

## **MODELLING THE RELATIONSHIP BETWEEN LEADERSHIP STYLES AND INNOVATIVE BEHAVIOR AND ENTREPRENEURIAL ORIENTATION IN AMERICAN FIRMS**

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### **ABSTRACT**

With the abundant amount of research that have focused on innovation and entrepreneurship within firms, there stands a dearth amount of research on American lead firms; the leaders' leadership style relationship with innovative behavior (IB) and entrepreneurial orientation (EO). The purpose of this research is to examine the relationship between innovative behavior and entrepreneurial orientation in American firms. This research is significant in that there is a dearth amount of studies that has quantitatively examined American firm leadership, and the relationship with employee EO and IB at the firm and individual level of analysis. A cross-sectional survey research design was employed to collect a total of 161 surveys from employees. The sample respondents were employed by a broad spectrum of firms in various industries-located in the Research Triangle Park area in Raleigh-Durham, North Carolina. Data were analyzed using hierarchical regression analysis. Based on new findings, transactional leadership style was positively statistically significantly related to innovative behavior in American firms. Therefore, this new finding suggests a strong linkage between employees' innovative behaviors in American firms and the use of transactional leadership style.

*Keywords: American entrepreneurs, leadership styles, Innovative behavior, entrepreneurial orientation*

### **Introduction**

The owners and managers of American firms have long relied on the productivity and ingenuity of its workforce to produce and develop products and services that strengthen their competitive edge. That is, the way in which an American firm is lead is indicative of the expectations managers have for their employees and the extent to which employees are able to take risks and implement new ideas. That is to say that the American inter-firm culture is undergirded with a notion of entrepreneurialism, which takes place within the confines of the workspace. This may imply that although employees do not own the firm, they are, however, value creators when they ideate and create products and services by taking calculated risks that put the firm in a competitive position within their respective industry. Nevertheless, the behaviors that are expected from employees are cultivated largely through the use of leadership styles. Managers employ leadership styles to influence and drive acceptable employee response behaviors, such as ideation generation, idea implementation, risk-taking and or proactiveness. The extant literature perpetuates the notion that firms view effective leadership as one that when applied is projected to increase performance, profit, and to gain market share. This research seeks to understand the impact that each leadership style has on employees' innovation; and, thus, if one style serves as a catalyst to increase employees' ideation, creation, and implementation of their innovative ideas. The following hypotheses are tested: (H1) Transformational style has a positive relationship with entrepreneurial orientation in American firms;(H2) Transactional style has a positive relationship with entrepreneurial orientation in American firms;(H3) Laissez-faire style has a negative relationship with entrepreneurial orientation in American firms; (H4) Transformational leadership style has a positive relationship with innovative behavior in American firms;(H5) Transactional style has a positive relationship with innovative behavior in American firms; (H6) Laissez-faire style has a negative relationship with innovative behavior in American firms. The significance of this research is the uncovering of the relationship between leadership styles on employee entrepreneurial orientation and innovative behavior, controlling for gender, age, and years on the job for sample respondents employed in the Research Triangle Park area located in Raleigh-Durham, North Carolina. This research will establish a new understanding of the nature of the relationships between these variables to increase the theoretical understanding of leadership styles' impacts on entrepreneurial orientation and innovative behavior within the context of American lead firms. The theoretical linkages attempt to establish baselines for leadership styles impact on work behavior, with the added cultural context, in the American firm. To add, there is practical significance in its indirect prescription for leaders in a wide array of industries in understanding leadership styles, and how these styles impact risk-taking and innovativeness at the individual-level of analysis, as value creators of the firm.

## Literature Review

### Leadership styles

The term leadership style is a topology that encompasses the diversity of leadership theories such as transformational leadership, transactional leadership, and laissez-faire (Bass, Stogdill, & Stogdill, 1990; Bhat, Verma, Rangnekar, & Barua, 2012; Yukl & Becker, 2006). The predominate and most referenced typology of leadership styles was conceived from Bass (1990, 1997) along with Bass and Avolio (1993) and Bass, Avolio, and Goodheim (1987) research studies. These styles are used by firm managers and leaders to motivate, mobilize, and mitigate circumstances between manager and employee. The differences between styles are largely based on firm's missions, resources, and the leaders' personal style. Leadership styles applicability are affected by the organizational design in which it operates. For example, a leader who is transactional could be constrained in the types of exchanges that could be offered an employee. Working within a close proximity of subordinate employees, leaders might find it difficult to be hands off or to assume and act as if employees will figure it out on their own. Transformational leadership, an independent variable, was defined by Yukl and Becker (2006) as someone involved in the inspiration of follower's and instilling their commitment to shared objectives; increasing social identification within the firm, and developing follower skills and collective efficacy. Transactional leadership, an independent variable, was defined by Bass, Avolio, Jung, and Berson (2003) as a situation where "followers agreed with, accepted, or complied with the leader in exchange for praise, rewards, and resources or the avoidance of disciplinary action" (p. 208). Laissez faire, another independent variable, has been defined by many theorists as leaders who avoid making decisions, absent when called upon, and that hesitate to take necessary action when it is needed (Bass, Cascio, et al., 1974; Hinkin & Schriesheim, 2008; Judge & Piccolo, 2004).

### Entrepreneurial orientation

The firms' orientation of entrepreneurship is reflective of the level of the entrepreneurial spirit individuals within an organization possess and the devotion of resources to harness new opportunity in untapped markets. Accordingly, entrepreneurial orientation is a dependent variable, which was defined as, "the entrepreneurial strategy-making processes that key decision makers use to enact their firm's organizational purpose and sustain its vision" (Pérez-Luño et al., 2010, p. 4). Even further, firms with a climate of entrepreneurial orientation are highly likely to invest resources on employees to find and discover new data, trends, and process methodologies (Barringer & Bluedorn, 1999). This orientation is one that is socially constructed and cannot reach its full potential unless there is a climate that fosters this type of employee behavior. Entrepreneurial orientation was found to be positively related to business growth and expansion (Ansoff, 1965; Monerno & Casillas, 2008). Covin and Slevin (1991) called firms with a climate of entrepreneurship, *entrepreneurial firms*, which is based on firms' growth strategies circumvented around employees' ability to take the necessary risk, engage in proactive activity, and to continually increase their knowledge base to drive innovativeness.

### Innovative behavior

Innovative behavior has its roots in the Robertson (1967) innovation typology which consists of three broad categories: (a) construction of new plants and equipment, (b) invention of new firms, and (c) the rise of leadership of new men. This typology puts innovation at the hands of the individual who ultimately, at the firm level, exhibits these pillars of inventive behavior. As a matter of definition, Kleysen and Street (2001) and West and Farr (1989), explained that innovative behavior is "all individual actions directed at the generation, introduction and or application of beneficial novelty at any organizational level" (p. 285). There are four domains that make up innovative behavior: idea exploration, idea generation, idea championing, and idea implementation (De Jong & DeHartog, 2010; Janssen, 2004; Scott & Bruce, 1994; West & Farr, 1989). Eisenbeiss et al.'s (2008) research study concluded with suggestive evidence that transformational style was positively related to innovation. Transformational leadership was shown to be a strong driver in innovative behavior in work teams and instrumental in team related tasks and processes.

### Methodology

This research employed a nonexperimental, cross-sectional quantitative survey research design. The very nature of survey research design allows for the implementation and use of reliable and validated instrumentation and sampling respondents at a single point in time (Kerlinger & Lee, 2000). The goal of this research design is to effectively maximize the variance of variables to answer the research hypotheses, control for extraneous variables that may

have an unwanted effect on the experimental outcomes, and to minimize the error of random variance (Kerlinger & Lee, 2000).

The sample respondents were randomly selected employees who worked for entrepreneurial firms operating in the Research Triangle Park area located in Raleigh-Durham, North Carolina. The respondents were American native employees. There were no criteria regarding age, years on job, or gender for the sample population. The variables: age, years on job, and gender were controlled in this study. Hair et al. (2010) called for a sample range of 15-20 observations per independent variable. Therefore, an overall sample size of 161 American entrepreneurs were obtained to be in compliance with the sample size provided by Hair et al. (2010). This study has three independent, two dependent, and four control variables. The independent variables are transformational, transactional, and laissez-faire leadership styles. The Multifactor Leadership Questionnaire (MLQ) was used to gather data; it has 40 items, reliability of .93, Cronbach's alpha of .70, on a 4-point Likert scale. The entrepreneurial orientation scale was used and has 6 items, a reliability of .87, Cronbach's alpha of .90 on a 7-point Likert scale. The innovative behavior scale was used and has 6 items, a reliability of .89, and Cronbach's alpha at .92, and has a 5-point Likert scale. The hierarchical (sequential) regression analysis method tested hypotheses 1-6. The variables were entered into blocks in a predetermined order (Hair et al., 2010). The control variables, age, gender, years on job were dummy-coded, as they are nonmetric variables assigned either a 1 or a 0 (Hair et al., 2010). After the nonmetric variables are dummy-coded, they are added to the regression formula.

**Results**

Tables 1 and 2 present the descriptive statistics and correlation of the variables. The descriptive table presents the means, standard deviations on all of the variables tested in this research.

Table 1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Age	161	1.0	2.0	1.5	.49
Years on job	161	3.0	4.0	3.5	.50
Gender	161	3.0	4.0	3.5	.49
Transformational leadership	161	1.0	4.0	3.2	.84
Transactional leadership	161	1.0	4.0	3.2	.85
Laissez-faire leadership	161	1.0	4.0	2.9	.84
Entrepreneurial Orientation	161	1.0	7.0	4.4	1.9
Innovative behavior	161	1.0	5.0	3.9	1.0

Table 2: Correlation of variables

		Age	Years on job	Gender	Transformational leadership	Transactional leadership	Laissez-faire leadership	EO	IB
Age	Pearson								
	Correlation	–							
	Sig. (2-tailed)								
Years' on job	Pearson								
	Correlation	.40**	–						
	Sig. (2-tailed)	.00*							
Gender	Pearson								
	Correlation	-.16*	.11	–					
	Sig. (2-tailed)	.05*	.15						

Transformational leadership	Pearson Correlation	.15	.15	.03	–			
	Sig. (2-tailed)	.06	.05	.64				
Transactional leadership	Pearson Correlation	.09	-.03*	-.05	.28**	–		
	Sig. (2-tailed)	.24	.68	.52	.00*			
Laissez-faire leadership	Pearson Correlation	.10	.12	.04	.17*	.18*	–	
	Sig. (2-tailed)	.19	.11	.57	.02*	.01*		
EO	Pearson Correlation	.05	-.18*	-.15*	.12	.13	-.04	–
	Sig. (2-tailed)	.50	.01*	.04*	.12	.10	.61	
IB	Pearson Correlation	.14	-.01*	.10	.10	.22**	.10	.09*
	Sig. (2-tailed)	.06	.83	.19	.20	.00*	.17	.23

\*\*p < .01 level, two-tailed. \*p < .05 level, two-tailed.

### Entrepreneurial Orientation

The first hierarchical regression model address the following three hypotheses: H1: Transformational leadership style has a positive impact on entrepreneurial orientation in the context of an American-based firm. H2: Transactional leadership style has a positive impact on entrepreneurial orientation in the context of an American firm. H3: Laissez-faire style has a negative impact on entrepreneurial orientation in the context of an American firm. Table 3 reports the control variance is 6.6% on the first line and 9.6% on the second line. The  $\Delta R^2$  shows *Impact of Leadership Styles on Employee Entrepreneurial orientation* where leadership styles accounts for 3% of the variance in the dependent variables. The regression coefficients report that laissez-faire ( $\beta = -.054, p > .05$ ) is not significant, transactional leadership style ( $\beta = .082, p > .05$ ) is not significant, and transformational leadership style ( $\beta = -.135, p > .05$ ) is not significant. Based on these results, Hypotheses 1, 2, and 3 are all unsupported. To date there has yet to exist in research empirically tested impact of leadership styles on EO within the context of American firms. There is, however, now evidence that would suggest leadership styles may not be related to risk taking and proactiveness and innovativeness in the American firm.

Perhaps the entrepreneurial orientation of employees, in American firms, could be related with leadership styles at the firm level of analysis and not the employee level of analysis, whereas applying leadership styles on each individual employee may result in individual outcome behavior oppose to leading the group as a whole using a particular style.

Table 3: Regression Coefficient—Hypothesis American Firm Entrepreneurial Orientation (N=161)

	Model 1 $\beta$	Model 2 $\beta$
Step 1 (Control Variables)		
Age	.12	.10
Years' on job	.22	.23*
Gender	.12	-.12
Step 2		
Age		.10
Gender		-.12

Years' on job		.23
Transformational		.14
Transactional		.08
Laissez-faire leadership style		-.05
$R^2$	6.6	9.6
$F$	3.7	2.7
df	(3, 157)	(3, 154)
$R^2$ Change	6.6	3.0

\* $p < .05$ . \*\* $p < .01$ .

### Innovative behavior

The second hierarchical regression model address the following three hypotheses: H4: Transformational leadership style has a positive impact on innovative behavior in American-based firms. H5: Transactional leadership style has a positive impact on innovative behavior in American firms. H6: Laissez-faire style has a negative impact on innovative behavior in American firms. Table 4 reports the control variance as 4.9% on model one and 9.6% on the second model. The  $\Delta R^2$  shows *Impact of Leadership Styles on Employee innovative behavior* where leadership styles accounts for 4.7% of the variance in the dependent variables. The regression coefficients report that laissez-faire ( $\beta = -.06$ ,  $p > .05$ ) is not significant, transactional leadership style ( $\beta = .19$ ,  $p < .05$ ) is positively statistically significant, and transformational leadership style ( $\beta = .02$ ,  $p > .05$ ) is not significant. Based on these results, hypotheses 4 and 6 are both unsupported; hypothesis 5 is supported. To date there are no studies that have tested leadership styles, in an American firm, with IB, so this research serves as a baseline for understanding leadership style relationship with the innovative behavior of entrepreneurial firms. This finding is similar to other studies that found transactional style to be positively related and supportive of innovative behavior (Eisenbeiss et al., 2008; Shunlong & Weiming, 2012). This research uncovered an important aspect of transactional style, which is that exchanges from manager to employee or leader to follower may be positively related to how employees generate and execute on their innovative conceptualizations in the American workplace. This finding may also suggest the notion that transactional style and its dimensions could work in tandem instead of independently to elicit employee's innovative behavior. That is suggesting that contingent reward may work as a basis for engaging innovative behavior, but then the behavior is further reinforced with both passive and active management-by-exception. Table 4: Regression Coefficient—Hypothesis American Firm Innovative behavior (N=161)

	Model 1 $\beta$	Model 2 $\beta$
Step 1 (Control Variables)		
Age	.22	.19*
Years' on job	.12	.12
Gender	.15	.15*
Step 2		
Age		.19*
Years' on job		.12
Gender		.15*
Transformational		.02
Transactional		.19*
Laissez-faire		.06
$R^2$	4.9*	9.6*

<i>F</i>	2.6	2.7
<i>df</i>	(3, 157)	(6, 154)
<i>R</i> <sup>2</sup> <i>Change</i>	4.9*	4.7*

\**p* < .05. \*\**p* < .01.

## Conclusion

The statistical results provide theoretical linkage and now thus add to the extant entrepreneurial and leadership literature. The results show that transactional style ( $\beta = .193$ ) has a positive and significant relationship with innovative behavior in American firms; therefore hypothesis H5 is supported. Transformational and laissez-faire leadership styles do not have a positive or statistically significant relationship with entrepreneurial orientation; therefore, hypotheses 1, 2, 3, and 4 are all unsupported. These results guide the practical understanding of how American leaders' styles, particularly, transactional style positively and significantly is related with employees' innovative behavior within organizations. Two limitations were present in this research, one of which is that there is only a regional area sample. Whereas, future research should focus on a broader geographically dispersed sample population. The second limitation was the length of time of this research, where in fact, a longitudinal design could bear further fruits in terms of how leadership styles might relate to employee behavior over time. This is an open area for future research with intentional inclusiveness of employee's age, gender, and title, as these variables could change the relationship overtime.

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