a promotion focus, with its eager and achievement focus, would positively impact performance in a dynamic environment because a promotion focus is associated with quicker adaption and calculated risks (Förster, Higgins, and Bianco 2003).

A dynamic operating environment provides a larger degree of managerial latitude of action, which works well with a promotion focus in driving a CEO to search and pursue goals with the interest in attaining more gains. In these situations, promotion focus tends to generate many more options than a prevention

focus. This is because of allocating resources (cognitive, emotional, and financial) toward multiple aspects of the business to move it forward, stemming from a willingness to change and thereby engaging in creative activities that should yield higher returns. As mentioned already, Liberman et al. (1999) found that a promotion focus results in more creativity and innovation in identifying new methods that facilitate effectiveness. Creativity and willingness to quickly adapt are two key components for firm effectiveness in dynamic conditions (Burke 2002). A CEO using a prevention focus lacks the creative zest for high firm performance and also is resistant to change due to the secure and vigilant focus, particularly in a dynamic environment as a prevention focus centers on stability and comprehensiveness. This focus on stability and comprehensiveness could lead to stagnation in decision-making, thereby allowing possible beneficial strategic actions to go untapped. These neglected opportunities and focus on comprehensiveness fail to advance the firm in turbulent environments and can lead to languishing performance, particularly in a dynamic industry characterized by the necessity of quick decision-making (Fredrickson and Mitchell 1984). Thus, we hypothesize:

H3: The relationship between promotion focus and firm performance is more positive in high environmental dynamism than in low environmental dynamism.

H4: The relationship between prevention focus and firm performance is less positive in high environmental dynamism than in low environmental dynamism.

Empirical Evidence

Participants and Procedures

By using the U.S. Postal Service, we sampled 1,059 CEOs of small firms. All

participating firms were smaller than 300 employees, and the mean size of the firm was 134 with an average firm age of 36 years. These are well-established firms within their environment. CEOs were identified through a university alumni list from a large Midwestern business school. All participants had at least one degree from this business school. Each executive was sent a postcard notification of the study. This postcard served two purposes: (1) to inform that the study was being conducted, and (2) that we wished for them to participate. Approximately one week later, the survey itself was mailed to all the CEOs following Dillman's (1983) total design method. The survey contained a measure of regulatory focus, environmental dynamism, firm performance, and questions relating to both individual and organizational demographics. We received complete survey data from 142 CEOs, and there were 178 bad addresses, giving us a response rate of 16.1 percent, which is similar to other response rates obtained in other CEO studies (DeTienne and Koberg 2002; Hmieleski and Baron 2008). Unlike many traditional CEO studies that rely on concurrent self-reported data from the CEO, we also wanted to better gauge our hypotheses with other reports of contextual variables and outcomes. Hence, we next requested that the CEOs ask one of their other top managers who was a part of the top management team and would be familiar with the firm's strategic issues to complete a similar survey. The "top manager" survey only contained measures for organizational dynamism and firm performance. We received complete top manager data from 70 executives, giving us a response rate of 49.3 percent. This helped us overcome limitations associated with common source data.

Measurements

All survey items used in the present study are presented in the Appendix.

Regulatory Focus. Promotion and prevention focus items were drawn from Lockwood, Jordan, and Kunda (2002). The promotion focus scale contains six items, and the prevention focus contains six items. The scale uses a five-point Likert format (1 = never; 5 = constantly), and both factors were found to be internally consistent (promotion $\alpha = 0.88$ and prevention $\alpha = 0.84$).

Environmental Dynamism. A scale developed by Miller and Friesen (1982) and adapted by Gilley and Rasheed (2000) was used to assess environmental dynamism. The scale contains seven items (e.g., little need to change marketing practices; consumer demand easy to predict) and is scored using a seven-point Likert format (1 = strongly disagree; 7 = strongly agree). The dynamism ratings were found to be internally consistent (CEO $\alpha = 0.72$; top manager $\alpha = 0.81$).

Firm Performance. Dess and Robinson (1984) suggested that researchers might be well served to utilize subjective financial performance when researching small firms because it is very unlikely that small private firms will provide objective financial data. We found this to be true in our study and thus elected to collect subjective firm performance data from both the CEO and the other top manager. This approach has additional advantages as well. As Venkatraman and Ramanujam (1987) note, subjective performance measures such as the one utilized in this study have been found to be highly correlated with objective measures of firm performance. Further, subjective measures allow for a broader conceptualization of firm performance that is additionally beneficial for several reasons. First, subjective measures better reflect the multidimensionality of the firm performance construct (Cameron 1978; Chakravarthy 1986; Richard et al. 2009). Second, because executives are

asked to compare their firm relative to similar firms in the same industry, this helps to minimize the effects of industry (Dess, Ireland, and Hitt 1990) and strategic group membership (Hatten, Schendel, and Cooper 1978). Third, it allows for comparisons on a wide array of organizational performance measures. For instance, subjective measures may more accurately reflect a balanced scorecard approach because they “add customer, internal process, and innovation measures to the measurement of financial performance” (Richard et al. 2009, p. 735). As such, subjective assessments of performance are able to more fully represent a balanced scorecard of performance that objective financial measures may not be able to assess (Kaplan and Norton 1996).

As Richard et al. (2009) note, performance measures should strive to capture three dimensions of organizational performance, including: (1) financial performance; (2) stakeholder performance; and (3) sources of heterogeneity relative to resource allocation. We utilized a 14-item measure of firm performance adapted by Gilley and Rasheed (2000) from the initial measure developed by Dess and Robinson (1984), and Pearce, Robbins, and Robinson (1987). The instrument chosen for this research captures each of the three dimensions recommended by Richard et al. (2009). Specifically, this measure captures financial performance (four items—return on assets, return on sales, sales growth, and overall financial performance), stakeholder performance (five items—stability/growth of employment, employee morale/job satisfaction, customer relations, supplier relations, overall nonfinancial performance), and heterogeneity with regard to resource allocation strategies (five items—funds allocated to R&D, funds allocated to advertising, process innovations, product innovations, and compensation of employees). Several other scholars have utilized this instrument as well (e.g.,

Gilley, Greer, and Rasheed 2004; Priem, Rasheed, and Kotulic 1995). The firm performance ratings were found to be internally consistent (CEO $\alpha = 0.88$; top manager $\alpha = 0.76$) and utilized a five-point Likert scale (1 = at the bottom of similar firms in the industry; 5 = at the top of similar firms in the industry).

CEO Gender and CEO Tenure. Strategy research has long addressed the demographic characteristics of the CEO and their impact on firm performance (Finkelstein and Hambrick 1990; Miller and Shamsie 2001; Westphal and Zajac 1995). As such, to accurately assess our model, we controlled for these variables. CEO gender was a dichotomous variable, with the value 1 indicating male and 0 indicating female. Tenure was the number of years that the individual had occupied the position as CEO of the organization.

Firm Age and Firm Size. The age and size of a firm may provide resources from which the firm can draw to more favorably compete (Stinchcombe 1965). As such, controlling for the liabilities of newness and smallness is necessary to more accurately assess the intended hypotheses (Freeman, Carroll, and Hannan 1983; Hannan and Freeman 1984). Firm age was measured as the number of years since firm founding, and firm size was measured by the number of employees.

Results

Descriptive statistics and bivariate correlations can be found in Table 1. Promotion focus was positively related to both CEO- and top manager-reported firm performance, whereas prevention focus was negatively related to top manager reports of performance and shared a nonsignificant relationship with CEO-rated performance. Prior to testing individual hypotheses, data for all predictor variables were centered before creating the interaction terms to help

Table 1
Descriptive and Bivariate Correlations for Variables in Study

Variable	α	<i>M</i>	S.D. ^a	1	2	3	4	5	6	7	8	9	10
1. Promotion Focus	0.88	3.62	0.56	—									
2. Prevention Focus	0.84	2.78	0.60	0.23*	—								
3. CEO-Reported ^b Environmental Dynamism	0.73	4.01	0.91	-0.05	-0.06	—							
4. CEO-Reported Firm Performance	0.84	3.56	0.54	0.22*	-0.03	0.14	—						
5. Top Manager-Reported Environmental Dynamism	0.79	4.10	1.01	-0.15	-0.34*	0.62*	0.05	—					
6. Top Manager-Reported Firm Performance	0.81	3.38	0.68	0.19*	-0.24*	0.28*	0.69*	0.36*	—				
7. Number of Firm Employees		134	105	0.02	-0.12	-0.02	-0.05	0.01	-0.09	—			
8. Age of Firm		36	11.90	-0.05	-0.05	-0.05	-0.19*	0.16	-0.03	-0.05	—		
9. CEO gender ^b		1.82	0.38	0.18*	0.10	-0.07	0.03	-0.13	0.09	0.06	-0.06	—	
10. CEO Tenure ^b		15.05	13.23	0.03	0.14	-0.09	0.01	-0.06	0.05	-0.07	0.06	0.07	—

^aS.D., standard deviation.

^bCEO, chief executive officer.

*Levels of significance: $p < .05$.

control for the possibility of spurious effects, following Aiken and West (1991). Spurious effects may appear as a result of multicollinearity between the predictors and the interaction term, or, as Aiken and West (1991) state, "the multicollinearity in the context of regression with (interaction terms) is due to scaling, and can be greatly lessened by centering variables" (p. 35). Hierarchical moderated regression was employed to test the stated hypotheses on both the CEO- and top manager-reported data. As an initial step, four variables common to research on the dependent variable of firm performance (Westphal and Zajac 1995) were included as controls: the number of employees to control for firm size, firm age, CEO gender, and CEO tenure. In the next step, promotion, prevention, and dynamism were entered in each regression to assess main effects followed by the third and final step, which included the interaction terms of promotion focus and dynamism, and prevention focus and dynamism in each regression.

Results generally supported the expectations outlined in the Introduction, and results for each step can be found in Table 2 for the CEO and in Table 3 for the top manager, respectively. It was found that promotion focus positively related to firm performance for CEO ratings of performance as well as for top manager ratings of performance. Thus, H1 was supported (CEO: $\beta = 0.23$, $p < .05$; top manager: $\beta = 0.29$, $p < .05$). H2 was not supported (CEO: $\beta = -0.15$, $p > .05$; top manager: $\beta = -0.44$, $p < .05$). In fact, prevention focus negatively related to firm performance in top manager reports of performance, and results from the CEO-reported firm performance were nonsignificant.

In accordance with H3, it was found that environmental dynamism positively moderated the relationship between promotion focus and firm performance across both the CEO and top manager reports of firm performance and environ-

mental dynamism. The significant interaction for promotion \times dynamism on firm performance displayed in Figure 2 fully supports H3 (CEO: $\beta = 0.21$, $p < .05$; top manager: $\beta = 0.38$, $p < .05$). Likewise, in full support of H4 (CEO: $\beta = -0.28$, $p < .05$; top manager: $\beta = -0.44$, $p < .05$), it was found that the relationship between prevention and firm performance is moderated negatively by environmental dynamism across both the CEO and top manager reports of firm performance and environmental dynamism, as indicated by the significant interaction for prevention \times dynamism in Figure 3.

Figure 2 shows, and tests of simple slopes support ($p < .05$), that there is a positive relationship between promotion focus and performance in highly dynamic environments and a nonsignificant relationship when dynamism is low. Figure 3 shows, and tests of simple slopes support ($p < .05$), that prevention focus positively relates to performance in low dynamism environment and negatively relates to performance in high dynamism environments. In short, when confronted with highly dynamic environments, the relationships among regulatory foci and firm performance are modified such that the effects of promotion are more positive and the effects of prevention are more negative in conditions of high dynamism. However, in environments of low dynamism, prevention focus appears to be the only significant and positive indicator of firm performance. Thus, it does appear that the regulatory fit of a given CEO is important in determining firm performance when operating under different environmental conditions.

Discussion

Though previous research in regulatory focus theory has found that differences exist between individuals' regulatory foci and their subsequent performance, no research has addressed this

Table 2
Moderated Multiple Regression of CEO^a-Reported Firm Performance on CEO^a Regulatory Focus and CEO^a-Reported Environmental Dynamism

	β	R^2	ΔR^2	F
Step 1				
Number of Firm Employees	-0.08			
Firm Age	-0.19			
Gender of CEO ^a	0.04			
Tenure of CEO ^a	-0.01	0.04	0.04	0.84
Step 2				
Number of Firm Employees	-0.09			
Firm Age	-0.18			
Gender of CEO ^a	0.01			
Tenure of CEO ^a	0.04			
Promotion Focus	0.23*			
Prevention Focus	-0.15			
Dynamism	0.11	0.11	0.07	1.39
Step 3				
Number of Firm Employees	-0.11			
Firm Age	-0.18			
Gender of CEO ^a	0.08			
Tenure of CEO ^a	0.02			
Promotion Focus	0.28*			
Prevention Focus	-0.19			
Dynamism	0.11			
Promotion Focus \times Dynamism	0.21*			
Prevention Focus \times Dynamism	-0.28*	0.21	0.10	2.29*

^aCEO, chief executive officer.

*Level of significance: $p < .05$.

application in the context of the performance of the individual's organization at the small firm level. Likewise, upper echelon theory has long addressed the impact that characteristics of key executives have on their respective organizations but has yet to examine the psychological traits associated with those individuals' motivational goal attainment and their impact on firm performance (Hambrick 2007; Lawrence 1997). This study addresses the paucity of research relating non-overt executive characteris-

tics to firm performance. First, we explore how CEO regulatory focus relates to firm performance by investigating the extent to which the relationships that an executive's tendency toward goal attainment impact performance of their organization. We hypothesized that although both promotion focus and prevention focus would positively impact performance, the eager nature of promotion focus will lead to higher firm performance than prevention focus, which is more inclined toward avoiding mis-

Table 3
Moderated Multiple Regression of Top Manager-Reported Firm Performance on CEO^a Regulatory Focus and Top Manager-Reported Environmental Dynamism

	β	R^2	ΔR^2	F
Step 1				
Number of Firm Employees	-0.19			
Firm Age	-0.10			
Gender of CEO ^a	0.12			
Age of CEO ^a	-0.01	0.11	0.11	0.97
Step 2				
Number of Firm Employees	-0.18			
Firm Age	-0.12			
Gender of CEO ^a	0.17			
Age of CEO ^a	0.19			
Promotion Focus	0.29*			
Prevention Focus	-0.44*			
Dynamism	0.22	0.25	0.14	2.49*
Step 3				
Number of Firm Employees	-0.19			
Firm Age	-0.17			
Gender of CEO ^a	0.17			
Age of CEO ^a	0.03			
Promotion Focus	0.22*			
Prevention Focus	-0.40*			
Dynamism	0.17			
Promotion Focus \times Dynamism	0.38*			
Prevention Focus \times Dynamism	-0.44*	0.47	0.12	4.98*

^aCEO, chief executive officer.

*Levels of significance: $p < .05$.

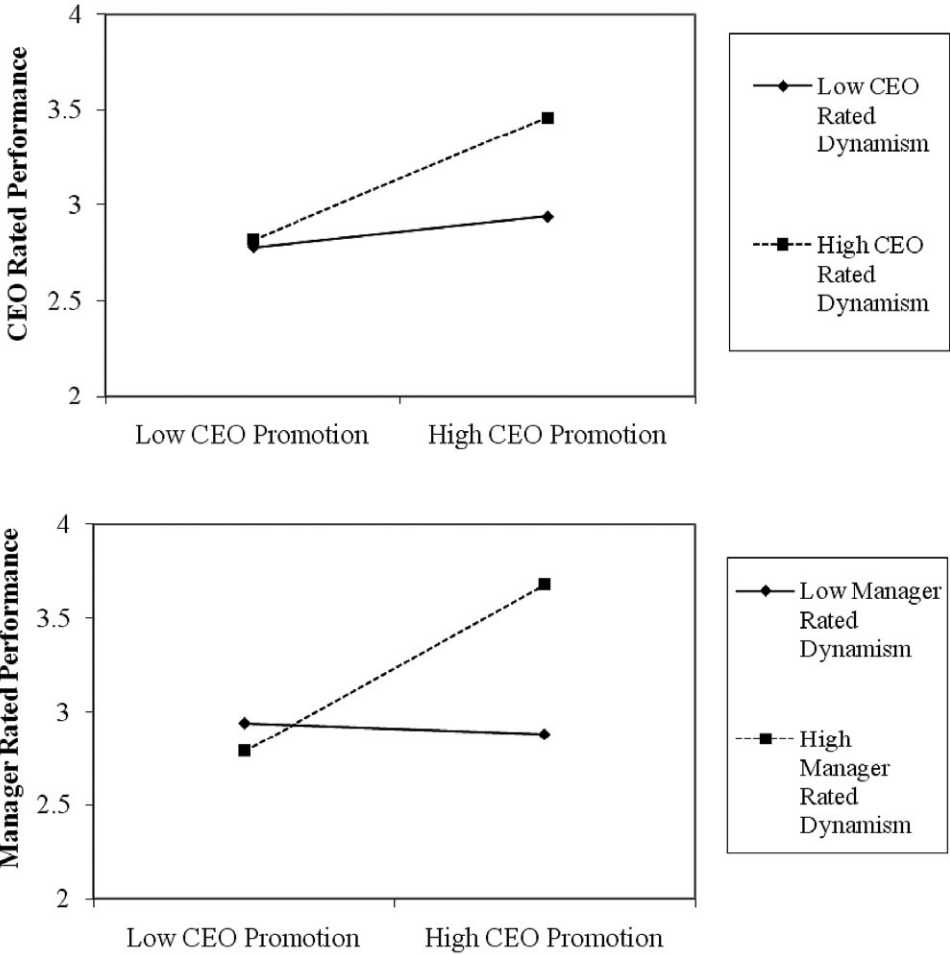
takes and proceeding cautiously. Results supported the more positive impact of promotion focus over prevention focus; contrary to H2, prevention focus did not relate to CEO-rated firm performance and negatively related to top manager-rated firm performance. This may be because in many small firms, there is little stability, and firms must adapt on a more continual basis than larger firms. Second, the present inquiry sought to incorporate the degree of regulatory fit between a CEO's regulatory foci and the

environment of their organization. Results indicated that the environment does play a key role in the effectiveness of the CEO's regulatory focus as it relates to firm performance.

Implications

Prior research has suggested that a firm should match their CEO's action orientation with extant opportunities to achieve higher performance (Greiner, Bhambri, and Cummings 2003). The present study set out to empirically

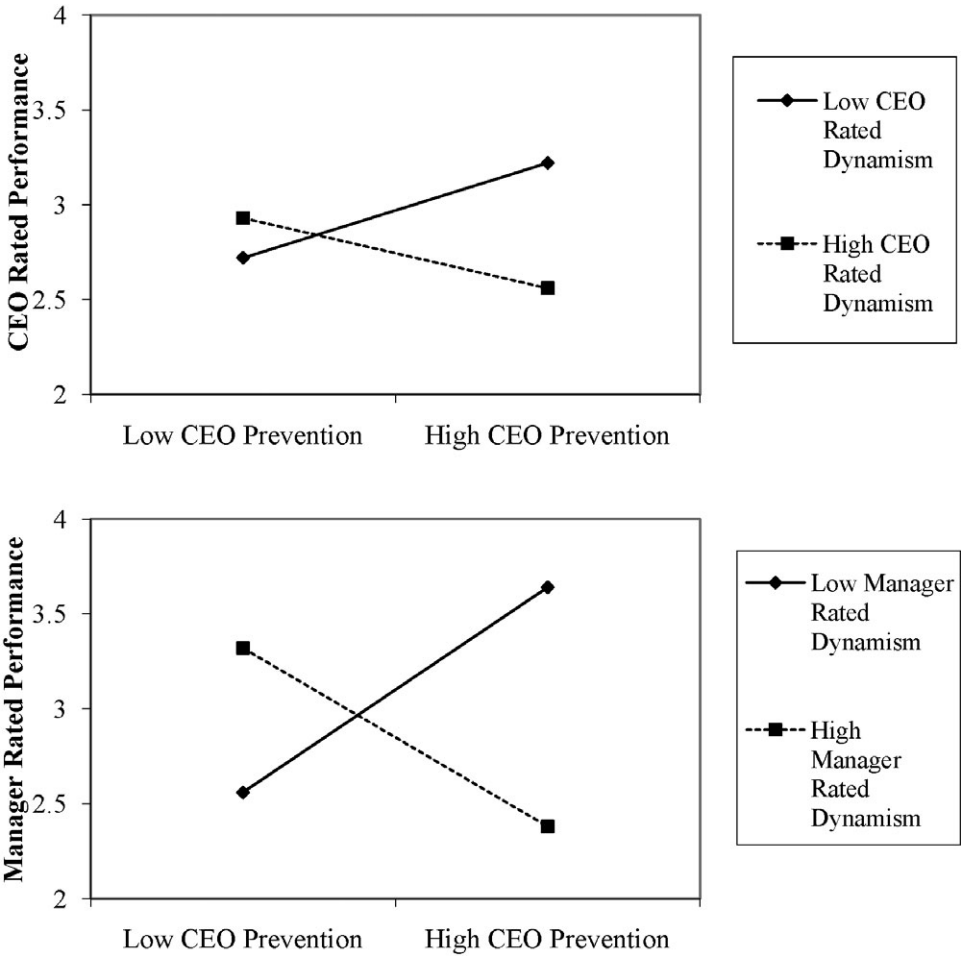
Figure 2
Interaction between Promotion Focus and Dynamism on Firm Performance



answer this question by assessing the correspondence between the CEO's regulatory focus and the degree of environmental dynamism confronting their organization. In highly dynamic environments, the demands placed on the CEO to make quick decisions when faced with uncertainty are heightened (Barr, Stimpert, and Huff 1992). As such, stra-

tegic leadership of organizations facing dynamic environments may be better suited for those individuals with higher promotion focus. The tendency of individuals with higher promotion focus toward goal attainment may provide a better fit in turbulent situations that necessitate rapid response than will their more prevention-focused counterparts,

Figure 3
Interaction between Prevention Focus and Dynamism on Firm Performance



who typically take a more cautious and deliberate approach before acting. The regulatory focus of the executive is an important characteristic to consider, particularly in the context of different environmental conditions. Promotion focus drives an individual to proactively advance their organizations and engage in higher degrees of innovation and new

product development that have been shown to positively affect performance in turbulent environments (Moorman and Miner 1997). In contrast, prevention focus drives individuals to avoid costly errors and shift organizational focus toward operational improvements, missing important opportunities that present themselves.

The findings of the current investigation have confirmed these beliefs. Promotion focus interacts with environmental dynamism such that more promotion focus in a more dynamic environment achieves superior performance. These results support the notion that the emphasis stemming from a promotion focus may be preferable to the vigilant nature of a prevention focus for the upper most position in the organization. Additionally, a CEO with a tendency toward a promotion focus may be more conducive to effectively managing an organization in a more dynamic industry. With the increasing dynamism throughout the business landscape, organizations might be better served to hire and utilize CEOs with a promotion focus, yet more research is needed to formally test this. However, organizations that are in need of stability may benefit from a CEO with a prevention focus. This is because it appears that the fit between a top leader's motivational foci and industry dynamism are two key levers that partially determine firm performance.

These findings add to our knowledge of both upper echelons and regulatory focus theories in showing how the psychological processes of executives may affect the performance of their firms. Further, the executive's regulatory focus may need to be matched with the demands placed on their organization in order to help optimize the performance of their firm. Though this study makes an important contribution to both UET and regulatory focus theory by assessing the impact of executive psychological traits, in addressing this initial question, potential items of interest have surfaced that will require further discussion and research.

First, can organizations effectively match the situations that confront them (i.e., their strategy, goals, and environmental conditions) with a CEO that will be best suited to elicit the desired performance of the organization and does

the mismatch between the regulatory foci of executives and the environment in which they face help explain the recent decrease in CEO tenure within the Fortune 500 (Charan and Colvin 1999). Organizations might be able to improve performance by selecting an executive whose regulatory foci is the best match with their organizational goals. Likewise, executives might be able to assess their regulatory processes and either self-select into appropriate environmental contexts or engage in appropriate developmental opportunities to help adjust and account for their regulatory processes. The moderating effects of dynamism on the regulatory focus to firm performance relationships suggest that dynamism is an important situational feature that must be considered if a firm sees a need to select a CEO (i.e., need to ensure regulatory fit). In this regard, firms must first identify the uncertainty present within the market they operate. If the firm operates in a more stable environment, then a CEO using a prevention focus appears to have more beneficial effects on performance. Today's markets are typically highly dynamic, and therefore, our results suggest that firms operating in highly dynamic industries would benefit substantially more with the selection of a CEO using a promotion focus.

Limitations and Future Research

As a possible extension of these findings, research might benefit from investigating the relationships among regulatory foci and executive job demands, or the degree to which an executive finds his/her job to be difficult or challenging (Hambrick, Finkelstein, and Mooney 2005). Strategic decision-making may be enhanced by a person with a promotion focus when coupled with high job demands, for example. On the contrary, an executive using a prevention focus may tend to struggle when

job demands are believed to be high, which might result in an attempt to imitate the strategic actions of other firms in the industry. This suggests looking at the process enacted by different motivational foci and studying the allocation of resources in a more finite manner.

Furthermore, recent group research also provides paths to further our understanding of regulatory foci at strategic levels and firm performance. Brockner, Higgins, and Low (2003) have suggested that to maximize performance, top management teams need to encompass both promotion- and prevention-focused individuals. This is because individuals in a promotion focus are consumed with finding "hits," and individuals in a prevention focus are consumed with avoiding "misses." Thus, many promotion ideas, decisions, and strategies might overlook some potential pitfalls, yet if there are prevention-oriented individuals on the team, they might catch the mistake and prevent it from moving forward. In essence, individuals using a prevention focus on top management teams might act as filters to the ideas, decisions, and strategies that are developed by promotion-focused individuals. Future research is needed to tell if this line of reasoning holds empirically.

Another avenue for future research that this research has highlighted is the importance of considering both personal and environmental factors as determinants of firm performance (Baron 2007; Mitchell et al. 2007). In the current paper, we addressed environmental dynamism; however, several other environmental characteristics may also interact with the regulatory disposition of the executive to affect the performance of their organizations. Future research could address the impact of additional environmental characteristics such as environmental munificence and complexity. For example, it is possible that in munificent environments, which are

marked by a high degree of stability and capacity for growth, both prevention and promotion focus would positively affect firm performance because of the increased existence of slack resources (Cyert and March 1963). The additional slack in the organization could provide a "buffer" for organizational actions (Dess and Beard 1984) such that a variety of motivational dispositions may be effective despite their different approaches to goal attainment.

Although the current investigation adds to our understanding of both regulatory focus and upper echelons theories, and the consequent organizational outcomes, limitations do exist. For example, this study explored only the relation between executive regulatory focus and firm performance in small firms. Results might differ in medium to large firms in which the CEO does not have as much influence. Research in that case should be targeted at top management teams rather than one specific individual (Hambrick and Mason 1984). Future investigations should also examine the specific strategies that executives with a prevention or promotion focus pursue in low and high dynamism environments. Specifically, in turbulent environments, executives using a prevention focus may seek the comfort and safety of strategic persistence or strategic conformity, whereas an executive utilizing a promotion focus would perhaps venture into a broader array of strategic possibilities, particularly in small firms. Future research should also investigate if dynamism actually changes a given executive's preferred regulatory focus. It could be that over time, a prevention-oriented executive that repeatedly operates within a highly dynamic environment might begin to prefer a promotion focus. Though our data cannot directly speak to this possibility, it does hint that most CEOs, at least in the present sample, are more promotion oriented as the mean for promotion focus was significantly higher

($p < .05$) than the mean for prevention focus. We encourage future research to investigate such possibilities. Future research should also begin to examine specific decision-making styles that might mediate the relationships between regulatory foci and performance. Though we have taken an important step forward by revealing relationships between regulatory foci and performance under differing levels of dynamism, the next step should be to examine mediators of such relationships, as well as other boundary conditions to further unlock the “black box” (cf. Lawrence 1997).

Another possible limitation is due to the difficulty in gathering data from the upper echelon of organizations. This study gathered data at one point in time, which could lead to some biases. However, to correct for this possible limitation, measures were gathered from both the CEO and another top manager. Yet this does not remedy any potential issues arising from common method variance (CMV). To assess any potential influence of CMV, we followed the recommendation of Podsakoff et al. (2003) and conducted tests to determine if CMV is a potential threat to the findings presented herein. First, a Harmon one-factor test was conducted (Podsakoff and Organ 1986), and results from this test indicated four factors for both the CEO only reported data and the CEO and top manager data-driven models. If CMV was a potential problem, we likely would have found only one factor. Second, we conducted a series of confirmatory factor analyses (CFIs) following the guidelines recommended by Widaman (1985) and used by several other researchers (e.g., Carlson and Kacmar 2000; Carlson and Perrewé 1999; Conger, Kanungo, and Menon 2000; MacKenzie, Podsakoff, and Paine 1999; MacKenzie, Podsakoff, and Fetter 1993, 1991; Moorman and Blakely 1995; Podsakoff and MacKenzie 1994; Podsakoff et al. 1990; Williams, Cote, and

Buckley 1989) to confirm the Harmon test. However, we were only able to do so using the CEO only data as there are too few participants (i.e., $n = 70$) for the models to be specified using both CEO and top manager data. We first conducted a single-factor model in which all items from our four measures were allowed to load on a single factor. This model did not fit the data well: $\chi^2_{(495)} = 1,996.23$, RMSEA (Root Mean Square Error of Approximation) = 0.19, CFI = 0.21, and SRMR (Standardized Root Mean Squared Residual) = 0.14. Next, we tested a four-factor model with each of the items loading only on their respective constructs. This model fit the data well: $\chi^2_{(489)} = 784.21$, RMSEA = 0.07, CFI = 0.94, and SRMR = 0.06. Next, we tested a model that added another latent construct in which we allowed all items to also load on in addition to their respective theoretical latent construct. In essence, this procedure controls for that portion of the variance in the indicators that might be attributable to the common method (MacKenzie, Podsakoff, and Fetter 1991). This model also fit the data well: $\chi^2_{(452)} = 745.17$, RMSEA = 0.07, CFI = 0.94, and SRMR = 0.05. Though this model improved certain fit indices, the χ^2 difference test indicated that the model did not significantly improve model fit ($\Delta\chi^2_{(37)} = 39.04$, $p > .05$), indicating that CMV does not appear to be driving many of the relationships in the present study. In fact, the common method construct only accounted for 11 percent of the variance in the data, which is much less than what was observed by Williams, Cote, and Buckley (1989), whereas those accounted for by the constructs of interest was much larger (i.e., 54 percent). Future work in this area may benefit from a longitudinal design if data are available. Lastly, we encourage researchers to replicate our findings using more objective financial performance data from organizations. Such replication

would greatly strengthen the results and conclusions presented here.

Conclusion

In conclusion, we believe that research into the psychological aspects of top management allows for a greater amount of insight into the effectiveness of executives and their respective firm, above and beyond the demographic and functional backgrounds that have been previously investigated (Hambrick 2007). Regulatory focus appears to be one fruitful theory in this regard. The current research contributes to organizational literature by demonstrating the effects that regulatory focus of top managers has on overall firm performance in dynamic industries, and we encourage researchers to further integrate psychological aspects of individuals in the upper echelons of organizations.

References

- Aiken, L. S., and S. G. West (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage.
- Baron, R. A. (2007). "Behavioral and Cognitive Factors in Entrepreneurship: Entrepreneurs as the Active Element in New Venture Creation," *Strategic Entrepreneurship Journal* 1, 167-182.
- Barr, P. S., J. L. Stimpert, and A. S. Huff (1992). "Cognitive Change, Strategic Action, and Organizational Renewal," *Strategic Management Journal* 13(S1), 15-36.
- Boone, C., B. De Brabander, and J. Helleman (2000). "CEO Locus of Control and Small Firm Performance," *Organization Studies* 21(3), 641.
- Boone, C., B. De Brabander, and A. Witeloostuijn (1996). "CEO Locus of Control and Small Firm Performance: An Integrative Framework and Empirical Test," *Journal of Management Studies* 33(5), 667-700.
- Brockhaus, R. (1980). "The Effect of Job Dissatisfaction on the Decision to Start a Business," *Journal of Small Business Management* 18(1), 37-43.
- Brockner, J., and E. T. Higgins (1997). "Regulatory Focus Theory: Implications for the Study of Emotions at Work," *Organizational Behavior and Human Decision Processes* 86, 35-66.
- Brockner, J., E. T. Higgins, and M. B. Low (2003). "Regulatory Focus Theory and the Entrepreneurial Process," *Journal of Business Venturing* 19, 203-220.
- Burke, W. W. (2002). *Organization Change: Theory and Practice*. Thousand Oaks, CA: Sage.
- Cable, D. M., and C. K. Parsons (2001). "Socialization Tactics and Person Organization Fit," *Personnel Psychology* 54, 1-23.
- Cameron, K. (1978). "Measuring Organizational Effectiveness in Institutions of Higher Education," *Administrative Science Quarterly* 23, 604-632.
- Cannella, A. L., S. Finkelstein, and D. C. Hambrick (2008). *Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards*. New York: Oxford University Press.
- Carlson, D. S., and K. M. Kacmar (2000). "Work-Family Conflict in the Organization: Do Life Role Values Make a Difference?," *Journal of Management* 26, 1031-1054.
- Carlson, D. S., and P. L. Perrewe (1999). "The Role of Social Support in the Stressor-Strain Relationship: An Examination of Work-Family Conflict," *Journal of Management* 25, 513-540.
- Carpenter, M., M. Geletkanycz, and W. Sanders (2004). "Upper Echelons Research Revisited: Antecedents, Elements, and Consequences of Top Management Team Composition," *Journal of Management* 30(6), 749.

- Chakravarthy, B. (1986). "Measuring Strategic Performance," *Strategic Management Journal* 6, 437-458.
- Charan, R., and G. Colvin (1999). "Why CEOs Fail," *Fortune* 139(12), 68-78.
- Chatterjee, A., and D. Hambrick (2007). "It's All about Me: Narcissistic Chief Executive Officers and Their Effects on Company Strategy and Performance," *Administrative Science Quarterly* 52(3), 351-386.
- Conger, J. A., R. N. Kanungo, and S. T. Menon (2000). "Charismatic Leadership and Follower Effects," *Journal of Organizational Behavior* 21, 747-767.
- Cyert, R. M., and J. G. March (1963). *A Behavior Theory of the Firm*. Englewood Cliffs, NJ: Prentice-Hall.
- Dess, G., and D. Beard (1984). "Dimensions of Organizational Task Environments," *Administrative Science Quarterly* 29(1), 52-73.
- Dess, G., R. D. Ireland, and M. A. Hitt (1990). "Industry Effects and Strategic Management Research," *Journal of Management* 16, 7-27.
- Dess, G., and R. B. Robinson (1984). "Measuring Organizational Performance in the Absence of Objective Measures: The Case of the Privately-Held Firm and Conglomerate Business Unit," *Strategic Management Journal* 5, 265-273.
- DeTienne, D. R., and C. S. Koberg (2002). "The Importance of Environmental and Organizational Factors on Discontinuous Innovation within High Technology Industries," *IEEE Transactions on Engineering Management* 49, 352-364.
- Dillman, D. A. (1983). "Mail and Other Self-Administered Questionnaires," in *Handbook of Survey Research*. Eds. P. H. Rossi, J. D. Wright, and A. B. Anderson. Orlando, FL: Academic Press, 359-377.
- Eisenhardt, K. M. (1989). "Making Fast Strategic Decisions in High-Velocity Environment," *Academy of Management Journal* 32, 543-576.
- Finkelstein, S., and D. Hambrick (1990). "Top-Management-Team Tenure and Organizational Outcomes: The Moderating Role of Managerial Discretion," *Administrative Science Quarterly* 35, 484-503.
- (1996). *Strategic Leadership: Top Executives and Their Effects on Organizations*. Chicago, IL: West Pub. Co.
- Förster, J., E. T. Higgins, and A. T. Bianco (2003). "Speed/Accuracy Decisions in Task Performance: Built-In Trade-Off or Separate Strategic Concerns?," *Organizational Behavior and Human Decision Processes* 90, 148-164.
- Foster, R. N., and S. Kaplan (2001). *Creative Destruction: Why Companies That Are Built to Last Underperform the Market and How to Successfully Transform Them*. New York: Doubleday Business.
- Fredrickson, J., and T. Mitchell (1984). "Strategic Decision Processes: Comprehensiveness and Performance in an Industry with an Unstable Environment," *Academy of Management Journal* 27, 399-423.
- Freeman, J., G. R. Carroll, and M. T. Hannan (1983). "The Liability of Newness: Age Dependence in Organizational Death Rates," *American Sociological Review* 48, 692-710.
- George, G., J. Wiklund, and S. Zahra (2005). "Ownership and the Internationalization of Small Firms," *Journal of Management* 31(2), 210.
- Giberson, T., C. Resick, and M. Dickson (2005). "Embedding Leader Characteristics: An Examination of Homogeneity of Personality and Values in Organizations," *Journal of Applied Psychology* 90(5), 1002.
- Gilley, K. M., C. R. Greer, and A. A. Rasheed (2004). "Human Resource Outsourcing and Organizational Performance in Manufacturing Firms," *Journal of Business Research* 57, 232-240.

- Gilley, K. M., and A. Rasheed (2000). "Making More by Doing Less: An Analysis of Outsourcing and Its Effects on Firm Performance," *Journal of Management* 26, 763–790.
- Greiner, L. E., A. Bhambri, and T. G. Cummings (2003). "Looking for a Strategy to Teach Strategy," *Academy of Management Learning and Education* 2, 402–420.
- Hage, J., and R. Dewar (1973). "Elite Values versus Organizational Structure in Predicting Innovation," *Administrative Science Quarterly* 18, 279–290.
- Hambrick, D. (2005). "Upper Echelons Theory: Origins, Twists and Turns, and Lessons Learned," in *Great Minds in Management*. Eds. K. G. Smith and M. A. Hitt. New York: Oxford University Press, 109–127.
- (2007). "Upper Echelons Theory: An Update," *Academy of Management Review* 32, 334–343.
- Hambrick, D., and S. Finkelstein (1987). *Managerial Discretion: A Bridge between Polar Views of Organizations*. Greenwich, CT: JAI Press.
- Hambrick, D., S. Finkelstein, and A. C. Mooney (2005). "Executive Job Demands: New Insights for Explaining Strategic Decisions and Leader Behaviors," *Academy of Management Review* 30, 472–491.
- Hambrick, D., and G. D. S. Fukutomi (1991). "The Seasons of a CEO's Tenure," *Academy of Management Review* 16(4), 719–742.
- Hambrick, D., and P. A. Mason (1984). "Upper Echelons: The Organization as a Reflection of Its Top Managers," *Academy of Management Review* 9, 193–206.
- Hannan, M. T., and J. Freeman (1984). "Structural Inertia and Organizational Change," *American Sociological Review* 49(2), 149–164.
- Hatten, K. J., D. E. Schendel, and A. C. Cooper (1978). "A Strategic Model of the U.S. Brewing Industry," *Academy of Management Journal* 21, 592–610.
- Henderson, A., D. Miller, and D. Hambrick (2006). "How Quickly Do CEOs Become Obsolete? Industry Dynamism, CEO Tenure, and Company Performance," *Strategic Management Journal* 27(5), 447.
- Higgins, E. T. (1997). "Beyond Pleasure and Pain," *American Psychologist* 52, 1280–1300.
- (2000). "Making a Good Decision: Value from Fit," *American Psychologist* 55, 1217–1230.
- (2002). "How Self-Regulation Creates Distinct Values: The Case of Promotion and Prevention Decision Making," *Journal of Consumer Psychology* 12, 177–191.
- (2006). "How Regulatory Fit Creates Value," in *Social Psychology and Economics*. Eds. D. de Cremer, M. Zeelenberg, and J. K. Murnighan. New York: Guilford, 79–94.
- Higgins, E. T., and A. L. Freitas (2007). "Regulatory Fit: Its Nature and Consequences," in *Perspectives on Organizational Fit*. Eds. C. A. Ostroff and T. A. Judge. Mahwah, NJ: Erlbaum, 71–98.
- Higgins, E. T., C. J. R. Roney, E. Crowe, and C. Hymes (1994). "Ideal versus Ought Predilections for Approach and Avoidance: Distinct Self-Regulatory Systems," *Journal of Personality and Social Psychology* 66, 276–286.
- Hmieleski, K. M., and R. A. Baron (2008). "When Does Entrepreneurial Self-Efficacy Enhance versus Reduce Firm Performance?" *Strategic Entrepreneurship Journal* 2, 57–72.
- House, R. J., and R. N. Aditya (1997). "The Social Scientific Study of Leadership: Quo Vadis?," *Journal of Management* 23, 409–473.
- Hrebiniak, L. G., and C. C. Snow (1980). "Industry Differences in Environmental Uncertainty and Organizational Characteristics Related to Uncer-

- tainty," *Academy of Management Journal* 23, 750–759.
- Jensen, M., and E. J. Zajac (2004). "Corporate Elites and Corporate Strategy: How Demographic Preferences and Structural Position Shape the Scope of the Firm," *Strategic Management Journal* 25(6), 507–524.
- Kanfer, R. (1990). "Motivation Theory and Industrial and Organizational Psychology," *Handbook of Industrial and Organizational Psychology* 1, 75–170.
- Kaplan, R. S., and D. P. Norton (1996). *The Balanced Scorecard: Translating Strategy into Action*. Boston, MA: Harvard Business School Press.
- Kark, R., and D. van Dijk (2007). "Motivation to Lead, Motivation to Follow: The Role of the Self-Regulatory Focus in Leadership Processes," *Academy of Management Review* 32(2), 500–528.
- Lawrence, B. S. (1997). "The Black Box of Organizational Demography," *Organization Science* 8(1), 1–22.
- Lawrence, P., and J. Lorsch (1967). *Organizations and Environment*. Boston, MA: Harvard Business School Press.
- Lieberman, N., L. C. Idson, C. J. Camacho, and E. T. Higgins (1999). "Promotion and Prevention Choices between Stability and Change," *Journal of Personality and Social Psychology* 77, 1135–1145.
- Lockwood, P., C. H. Jordan, and Z. Kunda (2002). "Motivation by Positive or Negative Role Models: Regulatory Focus Determines Who Will Best Inspire Us," *Journal of Personality and Social Psychology* 83, 854–864.
- MacKenzie, S. B., P. M. Podsakoff, and R. F. Fetter (1991). "Organizational Citizenship Behavior and Objective Productivity as Determinants of Managerial Evaluations of Salespersons' Performance," *Organizational Behavior and Human Decision Processes* 50, 1–28.
- (1993). "The Impact of Organizational Citizenship Behavior on Evaluations of Salesperson Performance," *Journal of Marketing* 57, 70–80.
- MacKenzie, S. B., P. M. Podsakoff, and J. B. Paine (1999). "Do Citizenship Behaviors Matter More for Managers Than Salespeople?," *Journal of the Academy of Marketing Science* 27, 397–410.
- Marks, M. L., and P. H. Mirvis (1998a). "How Mind-Set Clashes Get Merger Partners Off to a Bad Start," *Mergers and Acquisitions* 33(2), 28–33.
- (1998b). *Joining Forces*. San Francisco, CA: Jossey Bass.
- Miller, D., and C. Droge (1986). "Psychological and Traditional Determinants of Structure," *Administrative Science Quarterly* 31, 539–560.
- Miller, D., and P. H. Friesen (1982). "Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum," *Strategic Management Journal* 3, 1–25.
- Miller, D., M. Kets de Vries, and J. Toulouse (1982). "Top Executive Locus of Control and Its Relationship to Strategy-Making, Structure, and Environment," *Academy of Management Journal* 25(2), 237–253.
- Miller, D., and J. Shamsie (2001). "Learning across the Life Cycle: Experimentation and Performance among the Hollywood Studio Heads," *Strategic Management Journal* 22, 725–745.
- Miller, D., and J. Toulouse (1986). "Chief Executive Personality and Corporate Strategy and Structure in Small Firms," *Management Science* 32(11), 1389–1409.
- Mitchell, R. K., L. W. Busenitz, B. Bird, C. M. Gaglio, J. S. McMullen, E. A. Morse, and B. Smith (2007). "The Central Question in Entrepreneurial Cognition Research," *Entrepreneurship Theory and Practice* 31, 1–27.
- Moorman, C., and A. Miner (1997). "The Impact of Organizational Memory on New Product Performance and

- Creativity," *Journal of Marketing Research* 34, 91–106.
- Moorman, R. H., and G. L. Blakely (1995). "Individualism-Collectivism as an Individual Difference Predictor of Organizational Citizenship Behavior," *Journal of Organizational Behavior* 16, 127–142.
- Pearce, J. A., D. K. Robbins, and R. B. Robinson (1987). "The Impact of Grand Strategy and Planning Formality on Financial Performance," *Strategic Management Journal* 8, 125–134.
- Podsakoff, P. M., and S. B. MacKenzie (1994). "Organizational Citizenship Behaviors and Sales Unit Effectiveness," *Journal of Marketing Research* 3(1), 351–363.
- Podsakoff, P. M., S. B. MacKenzie, J. Y. Lee, and N. P. Podsakoff (2003). "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology* 88, 879–903.
- Podsakoff, P. M., S. B. MacKenzie, R. H. Moorman, and R. Fetter (1990). "Transformational Leader Behaviors and Their Effects on Followers' Trust in Leader, Satisfaction, and Organizational Citizenship Behaviors," *Leadership Quarterly* 1, 107–142.
- Podsakoff, P. M., and D. W. Organ (1986). "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management* 12, 531–545.
- Priem, R. L., A. A. Rasheed, and A. G. Kotulic (1995). "Rationality in Strategic Decision Processes, Environmental Dynamism and Firm Performance," *Journal of Management* 21, 913–929.
- Richard, P. J., T. M. Devinney, G. S. Yip, and G. Johnson (2009). "Measuring Organizational Performance: Towards Methodological Best Practice," *Journal of Management* 35, 718–804.
- Schneider, B. (1987). "The People Make the Place," *Personnel Psychology* 40, 437–453.
- Shamir, B., and J. Howell (1999). "Organizational and Contextual Influences on the Emergence and Effectiveness of Charismatic Leadership," *Leadership Quarterly* 10(2), 257–283.
- Stinchcombe, A. L. (1965). "Social Structure and Organizations," in *Handbook of Organizations*. Ed. J. G. March. Chicago, IL: Rand McNally, 142–193.
- Van de Ven, A., R. Hudson, and D. Schroeder (1984). "Designing New Business Startups: Entrepreneurial, Organizational, and Ecological Considerations," *Journal of Management* 10(1), 87.
- VandeWalle, D. (1997). "Development and Validation of a Work Domain Goal Orientation Instrument," *Educational and Psychological Measurement* 57, 995–1015.
- Venkatraman, N., and V. Ramanujam (1987). "Measurement of Business Economic Performance: An Examination of Method Convergence," *Journal of Management* 13, 109–122.
- Waldman, D. A., G. A. Ramirez, R. J. House, and P. Puranam (2001). "Does Leadership Matter? CEO Leadership Attributes and Profitability under Conditions of Perceived Environmental Uncertainty," *Academy of Management Journal* 44, 134–143.
- Wallace, J. C., and G. Chen (2006). "A Multilevel Integration of Personality, Climate, Self-Regulation, and Performance," *Personnel Psychology* 59, 529–557.
- Westphal, J. D., and E. J. Zajac (1995). "Who Shall Govern? CEO Board Power, Demographic Similarity, and New Director Selection," *Administrative Science Quarterly* 40, 60–83.
- Widaman, K. F. (1985). "Hierarchically Nested Covariance Structure Models

for Multitrait-Multimethod Data,” *Applied Psychological Measurement* 9, 1–26.

Williams, L. J., J. A. Cote, and M. R. Buckley (1989). “Lack of Method Vari-

ance in Self-Reported Affect and Perceptions at Work: Reality or Artifact?” *Journal of Applied Psychology* 74, 462–468.

Appendix: All Survey Items

Regulatory Focus

1. ____ I often think about the person I would ideally like to be in the future
 2. ____ I often worry about that I will fail to accomplish my goals
 3. ____ I typically focus on the success I hope to achieve in the future
 4. ____ I often imagine myself experiencing good things that I hope will happen to me
 5. ____ I frequently think about how I can prevent failures in my work life
 6. ____ I am more oriented toward preventing losses than I am toward achieving gains
 7. ____ My major goal right now is to achieve my ambitions
 8. ____ My major goal is to avoid becoming a failure and not reach my goals
 9. ____ I see myself as someone who is primarily striving to become the person I “ought” to be—to fulfill my duties, responsibilities, and obligations
 10. ____ I see myself as someone who is primarily striving to reach my “ideal self”—to fulfill my hopes, wishes, and aspirations
 11. ____ I am more oriented toward achieving success than preventing failure or benefits with that role
 12. ____ I am anxious that I will fall short of my responsibilities and obligations
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Items 1, 3, 4, 7, 10, and 11 are promotion-focused items; 2, 5, 6, 8, 9, and 12 are prevention-focused items. Scale adapted from Lockwood, Jordan, and Kunda (2002).

Dynamism

1. ____ There is little need for our firm to change its marketing practices to keep up with competitors.
 2. ____ The rate at which products/services are becoming obsolete in the industry is very slow.
 3. ____ Actions by competitors are very easy to predict.
 4. ____ Demand and consumer tastes are very easy to predict.
 5. ____ I talk about their most important values and beliefs.
 6. ____ Technological advances within the industry are easy to predict.
 7. ____ Consumer demand for our products is very stable.
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Firm Performance

1. ___ Funds allocated to R&D activities
 2. ___ Funds allocated to advertising
 3. ___ Return on assets
 4. ___ Return on sales
 5. ___ Sales growth
 6. ___ Overall financial performance
 7. ___ Stability/growth of employment
 8. ___ Process innovations
 9. ___ Product innovations
 10. ___ Compensation of employees
 11. ___ Employee morale/job satisfaction
 12. ___ Customer relations
 13. ___ Supplier relations
 14. ___ Overall *nonfinancial* performance
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