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Impact of CEO Leadership Styles on Firm Performance during Environmental Uncertainty: A Study of Privately Owned Korean Companies

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ABSTRACT

This study analyzes the relationship between a CEO's leadership style and firm performance under conditions of perceived environmental uncertainty. It also seeks to determine whether the impact of the CEO's leadership on a firm's subjective and objective performance is significantly different. This study considered the leadership styles of owner-managers and compared the effect of transformational and transactional leadership on both objective and subjective firm performance. Results supported the view that a transformational leadership style of a CEO who owns and operates a firm positively influences both the objective and subjective performance of the firm. Under uncertain conditions, the impact of the CEO's transformational leadership style on firm performance became greater. The CEO's transactional leadership style, contrastingly, was not found to significantly impact the firm's objective performance. The impact of a CEO's transactional leadership style on the firm's subjective performance was found to be greater in a context of high uncertainty.

Key words: CEO leadership, transformational leadership, transactional leadership, environmental uncertainty, firm performance

INTRODUCTION

The rapid spread of globalization and the enormous developments in information and communication technology have led to a dynamic and uncertain business environment. Competition among companies has never been fiercer and the strategic direction of organizations is at the heart of wealth creation today.

Theories of strategic management highlight the impact of top-level executives such as Chief Executive Officers (CEOs) and Top Management Teams (TMTs) on the firm's strategic direction and overall performance. Upper echelons theory suggests that the characteristics of CEOs engender differences in strategy formulation and business performance (Hambrick and Mason, 1984). Various studies have focused on the effects of CEOs' demographic variables including age, work experience, education level, socio-economic background and financial status.

Despite the importance of CEO leadership in strategic management (Agle *et al.*, 2006; Ling *et al.*, 2008; Waldman *et al.*, 2001; Wang *et al.*, 2011), few studies have empirically assessed the direct effect of the leadership styles of top executives. Extant literature largely examines leadership at lower management levels due to the lack of data at higher levels. Moreover, most studies focus on either charismatic or transformational leadership and not transactional leadership. We believe that it is necessary to consider various types of leadership styles, including transactional leadership proposed by Pawar and Eastman (1997) and charismatic or transformational leadership.

Recent studies on the relationship between a CEO's leadership style and firm performance provide mixed results (Wang *et al.*, 2011); some show that CEO leadership has a positive impact on firm performance (Carmeli *et al.*, 2011; Elenkov, 2002) while others do not find support for such a relationship (Tosi *et al.*, 2004; Waldman *et al.*, 2001). Possible explanations for these inconsistent findings may be the differences across studies regarding performance measurement as well as other moderating factors. Contingent approaches consider the role of the organizational context (Tosi *et al.*, 2004; Waldman *et al.*, 2001, 2004) and examine the uncertainty that is inherent in today's business environment as an important variable. These studies show that the impact of a CEO's leadership style on firm performance varies depending on the degree of perceived uncertainty in the business environment. In relatively less complex organizational contexts, senior executives may have greater latitude in making strategic choices and, consequently, they are more likely to have a greater impact on firm performance. Consistent with this view is that of Lubatkin *et al.* (2006), who proposed that CEOs of smaller, privately held firms may have greater organizational influence than their counterparts in large, professionally managed firms. The status of the founder CEO of a company can also be considered a crucial moderator. Specifically, Ling *et al.* (2008) found that the positive relationship between a CEO's transformational leadership style and firm performance is stronger for founder CEOs than for non-founders. Most studies on the relationship between a CEO's leadership style and firm performance are conducted on companies belonging to the United States (Agle *et al.*, 2006), England (Ling *et al.*, 2008) and China (Wang *et al.*, 2011). However, few studies have been done on firms belonging to other countries.

Building on these ideas, this study studies privately owned Korean companies in order to examine the relationship between the CEO's leadership style and firm performance, with environmental uncertainty as a significant moderating variable. This approach expands existing strategic management research and leadership literature by increasing our understanding of how and under what conditions a CEO's leadership style impacts firm performance.

THEORY AND HYPOTHESES

CEOs' transformational leadership style and firm performance: Studies on CEO leadership primarily reveal the relationships between a CEO's leadership style and firm performance (Tosi *et al.*, 2004; Waldman *et al.*, 2001, 2004; Zhu *et al.*, 2005), between CEO leadership and firm innovation (Jung *et al.*, 2003), or between CEO leadership and firm culture (Beyer and Browning, 1999; Vera and Crossan, 2004). Some studies examine the charismatic/transformational and transactional leadership styles of CEOs (Agle *et al.*, 2006; Peterson *et al.*, 2009; Waldman *et al.*, 2001). Transformational leadership is a comprehensive concept that covers charismatic leadership which is based on a leader's actions that can create a favorable impression on employees and help him/her establish productive relationships with

employees. Leaders can take various actions to make a good impression on employees such as articulating a vision or mission, showing determination, communicating high performance expectations, displaying confidence in themselves, making followers feel good in their presence and garnering strong admiration and respect (Waldman *et al.*, 2001). These (charismatic) actions are similar to those of transformational leaders who present a long-term vision for the firm and take actions to foster high motivation in employees which is needed to realize the stated vision.

According to Burns (1978), transformational leadership increases the level of employee awareness regarding the importance and value of the given tasks; it transcends individual benefits as employees attempt to secure rewards for their teams and the firm as a whole and involves a leadership trait that can develop higher aspirations within employees such as for high accomplishment or self-actualization. Bass (1985) asserted that transformational leadership comprises charisma, intellectual stimulation and individualized consideration; however, Bass and Avolio (1990) presented revised versions as they changed charisma to idealized influence and added an inspirational motivation to the list of determining factors. Meanwhile, transactional leadership relates to the exchange-based relationship that satisfies both employees and the leader (Burns, 1978).

Transformational leaders create a strategic vision, continuously seek to accomplish it and motivate their employees to commit to meeting these goals (Avolio, 1999). They inspire various members of the firm (Shamir *et al.*, 1993), increase cohesion among employees to accomplish the goals set by the firm (Waldman and Yammarino, 1999) and reflect their own values in their strategic choices and abilities to influence firm performance (Finkelstein and Hambrick, 1996).

Many empirical studies support the positive relationship between transformational leadership and firm performance (Avolio, 1999; Jung and Sosik, 2002; Ling *et al.*, 2008; Zhu *et al.*, 2005). Ling *et al.* (2008) note that the CEO's transformational leadership style has a significant impact on firm performance. According to Waldman *et al.* (2004) who study charisma (a sub-dimension of transformational leadership), there is a significant correlation between CEO charisma and firm performance. Based on these studies and theoretical discussion, the authors established the following hypotheses.

Hypothesis 1: The CEO's transformational leadership style and firm performance have a positive relationship:

- **Hypothesis 1.1:** CEO's transformational leadership style and objective firm performance have a positive relationship
- **Hypothesis 1.2:** CEO's transformational leadership style and subjective firm performance have a positive relationship

CEOs' transactional leadership style and firm performance: Transactional leaders focus on the exchange relationship with employees as well as on the contingent reward behavior in order to satisfy the current needs of employees, review mistakes and deviations from the norm, make efforts to solve problems and maintain the current system in good order (Bass, 1985). Contingent reward behaviors of transactional leaders clarify the expectations they have of their employees so that the latter are aware of what they need to accomplish in order to receive the expected rewards.

Clarifying the role expectations between the leader and employees is very important in establishing straightforward expectations between the leader and employees. In a transactional leadership setting, the leader can clarify mutual expectations with employees and the relationships between the leader and the employees can mature over time (Whittington *et al.*, 2009). Transactional leaders prefer making various transactional agreements with their employees and the level of trust among employees regarding the leader is formed based on a continuous relationship (Avolio, 1999). Transactional leaders clarify the range of roles that employees need to fill and provide the necessary motivation to accomplish the given tasks. The results of the meta-analysis by Judge and Piccolo (2004) show that the contingent reward of transactional leaders is highly correlated with firm performance.

When employees are not able to accomplish the expected level of performance, transactional leaders intervene and take corrective actions through exceptional management which focuses on suggesting appropriate changes and exceptional management guidance to employees for achieving their goals (Tosi, 1982). These actions help employees carry out the transactional agreements and successfully fulfill their responsibilities. Research evidence provides overall support for the positive relationship between transactional leadership and firm performance (Lowe *et al.*, 1996). CEOs with transactional leadership can successfully manage goal accomplishment and contribute to the enhancement of the firm performance.

Hypothesis 2: A CEO's transactional leadership style and firm performance have a positive relationship:

- **Hypothesis 2.1:** A CEO's transactional leadership style and objective firm performance have a positive relationship
- **Hypothesis 2.2:** A CEO's transactional leadership style and subjective firm performance have a positive relationship

CEO leadership, firm performance and environmental uncertainty: Recent studies on the relationship between CEO leadership and firm performance provide mixed results (Agle *et al.*, 2006; Ling *et al.*, 2008; Waldman *et al.*, 2001), primarily due to diverse situational variables (Pawar and Eastman, 1997; Podsakoff *et al.*, 1996; Waldman and Yammarino, 1999). One of the most important situational variables is environmental uncertainty which can influence the relationship between the CEO's leadership style and firm performance. Empirical studies show that environmental uncertainty has strong moderating effects on the relationship between a CEO's transactional as well as charismatic leadership style and firm performance (Waldman *et al.*, 2001).

Uncertainty is high when the environment is complex and dynamic (Duncan, 1972). The concept of environmental uncertainty signifies objective properties as well as cognitive phenomena recognized by people (Milliken, 1987). Because the degree of uncertainty recognition depends on individuals or situations in the firm, subjectively accepted environmental uncertainty is important as well. Milliken (1987) states that environmental uncertainty is a perceived state of inability to comprehend the direction of the environmental change or the potential impact that the change can have on the firm, or the probability of success regarding the firm's response to the environment.

In high-uncertainty situations, employees need more direction and guidance from their leader (Bass and Stogdill, 1990) and are more likely to follow the leader (Agle *et al.*, 2006). Within a

context of high uncertainty, transformational leaders become more influential (Shamir and Howell, 1999); their charisma, self-assuredness and sense of vision become an important source of psychological confidence for employees. Leaders also mitigate employee stress by providing new opportunities or a vision for success during the state of uncertainty (Bass, 1985). Meanwhile, effective transactional leaders clarify the roles that employees have to fulfill and grant appropriate rewards based on job performance; employees who fail to meet these expectations receive support in fulfilling their roles. Under conditions of high uncertainty, the roles of transformational and transactional leaders are more critical and have a positive impact on firm performance.

Hypothesis 3: The positive relationship between a CEO's leadership style and firm performance is stronger under conditions of high uncertainty:

- **Hypothesis 3.1:** The positive relationship between a CEO's transformational leadership style and objective firm performance is stronger under conditions of high uncertainty
- **Hypothesis 3.2:** The positive relationship between a CEO's transformational leadership style and subjective firm performance is stronger under conditions of high uncertainty
- **Hypothesis 3.3:** The positive relationship between a CEO's transactional leadership style and objective firm performance is stronger under conditions of high uncertainty
- **Hypothesis 3.4:** The positive relationship between a CEO's transactional leadership style and subjective firm performance is stronger under conditions of high uncertainty

RESEARCH METHOD

Sample and data collection: This study focuses on privately held firms that are managed by a CEO with a tenure of over 3 years. Based on these criteria, the authors randomly selected and contacted 150 firms representing various industries, including electronics, information technology (IT), machinery, finance, services, distribution and transportation. Sixty-four CEOs and 185 TMT members from 64 companies completed the self-administered questionnaires.

The characteristics of the data in our sample are as follows. The average age of the CEO is 52.07 years (SD = 9.48 years) and the average tenure is 10.31 years (SD = 8.62 years); 89.1% hold a bachelor's degree and 92.1% are men. The average age of employees is 45.08 years (SD = 6.83 years) and their average tenure is 9.06 years (SD = 7.11 years); 78.4% hold a bachelor's degree and 84.3% are men.

Measurement

CEO leadership: This study measures CEO leadership with items from the Multifactor Leadership Questionnaire (MLQ Form 5X: Bass and Avolio, 1995). The survey on transformational leadership includes four dimensions: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. Eight items were used to measure idealized influence (e.g., "My CEO goes beyond self-interest for the good of the organization"). Four items were used to measure inspirational motivation (e.g., "My CEO talks optimistically about the future"), intellectual stimulation (e.g., "My CEO seeks differing perspectives when solving problems") and individualized consideration (e.g., "My CEO spends time teaching and coaching") ($\alpha = 0.95$). The survey on

transactional leadership contained 12 questions, including two sub-dimensions: contingent rewards and management-by-exception. Four items were used to measure contingent rewards (e.g., “My CEO provides me with assistance in exchange for my efforts”) and eight items were used to measure management-by-exception (e.g., “My CEO concentrates his/her full attention on dealing with mistakes, complaints and failures”) ($\alpha = 0.69$).

Firm performance: The current study uses ROA (return on assets) to determine objective firm performance and perceived organizational performance measured by TMT for gauging subjective firm performance. ROA, an accounting measurement, is one of the most commonly used performance measures and is calculated by the ratio of net income to total assets. Self-reported data are deemed reliable (Nayyar, 1992; Tan and Litsschert, 1994), particularly with respect to the data of high-ranking officials (Nunnally, 1978). This study utilized the measure of perceived organizational performance developed by Hung *et al.* (2010) which includes the change in the company’s competitive advantage, market share, profit, cost and sales revenue versus its largest competitor. Performance was measured at the organizational level. ($\alpha = 0.72$).

Uncertainty: Four items from Waldman *et al.* (2001) were used to measure uncertainty. For example, a representative survey question was: “I think that the external environment within which our corporation functions is very dynamic, changing rapidly in technical, economic and cultural dimensions”. ($\alpha = 0.90$).

Aggregation and preliminary analysis: Based on the common approach used in unit-level research (Ostroff, 1992; Ryan *et al.*, 1996; Wang *et al.*, 2011), the current research aggregated individual-level variables at the firm level. Tests were conducted to verify the validity of aggregating CEOs’ transformational or transactional leadership style, subjective performance and perceived uncertainty. First, we computed $R_{wg(i)}$ to assess within-group agreement (James *et al.*, 1984). We then computed ICC (intra-class correlation) (1) and ICC (2) to evaluate the variance between groups and within group (James *et al.*, 1984; Ostroff, 1992). Table 1 presents the agreement indices for CEO transformational and transactional leadership, subjective performance and uncertainty. The $R_{wg(i)}$ values range from 0.74-0.82. ICC (1) ranges from 0.10 and 0.38, whereas ICC (2) ranges from 0.27-0.65. These results confirm a high level of agreement and reliability in the relationship between a CEO’s transformational and transactional leadership style and subjective performance. In the case of uncertainty, however, the value of ICC (2) is below the standard. Because there is a need to consider other statistics instead of making sole judgments (Bliese, 2000), uncertainty was included in calculating the collective value, given that the $R_{wg(i)}$ and ICC(1) values indicate a reasonably accepted level.

Table 1: Reliability analysis and confirmatory factor analysis for measurement items

Variables	$R_{wg(i)}$	ICC (1)	ICC (2)
Transformational leadership	0.78	0.25	0.51
Transactional leadership	0.76	0.41	0.68
Environmental uncertainty	0.74	0.10	0.27
Perceived performance	0.82	0.38	0.65

RESULTS

Correlation analysis: The average values and standard deviation of the variables used in this research, as well as the correlation coefficients, are displayed in Table 2. The scales of the firm and CEO tenure are included as control variables. A logarithm of the number of employees was used for the firm scale and the number of years for CEO tenure. Average CEO tenure is 10.31 years.

Regression analysis: Table 3 shows the results of the regression analyses conducted to verify Hypotheses 1.1, 1.2, 3.1 and 3.2. The authors conducted a hierarchical regression analysis for determining moderating effects. After controlling for firm size and CEO tenure, the explanatory power of models, measured using adjusted-R², ranged from 0.18-0.37. Hypotheses 1.1 and 1.2 were supported since transformational leadership significantly influences both objective and subjective performance of a firm. As the interaction of the CEO's transformational leadership style and environmental uncertainty adds significant variance, objective performance was increased by 7%, whereas subjective performance was increased by 5%. Therefore, Hypotheses 3.1 and 3.2 were supported.

Table 4 displays the results of the regression analysis regarding Hypotheses 2.1, 2.2, 3.3 and 3.4. Similar to Table 3, after controlling for firm size and CEO tenure, explanatory power, measured by adjusted R², ranged from (ranges from -0.01-0.17). Since, transactional

Table 2: Descriptive statistics and correlations^a

Variable	Mean	SD	1	2	3	4	5	6	7
Firm size (log)	4.51	1.70	1.00						
CEO tenure	10.31	8.62	0.12	1.00					
Transformational leadership	4.00	0.50	0.03	-0.03	1.00				
Transactional leadership	3.33	0.35	-0.15	0.03	0.56***	1.00			
Environmental uncertainty	3.97	0.45	0.05	0.08	0.25**	0.31**	1.00		
ROA (log)	1.62	1.10	-0.16**	-0.18	0.41***	0.04	-0.35**	1.00	
Perceived performance	3.41	0.64	0.06	-0.02	0.57***	0.39***	0.15	0.51***	1

^an = 64. *p<0.10, **p<0.05, ***p<0.01

Table 3: CEO's transformational leadership style and firm performance

Variable	ROA (objective performance)			Perceived performance (subjective performance)		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Firm size	-0.19	-0.16	-0.15	-0.04	0.04	0.06
CEO tenure	-0.17	-0.16	-0.14	-0.01	-0.01	0.01
CEO Transformational leadership	0.42***	0.46***	0.51***	0.57***	0.57***	0.61***
Environmental uncertainty		-0.37***	-0.29**		0.00	0.02
CEO transformational leadership× environmental uncertainty			0.29**			0.23**
R-squared	0.23	0.37	0.44	0.33	0.33	0.37
Adjusted R-squared	0.18	0.31	0.37	0.29	0.28	0.32
ΔR ²		0.14***	0.07**		0.00	0.05**
F	4.24***	6.02***	6.25***	961.00***	7.09***	6.90***
n	46.00	46.00	46.00	64.00	64.00	64.00

*p<0.10, **p<0.05, ***p<0.01

Table 4: CEO's transactional leadership style and firm performance

Variable	ROA (objective performance)			Perceived performance (subjective performance)		
	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Firm size	-0.16	-0.13	-0.13	0.12	0.12	0.14
CEO tenure	-0.18	-0.17	-0.16	-0.05	-0.05	-0.11
CEO transactional leadership	0.05	0.12	0.12	0.41***	0.40**	0.32***
Environmental uncertainty		-0.35**	-0.36		0.02	0.03
CEO transactional leadership× environmental uncertainty			-0.03			0.29**
R-squared	0.06	0.18	0.18	0.17	0.17	0.24
Adjusted R-squared	-0.01	0.10	0.08	0.12	0.11	0.17
ΔR^2		0.12**	0.00		0.00	0.07**
F	0.88	2.24*	1.75	4.00**	2.93**	3.61**
n	46.00	46.00	46.00	64.00	64.00	64.00

*p<0.10, **p<0.05, ***p<0.01

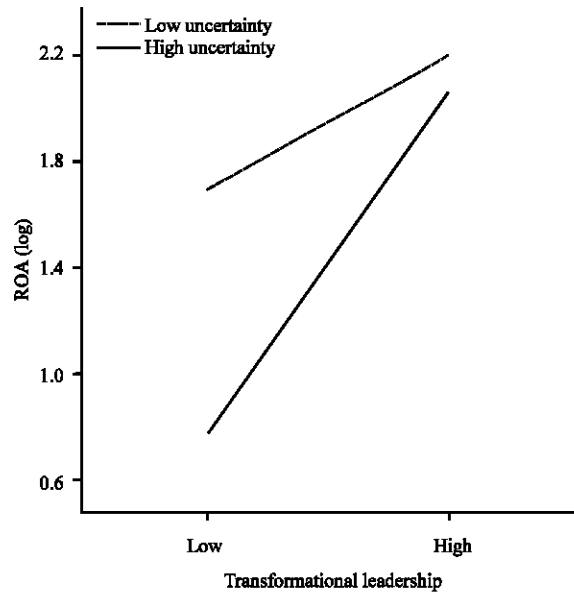


Fig. 1: Moderating effects of perceived environmental uncertainty on the relationship between a CEO's transformational leadership style and objective performance

leadership did not have a significant impact on objective performance, Hypothesis 2.1 was not supported. However, Hypothesis 2.2 was supported as transactional leadership affected the subjective performance of a firm. Hypothesis 3.3 was not supported because the interaction between a CEO's transactional leadership style and environmental uncertainty did not increase the significant variance of objective performance. Hypothesis 3.4 was supported because the variance of the subjective performance increased significantly by 7%.

The interaction effects between a CEO's leadership style and uncertainty are depicted in the following figures. Figure 1 shows that uncertainty increases the influence of a CEO's transformational leadership style on the firm's objective performance. Figure 2 confirms that the

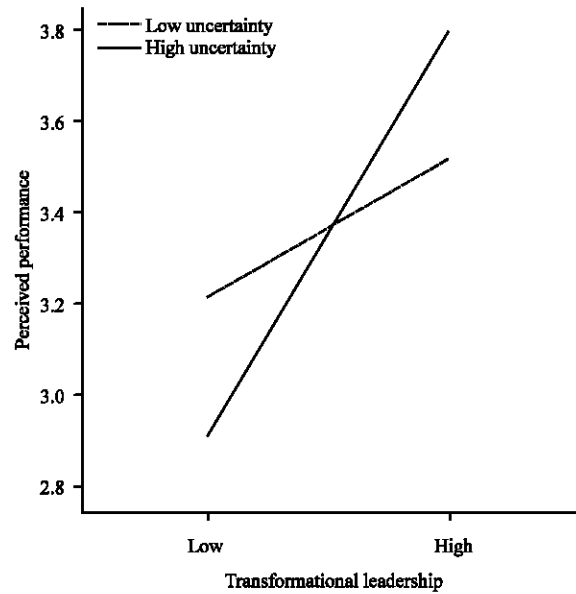


Fig. 2: Moderating effects of perceived environmental uncertainty on the relationship between a CEO's transformational leadership style and subjective performance

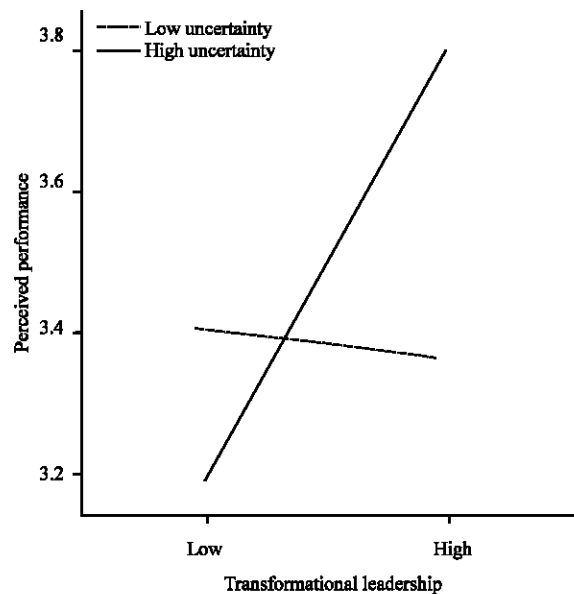


Fig. 3: Moderating effects of uncertainty on the relationship between a CEO's transactional leadership style and perceived performance

impact of the CEO's transformational leadership style on the firm's subjective performance is greater under conditions of high uncertainty. Figure 3 demonstrates that the CEO's transactional leadership style increases the firm's subjective performance when uncertainty is high.

DISCUSSION

The current study examines the relationship between a CEO's leadership style and the performance of firms managed by owner-managers and takes into account the moderating role of

environmental uncertainty. Extant studies regarding the impact of CEO leadership typically do not distinguish between the forms of ownership (Agle *et al.*, 2006; Makri and Scandura, 2010; Waldman *et al.*, 2001) and cover either charismatic or transformational leadership styles (Agle *et al.*, 2006; Colbert *et al.*, 2008; Ling *et al.*, 2008; Waldman *et al.*, 2001). However, this study considered the leadership styles of owner-managers and compared the effect of transformational and transactional leadership on both objective and subjective firm performance.

The results supported the view that a transformational leadership style of a CEO who owns and operates a firm positively influences both the objective and subjective performance of the firm. Under uncertain conditions, the impact of the CEO's transformational leadership style on firm performance became greater. The CEO's transactional leadership style, on the other hand, was not found to significantly impact the firm's objective performance. The impact of a CEO's transactional leadership style on the firm's subjective performance was found to be greater in a context of high uncertainty.

This is especially surprising as Agle *et al.* (2006) reported a positive correlation between perceived performance and objective performance measures such as ROA ($r = 0.19$), sales growth ($r = 0.38$) and stock returns (0.24); Ling *et al.* (2008) also reported a high correlation between perceived firm performance and sales growth ($r = 0.24$). Given the positive correlation between perceived and objective firm performance in Agle *et al.* (2006) study and a stronger positive correlation between the two performance measures in our study ($r = 0.51$), it is a surprise that we did not find support for Hypotheses 2.1 and 3.3.

We think that the TMT rating of subjective firm performance is heavily influenced by the biases of TMT members in support of their owner-CEOs. Jung *et al.* (2009) noted that the collectivist culture in the Korean sample compared to the U.S. sample may have enhanced the effect of the CEO's transformational leadership style on leaders' subjective performance (i.e., performance in tasks that are common to middle-and upper-level managers that relate to quality and quantity of products, work relationships and processes that benefit the organization). They explain that the positive leadership behavior-leaders' subjective performance link is stronger in the Korean setting as positive leadership behavior is especially respected in Korea and leads to a more favorable view of leaders' performance.

This study provides theoretical implications.

First, the research subjects of this study included both small and large firms, unlike previous studies that focused either on large firms (Agle *et al.*, 2006) or small ones (Ling *et al.*, 2008). Much of the theory in transformational leadership details how leaders influence individual followers as well as a group of followers, but are relatively silent on how transformational leaders impact organizational-level outcomes such as overall firm performance. Some researchers suggest that the impact of the CEO on the overall operation and performance of the firm becomes greater in smaller companies (Hambrick and Finkelstein, 1987). Others suggest that the influence of CEO leadership on firm performance is equal for both small and large firms (Agle *et al.*, 2006; Ling *et al.*, 2008). The results of this study concurred with the latter view and showed that CEO leadership significantly influences firm performance regardless of firm size.

Second, considering that CEO ownership plays an important role in exerting leadership, this study examined how CEO ownership influences firm performance. The results showed that CEO leadership significantly impacts firm performance when the CEO is also the owner-manager. This is consistent with previous findings in that the influence of CEO leadership on firm performance becomes greater when the CEO owns the firm (Ling *et al.*, 2008).

Third, this study shows that the CEO's transformational leadership style has positive effects on a firm's objective and subjective performance. Existing studies about the relationship between CEO leadership and firm performance show varying results (Agle *et al.*, 2006; Tosi *et al.*, 2004; Waldman *et al.*, 2001, 2004). In studies conducted by Waldman *et al.* (2004), CEO leadership significantly influenced firm performance; however, in studies conducted by Agle *et al.* (2006), Tosi *et al.* (2004) and Waldman *et al.* (2001), CEO leadership did not significantly influence overall firm performance. Agle *et al.* (2006) pointed out different assessment methods of firm performance as one of the reasons of these varying outcomes. The current study used ROA which was used most often in extant studies as a measure of objective firm performance and perceived performance by TMT, confirmed by Agle *et al.* (2006) to gauge subjective performance. The authors found that only a transformational leadership style of the CEO significantly influenced ROA, but both transformational and transactional leadership styles had a meaningful impact on the firm's subjective performance.

Fourth, this study confirmed that CEO leadership has a greater impact on firm performance in a high-uncertainty environment. Existing studies on the relationship between CEO leadership and environmental uncertainty suggest that environmental uncertainty is an important factor influencing the relationship between CEO leadership and firm performance (Waldman *et al.*, 2001). In particular, the impact of the CEO's transformational leadership style on both subjective and objective performance was found to be stronger in environments where uncertainty was higher.

The practical implications of this study are as follows. First, as CEO leadership plays a very important role in the improvement of firm performance regardless of size, CEOs need to take more interest and put in considerable effort toward developing and exerting leadership. Leadership competency and broad leadership skills are important qualities that leaders must continuously develop in a dynamic and uncertain business environment.

In addition, the results of this study provided insights for leaders of privately owned companies who need to resolve uncertainty and identify their roles in improving firm performance. In terms of the founder or CEO of a new venture, leadership competency is one of the most critical success factors. It is essential for founders to be able to work with, understand and motivate others to work toward congruent goals.

Finally, as for the type of CEO leadership style that is most effective, a transformational style was found to be preferable to a transactional one. These results are consistent with the fact that most studies of CEO leadership focus on charismatic leadership or transformational leadership.

This study is not without its limitations, however. First, it only focuses on CEOs who own enterprises in select industries in South Korea which limits the generalizability of the results. Follow-up studies using firms with various ownership patterns in diverse industries and countries are necessary in order to generalize the results of this research.

Second, this study does not determine the process of how a CEO's leadership style is connected to firm performance. Further research in this regard would be helpful for expanding the scope of this study. Detailed explanation of a mediator or even a brief discourse would have greatly helped to show the process regarding how CEO leadership is related to firm performance. Future research can benefit from a theoretical explanation regarding how CEO leadership impacts distal and higher-level organizational outcomes such as firm performance and compare that with how CEO leadership impacts proximal outcomes that relate directly to the TMT members (e.g., TMT members' performance, attitude, turnover, etc.) via a trickle-down process.

Third, firm effectiveness cannot be explained merely via., performance measurement. Future research models need to incorporate diverse areas of corporate effectiveness such as organizational commitment and loyalty of employees as well as the firm's reputation among various stakeholders including customers.

Fourth, as the effects of CEO leadership are not immediately reflected in firm performance, future studies could consider a longitudinal study or different performance measurements in order to provide more reliable results.

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