

Unique Leadership Characteristics of Entrepreneurs in Innovation-based Firms

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Abstract

The pivotal role of business founders is widely acknowledged in the field of entrepreneurship, but little attention has been given to their leadership characteristics (Daily, et al., 2002). However it seems, founders of innovation-based enterprises face distinct challenges that require unique leadership qualities if the firm is to be successful (Drucker, 1985). Unfortunately, to date very few empirical investigations have been conducted to examine this key issue or chart a research agenda for future research into the leadership characteristics of “techno-preneurs” (Jensen & Luthans, 2006). This paper describes an exploratory examination of leadership characteristics common among entrepreneurs in innovation-based firms to provide a structured direction for future research in the intersecting fields of leadership and entrepreneurship. Subjects completed an online survey measuring five key leadership traits.

The results of this study suggest the relationship between resiliency and transformational leadership is extremely high among the innovation-based entrepreneurs participating in the online survey used. Resiliency, a measure of the leader’s ability to quickly recover from an externally induced change in plans, among entrepreneurial leaders in innovation-based firms seems to be an especially critical trait for successful leaders. That is, as the techno-preneur faces unique challenges to develop superior products or services as the key technology underlying the firm advances at an ever-increasing rate, and the investment climate for these ventures fluctuates with the general economic conditions, accommodating those changes seems to be a characteristic of successful leaders of innovation-based firms. Interestingly, measures of optimism were not strongly correlated with other measured leadership traits. This could be the result of current economic conditions, but should be explored further in future studies. Future research should examine if leadership traits of entrepreneurial leaders in innovation-based firms have strong correlations with specific outcome measures (ex. financial success of the firm) and non-traditional leadership characteristics such as environmental and social awareness. Propositions to help guide the suggested future research directions are provided.

Introduction

The executive leaders of organizations provide the overall strategic direction for the company and have significant impact on its bottom-line performance (Barrick, et. al., 1991). In fact, after a review of a wide-ranging group of empirical studies of leadership effectiveness, Clark and Clark (1996) suggest that the actions of individual leaders have a demonstrable impact on an organization’s effectiveness and a variety of organizational outcomes. While the pivotal

role of business founders has been widely acknowledged in the study of entrepreneurship, very little attention has been given to the specific impact of their leadership capacities (Daily, et al., 2002). Organizational behavior and leadership scholars have also given very little attention to leadership characteristics of entrepreneurs (Jensen & Luthans, 2006). There is growing support that leadership capabilities are crucial for organizational success and sustainable competitive advantage (Luthans and Youssef, 2004). This study attempts to examine the leadership characteristics of entrepreneurs in technology-focused firms as a first-step and call for further research in this field.

Oftentimes, technology-based entrepreneurs seek the assistance of business support organizations, such as business incubators and business development organizations, to aid the start-up company in the critical early stages of development. Business support organizations are often measured by the success of the start-up firms they support. Therefore, business support organizations are dependent upon the leaders of the emerging ventures to develop successful enterprises not only for the benefit of the firm's employees, but also for the business support organization itself. Therefore, it is critical for the business support organizations to evaluate the leadership abilities of their entrepreneurs to determine if the leader possesses the leadership characteristics in order to help lead the firm to success and to provide the appropriate leadership training programs to help the entrepreneur succeed. While most business support organizations seek to attract and retain experienced and successful talent to lead their new ventures, to date many of these support organizations have not formally analyzed the leadership traits of their client company CEOs.

An analysis of the leadership characteristics of technology-based entrepreneurial leaders from business support organizations would prove valuable for the support organization by gaining a deeper understanding of the leadership characteristics of the entrepreneurial leaders currently in place in their start-up organizations. This analysis can then be used to determine if current entrepreneurial leaders would benefit from additional leadership training and as a future benchmark to help evaluate future start-up company CEOs.

Literature Review

A literature review of books, journal articles, and dissertations was conducted utilizing the ProQuest, LexisNexis Academic, Dissertation Abstracts, and Google Scholar databases. Searches focused on research and literature containing the key words: entrepreneurship, leadership, and technology. No significant works were found that analyzed the unique leadership characteristics of entrepreneurs in technology-based firms. The literature reviewed below was identified to be the most relevant works related to leadership characteristics and entrepreneurship.

Eggers and Leahy (1995), working for the Center for Creative Leadership, performed a study consisting of two surveys. They first, utilizing the Entrepreneurial Leadership Questionnaire, asked respondents to list and indicate relative importance of all the leadership and management skills essential for running a company. 338 questionnaires were analyzed. A second survey, sent to the 338 respondents, utilizing the Management Skills Profile, asked the participants to rate the effectiveness of a person's management skills and behaviors. 221 useable responses were compiled.

The results of the survey indicate that CEOs of US-based small businesses believe the most critical skills needed for company development include: financial management, communication, motivation of others, vision, and motivating self. The authors contend that these five skills are frequently cited in the leadership literature as critical for leading business growth. While acknowledging that these skills are critical to business success is an important first step, this article does address the unique needs of technology-based start-up companies and does not advise the reader on how to measure or improve these critical leadership skills.

Jensen & Luthans (2006) examined the link between the leadership traits and positive psychological capital of 76 business owners /founders in the Midwest to dimensions of authentic leadership. “The study suggests a positive relationship between entrepreneur’s positive psychological capital and their self-perception of authentic leadership” (p. 266). The authors suggest authentic leaders tend to inspire trust and ultimately improve the overall performance of the organization. Jensen and Luthans suggest further research be done on psychological strengths and authentic leadership to help determine if these traits help to enable entrepreneurs to thrive in challenging and dynamic environments. In this article, Jensen and Luthans examine leadership traits of entrepreneurs in general, but they do not distinguish these entrepreneurs from the types of firms that they own or suggest which leadership traits are most likely to lead to successful firms.

The authors interviewed 27 entrepreneurs of high-technology firms who led their organizations from start-up to professionally managed firms. The results of their studies found two distinct sets of leadership competencies required for entrepreneurs to remain CEO of a growing firm. A majority of the participants in the research indicated their company went through a transition from “formative growth phase” to “institutional growth phase.” The participants further agreed that substantive different skills were required in the second phase of company growth from the first phase. The competencies required of entrepreneurs to span both stages of firm growth are: “Functional competencies” (operations, finance, marketing, and human resources) and “Self competencies” (intellectual integrity, promoting the company over individual leaders, utilizing external advisors, and creating a sustainable organization). Swiercz & Lydon (2002) present a valuable comparison of leadership skills required for growing start-up firms vs. more established companies; however most of the research is based on the functional business skills needed (i.e. accounting, marketing, etc.) and not on the specific leadership characteristics of these entrepreneurial leaders.

In a study of 361 Russian managers and 288 Russian entrepreneurs, Ardichvili (2001) found significant differences between leadership styles of entrepreneurs and managers. According to the results, entrepreneurs are more likely than managers to use inspirational and charismatic leadership behaviors and to motivate employees by establishing a direct link between performance and rewards. Furthermore, managers had higher levels of passive, laissez-faire leadership behaviors than owners. While Ardichvili’s article is a valuable contribution to determining distinct leadership skills needed in entrepreneurial firms, the focus of the article is on comparing entrepreneurs to managers and does not examine the distinct leadership characteristics needed to lead a technology-based firm.

In a study of six privately held family-operated businesses in the United States, Hunt and Handler (1999) indicate that effective family-run business owners would likely display a delegating, empowering, and participative leadership style. While these results will help to lead the initial research into the field of leadership characteristics of entrepreneurial leaders, the study

can not be generalized to this specific population because of the unique needs and challenges faced by leaders in these firms.

The literature presented above demonstrates the variety of research articles attempting to analyze the different components of the leadership and entrepreneurship. After an exhaustive search of the literature, no studies were found that attempt to examine the leadership characteristics of technology-based entrepreneurs. However, the results from these studies provide a good foundation for analyzing the desirable leadership characteristics for entrepreneurs of technology firms.

While recognizing one's predisposition to successful business ownership yields value, as Jensen & Luthans (2006) suggest, additional benefit can be obtained by identifying leadership traits and styles that are *amenable to change*. Furthermore, it is important that entrepreneurial leaders acquire new leadership competencies while the company is doing well as poor leadership abilities of entrepreneurs tend to have a more immediate impact on the firm than other functional abilities (Swiercz & Lydon, 2002).

Entrepreneurial firms should continually assess the leadership abilities of their leaders to determine if additional training can be utilized to help ensure the success of the enterprise. For example, if optimism, resiliency, and hope are determined to make a contribution to entrepreneurial success, then these characteristics can be learned and reinforced through training and development (Jensen & Luthans, 2006). For business support organizations, it is critical to analyze the leaders of client companies to determine if leadership training and development activities need to be implemented to further advance the companies' potential for success. Thus, the following research hypothesis is presented.

Hypothesis: Leaders of technology-based firms will exhibit high levels of transformational leadership and resiliency characteristics.

Method & Participants

For this study, an online survey was administered to technology-based entrepreneurs, comprised of the measures from the scales mentioned below. The instrument first explained the intent of the survey followed by a series of questions from the scales. Because of the anticipated small sample and the concern for anonymity on the part of the participating business support organizations and the entrepreneurs, no demographic or company specific data were collected.

Participants included 13 leaders of start-up technology-based companies affiliated with either the National Institute for Strategic Technology Acquisition and Commercialization, the Lawrence Regional Technology Center, the Enterprise Center of Johnson County, or alumni of the Kansas Technology Enterprise Corporation's Pipeline Entrepreneurship fellowship program.

The following instruments were used to measure leadership characteristics.

Optimism was measured using the Life Orientation Test by Shifren and Hooker (1995). Sample questions include, "I am always optimistic about my future" and "It's easy for me to relax."

Resiliency was measured using Block and Kreman (1996) and Klonhlen (1996) resiliency scale. Sample questions include, "I feel I can handle many things at a time" and "I keep interested in things."

Transformational leadership was measured utilizing Reichard, Riggio, and Smith's scale (2009). Sample questions include, "My followers would say that they know what I stand for" and "I have found that motivating people to do their best is the primary key to success."

Political scale was measured using Ahearn, Ferris, Hochwarter, Douglas, and Ammeter's scale (2004). Sample questions include, "I understand people well" and "It is easy for me to develop good rapport with most people."

Social skill was measured using Riggio and Carney's scale (2003). Sample questions include, "I always mingle at parties" and "I rarely show my anger."

Analysis & Results

The data were examined for outliers and missing information. The data were added to SPSS and items reverse coded according to the measure's direction. The Pearson Correlation was calculated to determine the relationship among optimism, resiliency, transformational leadership, political skill, and social skill.

Table 1: Survey results

	1	2	3	4
1 Optimism				
2 Resiliency	0.143			
3 Transformational Leadership	0.206	0.913**		
4 Political	-0.056	0.884**	.798**	
5 Social Skill	0.361	0.8**	.779**	.770**

N = 13

This study found that strong correlations exist among characteristics of resiliency, transformational leadership, political skill and social skill with leaders of technology-based entrepreneurial firms. While the data is based on a small sample size, and therefore cannot be generalized to a larger population, the findings of the study provide results for future studies to consider when measuring leaders of entrepreneurial firms. Specifically, the data shows an exceptionally strong correlation between transformational leadership and resiliency. The relationship of these traits with entrepreneurial leaders should be explored further.

While many categories show significant correlation, the relationship between transformational leadership and resiliency were the strongest at .913. Start-up companies, particularly in the technology industry, face frequent challenges and setbacks and therefore the leaders of these firms need to be able to pursue their goals despite adversity. In order to be a leader in an entrepreneurial company, it seems intuitive that high-energy levels and resiliency are required. Jack Welch, former CEO of General Electric, frequently speaks to the relationship of high-energy and successful leadership. Specifically, Jack Welch's website (www.welchway.com) states: "From our experience, the first essential trait of leadership is positive energy – the capacity to go-go-go with healthy vigor and an upbeat attitude through good times and bad."

Future Research & Limitations

The results of this study are limited due to the small sample size of the survey. Future studies should be conducted in order to determine if significant correlations among the

leadership traits still exist when surveying larger sample sizes. The work presented in this paper can serve as a benchmark for future researchers when preparing surveys for larger sample sizes.

Secondly, future researchers should examine leadership traits of entrepreneurial firm leaders to determine if any correlation exists between leadership traits and select outcome measures, like the financial success of the firm. If a correlation does indeed exist between leadership characteristics and financial measures of success, many entrepreneurial support organizations (business incubators, banks, venture capital firms, Angel investor networks, etc.) could consider utilizing these survey instruments to select the best entrepreneur to lead a start-up firm.

Finally, future studies should also survey employees of the entrepreneurial firms to see if staff member's view of the leadership characteristics of their leader is different than the leader's view. It is possible that some leaders will not be able to provide an accurate evaluation of his or her leadership characteristics when completing the survey instruments. Future studies should consider separately surveying employees of the entrepreneurial leader to determine if entrepreneurial leader and the employees are consistent in their evaluation of the leader's leadership characteristics. The employees' evaluation of the leadership characteristics of the firm leader should also be measured against variables such as financial measures of success.

Conclusion

As stated earlier, the pivotal role of business founders has been widely acknowledged in the study of entrepreneurship, but very little attention has been given to their leadership capacities (Daily, et al., 2002). This paper attempts to explore the various leadership characteristics of entrepreneurial leaders in technology-based, start-up companies. While the results of this survey cannot be generalized to a larger population due to the extremely small sample size, the results do seem to indicate there are strong correlations among certain key traits of entrepreneurial leaders. Further studies should be explored to determine if leadership characteristics are correlated with specific outcome measures, like financial success of the firm. Furthermore, the potential link between transformational leadership and resiliency in start-up company founders should be further studied to determine if strong correlations do indeed exist.

References

- Ahearn, K. K., Ferris, G. R., Hochwarter, W. A., Douglas, C., & Ammeter, A. P. (2004). Leader political skill and team performance. *Journal of Management*, 30, 309-327.
- Ardichvili, Alexander. (2001). Leadership styles of Russian entrepreneurs and managers. *Journal of Developmental Entrepreneurship*, 6(2), 169-187.
- Barrick, M. R., Day, V. D., Lord, R. G., & Alexander, R. A. (1991). Assessing the utility of executive leadership. *The Leadership Quarterly*, 2(1), 9-22.
- Block, J. & Kreman, A. M. (1996). IQ and ego resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*. 70, 349-361.
- Clark, K. & Clark, M. (1996). *Choosing to lead*. Greensboro, NC: Center for Creative Leadership.
- Daily, C. M., McDougall, P. P., Covin, J. G., & Dalton, D. R. (2002). Governance and strategic leadership in entrepreneurial firms. *Journal of Managerial Issues*, 9(2), 145-162.

- Eggers, John H, & Leahy, Kim T. (1995, July). Entrepreneurial leadership. *Business Quarterly*, 59(4), 71-76.
- Hunt, James M. & Handler, Wendy C. (1999). The practices of effective family firm leaders. *Journal of Developmental Entrepreneurship*, 4(2), 135-151.
- Jensen, Susan M. & Luthans, Fred. (2006). Relationship between entrepreneurs' psychological capital and their authentic leadership. *Journal of Managerial Issues*, 18(2), 254-273.
- Klonhlen, E. A. (1996). Conceptual analysis and measurement of the construct of ego-resiliency. *Journal of Personality and Social Psychology*. 70, 1067-1079.
- Luthans, F. & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics* 33(2), 143-160.
- Reichard, R.J., Riggio, R.E., & Smith, M. (2009). Development of a new self-report measure of transformational leadership. Paper presented at the Academy of Management (AOM), Chicago, IL, Aug 9-11.
- Riggio, R.E., & Carney, D.R. (2003). *Social Skills Inventory Manual, 2nd Ed.*, Redwood City, CA: MindGarden.
- Shifren, K. & Hooker K. (1995). Daily measurements of anxiety and affect: a study among spouse caregivers. *International Journal of Behavioral Development*. 18(4).
- Swiercz, Paul Michael & Lydon, Sharon R. (2002). Entrepreneurial leadership in high-tech firms: A field study. *Leadership & Organization Development Journal*, 23(7), 380-389.