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The impact of leadership on small business innovativeness☆

Timothy C. Dunne *, Joshua R. Aaron, William C. McDowell, David J. Urban, Patrick R. Geho

Middle Tennessee State University, USA

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ABSTRACT

Innovation is a fundamental requisite for small firms to achieve long-term viability. While relevant literature highlights the importance of leadership within small firms in order to establish and foster a climate conducive for innovation, evidence linking specific leadership attributes with innovation is lacking. This study examines the impact of the individual entrepreneur on fostering new product innovation within firms. An analysis of the responses collected from entrepreneurs indicates that leadership style, negotiation style and organizational efficacy each affect new product innovation. Specifically, we find evidence to support the idea that small business leaders who are inspirational, who negotiate competitively, and who lead efficacious organizations establish environments that are more likely to yield new product innovations.

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1. Introduction

A firm's success often depends on its ability to innovate. In fact, creativity and product innovation is a common goal of many organizations (Cooper, 1999) and is necessary for growth and survival (Schumpeter, 1942). The numerous practitioners as well as academic publications involved in a study of innovation illustrate the prominence of this area. The importance placed on innovation manifests in the common practice of research and development departments and even the incorporation of innovation in organization missions (Bart, 2004). While entrepreneurship research often focuses on innovation and creativity, little is known about how small business leaders create an environment that enhances innovation. The main objective of our study is to explore the role of leadership in fostering new product innovation within small businesses. Specifically, we aim to identify leader characteristics that are positively associated with small business innovation.

This study begins by describing the crucial role of new product innovation on firm survival and success. Next, we provide a review of established antecedents to new product innovation regardless of firm size and draw upon leadership theory to predict how small business leaders may influence innovation. Results and implications of our study are discussed subsequently.

1.1. Innovation and firm performance

Firms, particularly small firms, need to be innovative to survive (Cefis, 2005). In general, however, when firms experience initial success resulting from innovation, leaders turn their attention towards efficient production and selling of their products or services, potentially at the expense of ongoing innovation. This seemingly prudent decision may unintentionally cause firms to become one-hit wonders, effectively limiting their potential success over time (Mazzei, Flynn & Haynie, 2016). Cefis (2005) suggests firms benefit from an *innovation premium* that extends their life expectancy.

Some antecedents of innovation include marketing capabilities (Banterle, Cavaliere, Carraresi & Stranieri, 2011), information and communications technology (Parida & Örtqvist, 2015), availability of financial slack (Parida & Örtqvist, 2015), and participation in small business advisory programs (Sawang, Parker, & Hine, 2014). Matthews and Bucolo (2013) suggest that simply increasing organizational awareness of the benefits of innovative practices helps, along with adopting a holistic approach to design innovation throughout the organization. Vargas (2015) examines the impact of transformational and transactional leadership on the firm's level of innovation and concludes that a flexible leadership style both fosters innovation and best facilitates organizational learning.

Innovation strongly influences the successes and failures of small firms. The ability of small firms to innovate is central to their progress in terms of remaining competitive and achieving growth (Roper, 1997). However, given that small firms are more resource and capability constrained than larger firms, their ability to implement innovation initiatives is even more essential (Hewitt-Dundas, 2006).

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* Corresponding author at: MTSU Box 75, Murfreesboro, TN 37132, USA.
E-mail address: Timothy.Dunne@mtsu.edu (T.C. Dunne).

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1.2. Impact of leader behavior on product innovation

The importance of innovation, as outlined in Section 1.1, has led to the search for and discovery of factors related to creativity and innovation. Within this literature, evidence suggests leader behavior may play an important role in fostering innovation at the individual, group, and organizational level. Innovation relies on individual and collective efforts to utilize knowledge, skills, and information in a manner that results in new and unique applications to develop products, services, processes, etc. The literature highlights three major themes of how this process transpires, namely the impact of individual characteristics, group characteristics and job characteristics. The dominant perspective regarding the link between job characteristics and innovation comes from literature related to job design of motivation (Hackman & Oldham, 1976). According to this stream of research, characteristics of job complexity will influence creativity by initiating positive psychological states. Specifically, Hackman and Oldham (1976) found that employees view their work as more meaningful when jobs involved a greater variety of tasks, allowed them to identify with job outcomes, provided them with autonomy, and were perceived to be valuable. Therefore, employees were more motivated, had higher levels of job satisfaction, were absent less frequently, and accomplished higher levels of performance.

In addition to job characteristics, certain individual characteristics have been found to foster innovation. Much of the research linking individual characteristics with innovation focuses on employee motivation. One factor that motivates creativity is the amount of personal accountability individuals have for their work (Anderson & West, 1998). An orientation towards individual accountability creates an environment whereby individuals are more concerned with maximizing performance, resulting in better implementation of improved processes. Similarly, research shows employees accomplish greater creative outcomes when they are personally concerned about problems and take greater ownership of jobs (Parker, Chmiel, & Wall, 1997). Similarly, when subordinates feel responsible, they achieve more innovative success. Consistent with motivation theories, Zhang and Bartol (2010) found intrinsic motivation was more likely to spur creativity than extrinsic motivation. On a related note, they found that employee engagement was also correlated with creativity at work.

In addition to the individual factors, scholars have determined group-level characteristics that also enhance innovation. One such factor that enhances a group's capacity to innovate is diversity (Dwyer, Richard, & Chadwick, 2003; Kaur, 2014). While demographic diversity is one factor, others have found that diversity in knowledge, skills, and functional backgrounds enables groups to increase innovative processes (Carbonell & Rodriguez, 2006). However, collective knowledge maximizes the group's creativity only when the team members' knowledge is utilized for solving problems (Sung & Choi, 2012). Similarly, the effective utilization of knowledge existing within a group requires transactive memory or an understanding by group members of who knows what (Gino, Argote, Miron-Spektor, & Todorova, 2010). Additionally, the knowledge residing within the members of the group must be shared with other members to realize the creative advantage of working collectively (Hu, Horng & Sun, 2009). The dynamic nature of group undertakings also makes it necessary for group processes to be integrated and for group members to trust each other to realize their creative potential (West, 2002).

2. Theoretical framework and hypotheses

Many of the antecedents to innovation reviewed in Section 1 are intuitive aspects influenced by leader behaviors and styles. Following this proposition, Anderson and King (1993) found a participative leadership approach, whereby followers are consulted to provide inputs in the decision-making process, was positively associated with innovation. Another study found that when leaders encouraged followers to take responsibility, the latter perceived they had a voice and felt secure in sharing their opinions, which ultimately led to innovation success (Anderson & West, 1998).

The impact of a leader on new product innovation also depends upon how the leader communicates with his/her followers. For example, Mayfield and Mayfield (2004) found the use of motivational language by leaders was positively related with employee innovation. Specifically, they found innovation was realized when the leader's communication provided both a clear direction of goals and responsibilities while being empathetic towards subordinates' needs and a mechanism to help subordinates appreciate group norms (Mayfield & Mayfield, 2004). Communication between leaders and followers is essential to provide effective feedback and recognition to reinforce employee behavior and to enhance creativity (King, 1990).

2.1. Inspirational leadership and innovation

The findings in Section 2 rely primarily upon motivation theories to predict how leaders may facilitate innovation. However, our predictions are based on the notions of affect theory (Tomkins, 1984), which proposes that behaviors are strongly influenced by felt and expressed emotions. Considerable amounts of research support the idea that individuals' emotions are related to their work performance (Lofy, 1998). Additionally, research suggests positive emotions stimulate innovation by producing biological responses that encourage creativity (Isen, 1999). Specifically, as highlighted in Isen (1999), positive affect enhances an individual's cognitive capacity to process information, broadens their focus, and increases the flexibility of cognitive elements used for problem solving. Additionally, the experience of positive emotions aid individuals in challenging the status quo and thinking beyond the scripted patterns that encompass common employee behaviors (Fredrickson, 2001). In an entrepreneurial setting, Baron and Tang (2009) found that the entrepreneur's positive affect was significantly related to creativity, which, in turn, was related to innovation at the firm level.

This impact of positive emotions is based on the premise that environmental factors can, and do, affect individual emotional states and moods. One such factor is a leader's use of emotions to inculcate positive emotions in subordinates. The connection between the leader's and subordinates' emotions may be explained by emotional contagion (Barsade, 2002) whereby the emotions expressed by one party are mimicked and then experienced by another party. While the mechanisms of emotional contagion have not been applied to small business leaders' innovation achievements, there is considerable evidence for such a prediction. A growing stream of leadership research has highlighted the importance of utilizing emotions to motivate individuals and groups effectively (Bass & Avolio, 1994). For instance, transformational leaders are more responsive to follower's needs and are able to use emotions to inspire followers to pursue organizational objectives (Ashkanasy & Tse, 2000; Berson, Shamir, Avolio & Popper, 2001). The impact of inspirational styles of leadership, including transformational and charismatic leadership, provide a foundation to predict that inspirational leadership in small business settings would lead to new product innovation.

Hypothesis 1. There will be a positive relationship between inspirational leadership and new product innovation within small businesses.

2.2. Leader communication and innovation

One common theme in innovation literature purports that leaders need to be good communicators in order to enhance group effectiveness. As such, Mayfield and Mayfield (2004) determined that to improve group innovativeness, a leader must communicate by providing straightforward directions and enabling subordinates to understand cultural norms and

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expectations within the group. Much creativity happens in groups; while many individual and group-level factors affect creativity, a clear articulation of job tasks is essential for both individuals and groups (Woodman, Sawyer & Griffin, 1993). Additionally, intergroup and intragroup coordination have been found to spur creativity (Ocker, Hiltz, Turoff, & Fjermestad, 1995), requiring managers to facilitate both internal and external communication. The dynamic process involved in creating something new requires integration of many different areas (Im, Hussain, & Sengupta, 2008). Managers must work towards integrating business processes and removing external constraints that hinder creativity (West, 2002). Leaders are also responsible to assist groups to establish transactive memory systems by communicating to members the knowledge and skills possessed by other group members (Gino et al., 2010) and by establishing an environment of trust that fosters knowledge sharing (Hu et al., 2009). Thus, we propose the more a leader is able to communicate and articulate meaning to his/her followers, the more innovative the group will be.

Hypothesis 2. There will be a positive relationship between a leader communicating meaning and the new product innovation within small business.

2.3. Organizational efficacy and innovation

Another indicator of leader-influenced innovation is the efficacy of the employee or group to be innovative (Farr & Ford, 1990). In fact, research found that self-efficacy influenced individuals to take initiative and exert greater effort to implement change. This is consistent with other studies related to the theory on self-efficacy. According to Bandura's (1986) original work, self-efficacy is conceptualized as a vital factor related to facilitating change — a necessity to realize new product innovation.

Efficacy has traditionally been examined at the individual level through the lens of motivation theory. However, in the area of innovation performance, the leader needs to apply efficacy at the organizational level (Gist, 1987; Harris, Gibson, McDowell, & Simpson, 2011). This organizational level efficacy of the leader may be defined as the organization's confidence to perform at acceptable levels. This cognitive confidence covers the capabilities, judgments, and assurance necessary for the organization to achieve high levels of success.

Previous research has found a relationship innovation efficacy and the degree of product innovation performance (Alegre, Lapiedra, & Chiva, 2006); however, the current research considered the impact of organizational efficacy on innovation success. Gist, Stevens, and Bavetta (1991) found that self-efficacy does indeed, relate to performance. Gully, Incalcaterra, Joshi, and Beaubien (2002) further developed this notion by indicating a positive relationship exists between collective efficacy and performance. While these studies examine efficacy in light of performance, Tasa and Whyte (2005) further this discussion by highlighting that collective efficacy is positively related to vigilant problem solving. In addition, Bandura (1986) finds that efficacy affects the ability to overcome obstacles.

Research supports the relationship between efficacy (self and collective) and performance; organizational efficacy is expected to lead to product and service innovation. Organizations must innovate to overcome obstacles and, as noted previously, efficacy helps in overcoming obstacles. In addition, innovation within a firm is a type of problem solving that will lead to continued success. As such, the relationship between organizational efficacy and problem solving should correspond to the relationship between organizational efficacy and innovation in the context of small businesses. Thus, we expect that the organization's confidence and capabilities would lead to new product and service innovation success.

Hypothesis 3. There will be a positive relationship between organizational efficacy and new product innovation within small businesses.

2.4. Leader negotiation style and innovation

Innovation requires a dynamic process of using human capital to translate knowledge into creative activity that subsequently results in innovation. This creates an environment conducive to conflicts of interest. Conflict is likely to occur at numerous stages in the innovation process both internally (with employees and within groups) and externally (with suppliers, customers, and partners). As such, the manner in which a leader handles conflict would greatly influence the organizational effectiveness to develop innovative products and services successfully. While this would apply to any manager, we expect it to be even more important for small business leaders who are likely to be more involved in these activities. Two commonly examined negotiation styles are competitive and collaborative negotiation. Competitive bargaining is the practice of aggressively, and even contentiously, attempting to obtain the most favorable outcomes for oneself while a collaborative approach aims to work together to achieve mutually beneficial outcomes (Rhoades & Carnevale, 2006).

According to Prajogo, McDermott, and McDermott (2013), small firm innovation is prominently dependent on processes related to exploitation. Their findings indicate the process of translating inputs into innovative outputs is more important for smaller firms as compared to medium and larger firms. A major factor related to creating innovation via exploitation is to structure contracts with suppliers and buyers in a manner that minimizes transaction costs. Accordingly, an approach of extracting as much value as possible would be prudent in the negotiation of such contracts. Thus, we expect that small business leaders with a more competitive conflict management style would be more likely to create efficiencies in the supply chain, which would translate into more successful innovation initiatives.

Hypothesis 4. There will be a positive relationship between competitive negotiation behavior and new product innovation within small businesses.

The ability to create efficient processes to enhance innovation requires a leader to negotiate with many different parties. Thus, it is imperative that small business leaders extract value from those negotiations. While we have suggested that a competitive negotiation style would improve innovative potential, we conversely expect that a collaborative approach to negotiation will have an adverse effect on innovation.

Hypothesis 5. There will be a negative relationship between collaborative negotiation behavior and new product innovation within small businesses.

Fig. 1 illustrates the conceptual framework of the various hypotheses investigated in this study.

3. Method

3.1. Sample

Data was collected from business owners associated with the Tennessee Small Business Development Center. An electronic survey was distributed to 2500 potential respondents; however, an unknown number were undelivered due to changes in email addresses or businesses ceasing operations. Of the total surveys distributed, 232 respondents opened the survey and 126 completed it. Respondents with no employees beyond the business owner were eliminated from the analysis resulting in a final sample of 76.

3.2. Measures

3.2.1. Leadership style

Leadership style was measured by adapting an instrument developed by Sashkin and Morris (1987). This multi-dimensional construct

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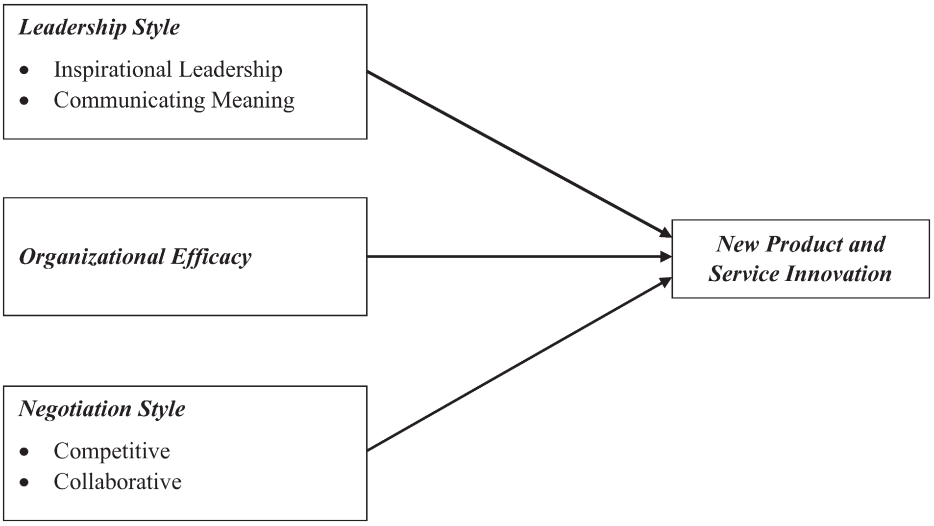

Fig. 1. Conceptual framework of the influence of leadership on small business innovativeness.

was measured on a 5-point Likert scale using four items for each dimension. *Inspirational leadership* measures the extent to which a leader can tap into the feeling of others and inspire them. *Communicating meaning* measures how effective a leader is at getting their meaning across to others. Reliability coefficients for leadership style were $\alpha = 0.73$ for *inspirational* and $\alpha = 0.75$ for *meaning*, respectively.

3.2.2. Organizational efficacy

To measure this variable, we used Riggs and Knight's (1994) scale of collective efficacy, which has been used to assess organizational efficacy (Harris et al., 2011). This seven-item construct was measured using a 5-point Likert scale that measures the organization's capabilities, purpose, and confidence with items such as "*My company is able to perform as expected for our customers*" ($\alpha = 0.76$).

3.2.3. Negotiation style

We used Thomas and Kilmann's (1978) instrument to measure the multi-dimensional scale for preferred negotiation styles. Specifically, we focused on the *competitive* and *collaborative* dimensions of negotiation style in this study. Each style was measured on a 5-point Likert scale including questions such as "*I work to come out victorious, no matter what*" (competitive) and "*I strive to investigate issues thoroughly and jointly*" (collaborative). The reliability coefficients were $\alpha = 0.65$ and $\alpha = 0.64$ for the respective dimensions.

3.2.4. Innovativeness

We used a self-report measure to determine the respondents' level of satisfaction with their firms' successful innovation of products and services.

4. Results & discussion

4.1. Results

The purpose of this study is to examine the influence of small business leadership on innovation. Hypothesis 1 predicted that inspirational leadership would be positively correlated with small business innovation. The results presented in Table 1 indicate that inspirational leadership is moderately correlated with new product and service innovation ($r = 0.26$; $p = 0.055$). However, when analyzed with other predictors in the full regression model (Table 2), this relationship becomes non-significant.

Hypothesis 2 proposed the relationship between a leader's communications of meaning would be associated with successful innovation. Regression results did not support the predicted relationship and thus, Hypothesis 2 was not supported.

Theory on self-efficacy was employed to predict a positive relationship between leader efficacy and small business innovation (Hypothesis 3). As displayed in Table 2, the results of our analysis indicate a positive and significant relationship between efficacy and innovation ($\beta = 0.812$; $p = 0.01$). Thus, strong support was found for Hypothesis 3.

This study made two predictions regarding the relationship between negotiation style and small business innovation. Hypothesis 4 proposed a positive relationship between competitive negotiation behavior and innovation, while Hypothesis 5 predicted that collaborative negotiation would have the opposite effect. The regression results presented in Table 2 support the predicted relationship in the former ($\beta = 0.38$; $p < 0.01$), implying that more competitive negotiation behavior is associated with improved product innovation. Thus, results provide strong support for Hypothesis 4. However, while the analysis revealed that

Table 1
Means, standard deviations, and bivariate correlations.

Variable	Mean	S.D.	1	2	3	4	5
1. Inspirational leadership	4.08	0.62	–				
2. Communicating meaning	3.84	0.64	0.74***	–			
3. Organizational efficacy	4.45	0.36	0.51	0.37***	-		
4. Competitive negotiation style	2.17	0.81	0.09	0.12	−0.00	–	
5. Collaborative negotiation style	4.31	0.53	0.18	0.23	0.13	0.00	–
6. Innovativeness	3.24**	0.83	0.26*	0.20	0.37***	0.37***	−0.13

* $p < .10$.
** $p < .05$.
*** $p < .01$.

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Table 2
Regression results for leadership influence on small business innovativeness.

Predictor variables	β	SE	t	95% CI Lower	95% CI Upper
Inspirational leadership	−.006	.253	−.023	−.515	.503
Communicating meaning	.120	..225	.579	−.322	.583
Organizational efficacy	.812**	.315	2.579	.179	1.444
Competitive negotiation style	.379**	.125	3.026	.127	.630
Collaborative negotiation style	−.310	.190	−1.628	−.693	.073

Note. R^2 for the regression model = .309.
* $p < .05$.
** $p < .01$.

the effect of collaborative negotiation style is indeed negative, it was not statistically significant ($\beta = -0.31$; $p = 0.11$). Thus, Hypothesis 5 was not supported.

4.2. Discussion

In this study, we seek to examine the impact the individual entrepreneur has on promoting innovation activity. Specifically, we hypothesized that leadership style, efficacy, and negotiation style all would play a role in the amount of new product innovation experienced.

Overall, our findings support the notion that leadership style affects small firm innovation. As noted in Section 2.1, transformational leaders are more responsive to followers' needs and better able to excite followers to pursue organizational objectives (Ashkanasy & Tse, 2000). The fact that this finding falls short ($p = 0.055$) of the 0.05 level of significance is potentially attributable to the lack of statistical power in the sample rather than an absence of a true relationship between leadership style and innovation. Surprisingly, we did not find evidence that the leader's communication competence leads to enhanced innovation. While there is strong evidence that quality communication is important for leaders, our results did not suggest its relevance in fostering innovation; at least in the presence of inspirational leadership.

In agreement with a large body of work in the area of efficacy and performance (Gist, Stevens, & Bavetta, 1991), the results of this study assert that the leader's performance confidence is an important predictor of new product innovation. It makes intuitive sense that a leader's negotiation style would create efficient internal and external processes that aid in innovation success. New product innovation is a disruptive force that alters the status quo. As such, conflict is likely to occur internally with employees and within groups, and externally with respect to dealings with suppliers, customers, and partners. In support of our prediction, this data suggests that having a competitive negotiation style is in fact an advantage for fostering small business innovation. While we expected that a collaborative style would maintain the status quo and stifle innovation, we did not find this negative relationship to be statistically significant. Thus, there appears to be sufficient evidence to conclude that a competitive negotiation style is preferable to a collaborative negotiation style in terms of spurring new product innovation.

4.3. Limitations and future research

Our study has several limitations. First, the entrepreneur or the business owner completed the surveys. While this respondent is uniquely positioned to represent the firm, the risk of single source bias is possible. Future research would benefit by analyzing responses from leaders and subordinates. Second, the final usable sample size is 76, which limits overall statistical power. It is highly likely that a few more responses would yield a statistically significant impact of inspirational leadership on new product innovation. This potentially also affects the lack of statistical significance found for our assertion that collaborative negotiation tactics would limit new product innovation.

5. Conclusion

An organization's ability to survive largely depends on the successful implementation of innovative products, services, and processes. We conjecture that this fact is even more crucial for small businesses. This study broadly examined the effect of leadership on the ability of small firms to innovate successfully. Specifically, results indicate that inspirational leaders stimulate small businesses to increase innovation. Likewise, small business leaders who display high levels of efficacy also spur innovative processes. Additionally, a competitive approach to the various negotiations in which small business leaders engage enables small businesses to leverage their limited resources for improved innovation. This study provides evidence that small business performance with respect to innovation is attributable to leadership and provides a framework to better understand this essential aspect of small business innovation.

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