



Entrepreneurial leadership and new ventures: nurturing innovation and growth

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Abstract

Entrepreneurial leadership plays a pivotal role in fostering innovation and facilitating the growth of new ventures. This scholarly article explores the dynamic relationship between entrepreneurial leadership and the initiation, development, and sustainability of new ventures. Drawing upon existing literature and case studies, it elucidates the key characteristics and behaviors of entrepreneurial leaders that are conducive to fostering innovation and driving growth in nascent enterprises. Furthermore, it examines the challenges faced by entrepreneurial leaders in navigating the uncertain and turbulent landscape of new ventures, and proposes strategies to effectively address these challenges. The article underscores the importance of entrepreneurial leadership in cultivating a culture of creativity, risk-taking, and resilience within new ventures, thereby enabling them to adapt to changing market dynamics and capitalize on emerging opportunities. Ultimately, it highlights the imperative for aspiring entrepreneurs and organizational leaders to cultivate and embody the attributes of entrepreneurial leadership in order to drive innovation and sustainable growth in the contemporary business environment.

Introduction

According to Watson (1999), an individual entrepreneur is more likely to fail in today's highly competitive market compared to an entrepreneurial team. Additionally, the majority of successful new enterprises are formed by teams. The study conducted by Critelli and Ponthieu in 1995. Reich argued in his 1987 article that social entrepreneurship had the potential to lead to economic progress. When expertise, vitality, and aptitude converge to establish a team, the capacity for



innovation exceeds the cumulative output of individual endeavours in this form of entrepreneurship. In Cooper's (1973) research, it was shown that 48 percent of high technology businesses in Austin, Texas, 61 percent of companies in Palo Alto, California, and 59 percent of 955 geographically scattered organisations were initiated by teams consisting of two or more individuals. In their study, Kamm et al. (1990) discovered that 56 out of the 100 most successful enterprises were collaborative efforts including teams.

Additionally, it was discovered that team-based businesses exhibited higher levels of sales, net profits, and market capitalization when compared to organisations that do not operate as teams. According to the research conducted by Bingham and Quigley (1989), the process of creating and selling new products can be accelerated by a group of entrepreneurial persons with diverse expertise working together. In addition, the factors that contribute to the development of exceptional creativity within teams are still not well comprehended, despite individuals having access to technology, financial resources, and entrepreneurs (Bygrave & Timmons, 1992). Developing and managing entrepreneurial teams is a complex undertaking that presents challenges, making it difficult to build a strong team (Kamm et al., 1990). Furthermore, scholars and practitioners have limited understanding of these teams and how to effectively address the issues they face (Kamm et al., 1990).

Creating and overseeing such teams would be difficult because of these uncertainties. The lead entrepreneur, also known as the entrepreneurial leader, holds a crucial role within the entrepreneurial team. This type of leader is accountable for establishing innovative environments, as stated by Gupta, MacMillan, and Surie (2004) and Rickards and Moger (2006). To generate strategic value, it is crucial to identify and arrange a network of interrelated individuals who are committed to and execute the vision. An essential attribute for a lead entrepreneur is the ability to attract and expand the team by recruiting key management individuals. The growth potential of a new company is greatly impacted by the quality of its entrepreneurial team (MacMillan, Zeemann, & Narasimha, 1987; Watson et al., 1995). In addition to the crucial role played by the



project's entrepreneurial leader, this is also important. The team requires certain traits, such as interpersonal skills (Watson et al., 1995), opportunity fixation (Ardichvili, Cardozo, & Ray, 2003), and (Amabile, 1997).

Furthermore, there are numerous extra traits. According to Timmon's (1999) renowned model of the entrepreneurial process, proficient teams of entrepreneurs employ creativity to identify opportunities for new companies and devise innovative methods to acquire and oversee resources. The success of a new firm relies on the presence of a skilled leader and a high-quality team. However, managing an entrepreneurial team requires specific considerations, as highlighted by Kamm et al. (1990) and Amason & Sapienza (1997). The fundamental catalyst for entrepreneurship is believed to be a keen awareness and responsiveness to potential opportunities. Hence, in order to identify technological or commercial prospects and generate patents by implementing inventive concepts, entrepreneurial leaders and their teams must possess creativity (Long, 1983). This study employs patents as the primary criteria for evaluating the level of innovation in new high-tech firms, due to several compelling reasons.

According to Markman, Espina, and Phan (2004), patents can protect a company's distinctive abilities, procedures, and some goods that are created throughout the invention process. Patents can be utilised to create, discover, and establish novel means of generating revenue. Each patent serves as protection for a unique breakthrough, and the overall quantity of patents awarded to a company can be utilised as a measure of its technological expertise and success in research and development. Patents provide a second advantage in technology known as first-mover advantages. Patents are highly valuable assets due to their portability and transferability, as well as their potential to generate revenue for businesses. This sets them apart from other forms of competitive advantage, which are often implicit, specific to a particular firm, and not easily tradable (Nelson & Winter, 1982; Heeley, Matusik, & Jain, 2007). Considering these aspects, this study addresses the following three questions: Can lead entrepreneurs' entrepreneurial leadership effectively enhance new firms' ability to innovate? Will the leadership



of lead entrepreneurs in the sector inspire members of entrepreneurial teams to engage in creative thinking?

Additionally, can the creative force that saturates entrepreneurial teams serve as a mediator in the connection between the innovative capability of new enterprises and entrepreneurial leadership? A group of two or more individuals who create and actively work for a company in which they share ownership is referred to as an entrepreneurial team, according to Kamm and Nurick (1993), Watson et al. (1995), and Timmons (1999). This research makes substantial contributions in three areas: Studying entrepreneurial leadership as a prerequisite for innovation enhances our practical knowledge of leadership in entrepreneurship. Recent research suggests that a distinct form of entrepreneurial leadership has arisen, which differs from prior behavioural models of leadership. This development is attributed to the increasingly volatile and competitive nature of today's economic environment (Ekvall & Arvonen, 1994; Ireland & Hitt, 1999; Gupta et al., 2004).

Despite the longstanding belief that leadership is a crucial determinant of a venture's success (Bass & Avolio, 1990), this statement remains valid. Furthermore, the correlation between leadership and creativity is moderated in entrepreneurial teams through the application of imaginative cognition. Some experts (Reich, 1987; Kamm et al., 1990) believe that collaborative entrepreneurship is the main catalyst for economic growth. Furthermore, there is a widespread consensus among individuals that creativity can be defined as the capacity to produce novel and valuable ideas across several domains (Amabile et al., 1996, p. 1155). In this case, the notion of creativity is specifically emphasised in connection with team-oriented business. This notion encompasses an entrepreneurial team that utilises its innovative capacity to identify possibilities and allocate resources (Timmons, 1999; Ardichvili, Cardozo, & Ray, 2003).

Literature review

The field of EL is now in its nascent stages. The theory's development primarily focuses on the embryonic phase, necessitating significant work before the field achieves stability (Leitch &



Volery, 2017). The sector is continuously increasing, and there are specific deficiencies that are particularly critical. Multiple challenges exist, such as the absence of evaluation techniques for quantifying EL attributes and the absence of precision in the explanation. Kindly elucidate the concept of entrepreneurial leadership (EL). Entrepreneurial leaders has the ability to see opportunities, develop visions, and effectively allocate essential resources to implement the vision and establish core principles.

Entrepreneurial leaders are individuals who, upon gaining self-awareness and understanding their operating environment, utilise their skills to actively engage in the creation of novel and inventive concepts, while also cultivating the necessary confidence to implement these ideas (Cai Li et al., 2020). ELs strongly advocate for the implementation of procedures that cultivate a culture of organisational innovation throughout the entire organisation. This is achieved by the identification and exploitation of opportunities to enhance organisational performance, the innovative resolution of challenges, and the optimal use of the organization's resources (Sawaeen and Ali, 2020). Entrepreneurial leadership and business performance are positively correlated. Entrepreneurial leadership fosters innovation and growth by considering the perspectives of both customers and competitors (Van Zyl and Mathur-Helm, 2007). Given that most micro and small business owners also serve as the primary leaders of their organisations, it is crucial to examine the skills and characteristics of these owners, which are most effectively demonstrated by the EL model. Gupta et al. (2004) introduced the notion of EL by combining Shumpeter's ideas on entrepreneurship, Covin and Slavin's entrepreneurial orientation, and Stevenson's entrepreneurial management.

They accomplished this by combining leadership with preexisting concepts. Gupta et al. (2004) define EL as a form of leadership that involves creating innovative situations to assemble and motivate a group of individuals who are dedicated to achieving the objective of discovering and leveraging strategic value. Gupta (2004) defines the EL idea as a leadership style characterised by three key attributes: innovation, proactiveness, and risk taking. In order to achieve a



competitive edge, innovation entails the leader's capacity to stimulate creativity among team members, hence enabling efficient transformation and the creation of novel products and services. Proactiveness, however, refers to the act of inspiring team members to engage in aggressive and ongoing competition with entities from other organisations. The risk-taking component pertains to the inclination to confront ambiguity and take accountability for one's own decisions.

According to Al Mamun et al. (2018), individual leadership (EL) is a concept that encompasses both leadership and entrepreneurship. Leadership entails the act of motivating and inspiring others to actively pursue a defined mission or objective. Entrepreneurship, however, centres on entrepreneurs and the convergence of entrepreneurs, as well as the existing opportunities in their communities. Conversely, it signifies the intangible assets of the company that are associated with its human resources. Entrepreneurs play a dual role as both the originator and the driving force behind the growth and development of a business. Gupta et al. (2004) assert that the pragmatic EL paradigm is supported by two crucial underpinnings. Primarily, it is anticipated that the entrepreneurs will establish an environment that provides potential prospects to revamp the existing condition. The term "enactment" pertains to the act of creating a new reality, rather than examining an already existing reality. They should possess the capacity to offer novel or different viewpoints or concepts that hold the possibility of altering the existing circumstances.

Furthermore, it is imperative that they possess the ability to convince both followers and stakeholders of the attainability of the desired objective through the recruitment of fresh personnel and the allocation of sufficient resources to effectively execute the process of change. (Paudel, 2019; Tsetim et al., 2020). Conventional leadership has been ineffective in addressing the present market volatility within an ever-changing and fiercely competitive company landscape. This is due to the ineffectiveness of traditional leadership. Entrepreneurial leadership is crucial in an unpredictable and highly competitive market, as well as in a continuously evolving company environment. When a leader oversees their own company, they regard themselves as an



entrepreneur. Consequently, it is a term employed to describe leadership marked by a strong sense of self-assurance, as well as the actions of entrepreneurs in their pursuit of an organization's vision and objectives. (Karim et al., 2019.)

They undertake the task of establishing conducive conditions for the organic development of their company's order of operations and generating opportunities that lead to the generation of value for their organisations, stakeholders, and society at large. Entrepreneurial leaders are driven by the aspiration to simultaneously generate opportunities in the social, environmental, and economic domains. They are indifferent to a scarcity of resources or a significant degree of uncertainty. According to Tsetim et al. (2020), employee leadership is the act of persuading and guiding people to improve their performance in order to reach the goals of the organisation. This is done by recognising and pursuing chances for entrepreneurial activity. Entrepreneurial leaders have the responsibility of reviving and nurturing entrepreneurial inclinations within the organisation and its people. The organisation promotes a culture of entrepreneurship, urging all employees to embody entrepreneurial concepts such as creativity, proactiveness, risk-taking, authority, and self-confidence (Cai Li et al., 2020).

Entrepreneurial leaders encourage their team members to abandon conventional methods of completing tasks in favour of innovative and entrepreneurial techniques. In addition, they promote and motivate their members to creatively adapt to changes in the external world, rather than succumbing to the influence of environmental factors. Environmental leadership has a crucial role in fostering organisational innovation (OI) and creativity, resulting in enhanced business performance (BP) (Paudel, 2019). Environmental dynamism serves as the context in which EL is employed. Emotional intelligence (EI) sets itself apart from other leadership styles and is crucial in a turbulent and competitive setting. Moreover, it is correlated with enhanced efficacy and longevity. Entrepreneurial leaders reshape the way their people perceive their organisation.



Research Scope

Statistics indicate that the majority of technological entrepreneurs originate from an academic environment focused on research. This ecosystem consists of university incubators, government research institutions, and similar entities. Cooper (1973) provides a description of nonprofit centres and institutions. European countries, the United States of America, and Asia have recently introduced public policies to promote the establishment of new companies through the establishment of business incubators or technology parks. Teachers and graduates from the Massachusetts Institute of Technology acted as venture champions for their own start-up firms located along Route 128. This is a renowned instance of early entrepreneurial endeavour. In light of the knowledge gained from these experiences, the Taiwanese government's SME Development Foundation implemented the "Act for Facilitating Public-Private Institutes in Establishing SME Innovation Incubators" in 1996.

This legislation endorsed the utilisation of small and medium enterprises' funds to financially support recently created university and non-profit incubators. These incubators have the potential to facilitate the improvement of technology for traditional organisations while also supporting the growth of tenant firms. Thanks to the assistance offered by this organisation, incubators are able to attract highly knowledgeable professionals. In addition, it offers laboratory and operating facilities, technical guidance, networking opportunities, business support, and management consulting. Incubation centres not only offer new entrepreneurs access to the resources of the host school, but also serve as a platform for academic instructors to deliver information or critique to these emerging organisations. According to Gregorio (2003), it is suggested that technology should be developed in a tight partnership with entrepreneurs who are involved in start-up companies. Regarding the quantity of new businesses and incubators, as well as the overall sum of subsidies and investments. In 1997, a total of seven incubators were constructed, and this number increased to sixty-five by 2004.



Chang et al. (2005) found that over 43% of Taiwanese colleges have established incubator facilities, as demonstrated by the illustrative indicators of the "surrogate incubation" model in Taiwan. In 1997, the number of enterprises amounted to 18, but in 2004, it significantly increased to 1,725. These findings indicate a consistent upward trend in the quantity of tenant enterprises within incubators. The amount of subsidies has risen from NT\$11.5 million in 1997 to NT\$191 million in 2003. In 2003, the overall investment increase amounted to 4,933 million Taiwanese dollars. The findings indicate that research-based incubators in Taiwan have significantly contributed to the promotion of entrepreneurial activity through the provision of resources, knowledge, advisory services, and facilitation of collaborative initiatives with industry.

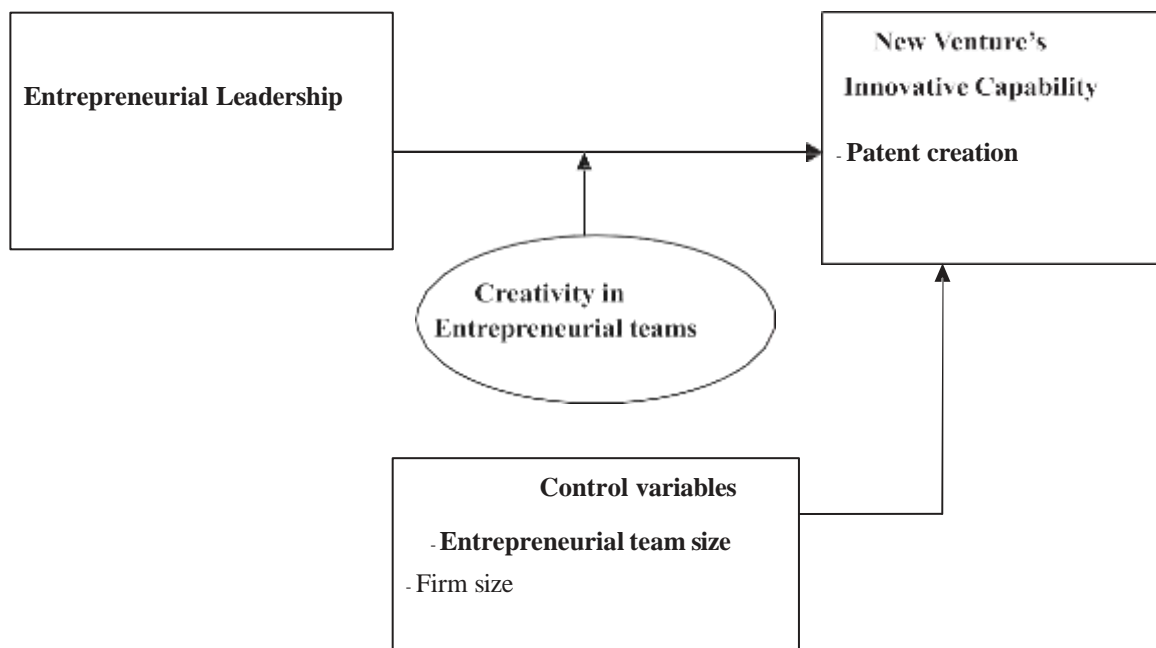


Figure 1



Research Model

Figure 1 illustrates a conceptual framework designed to establish a connection between entrepreneurial leadership, creativity, and a business's capacity for innovation. The entrepreneurial leadership model perceives entrepreneurial leadership as autonomous. Team, variable, and Creativity functions as a mediator, where the innovative capacity of a new company is the outcome being influenced. Lumpkin and Dess (1996) and Gupta et al. (2004) provide a definition of entrepreneurial leadership that encompasses the qualities of risk-taking, proactivity, and creativity. Creativity in entrepreneurial teams refers to the utilisation of the team's innovative capabilities to uncover opportunities, effectively utilise limited resources, and identify potential market and technological prospects. Creativity enables a team to discern and seize possibilities. Glancey (1998) argues that patents act as a representation of creative output, indicating the annual innovative capacity of a new enterprise.

Research Hypothesis

Hypothesis 1: The correlation between entrepreneurial leadership and a high-tech new enterprise will be favourable and the capacity for innovation in the new undertaking

Hypothesis 2: There is an anticipated correlation between entrepreneurial leadership and the establishment of high-tech new enterprises in regard to Innovative and imaginative thinking in entrepreneurship.

Hypothesis 3: The impact of entrepreneurial leadership on the innovative potential of new businesses is moderated by the level of creativity within entrepreneurial teams.

Methodology

Research in the field of technical entrepreneurship has found that technical entrepreneurs typically come from research-based university environments. Referenced in Cooper's work from 1973. Consequently, a study was conducted utilising data gathered from Pakistan's Securities and



Exchange Commission to generate a comprehensive inventory of all tenant companies operating in government-funded enterprises in Pakistan. The study conducted in 2005 encompassed a total of 144 academic incubators, six government incubators, and five non-profit incubators. After doing thorough telephone and internet searches to eliminate tenant companies that did not meet the selection criteria, a total of 644 new businesses were identified at incubators. The entrepreneurial teams were selected based on the following criteria: (1) the ventures were established within the past ten years; (2) the ventures had not yet reached the stage where they could make an initial public offering (IPO); and (3) the businesses were now tenants in the incubators. Per Kamm et al. (1990) and Kamm and Nurick (1993), the survey was administered to a crucial member of the entrepreneurial team who had joint ownership of the new venture and played an active role in its growth. From March to September 2005, we carried out a mail survey in three consecutive rounds.

Subsequently, three subsequent letters and questionnaires were dispatched to those who did not provide a response to the initial mailing, approximately two to three weeks afterwards. A total of 112 valid and usable replies were collected and utilised in this investigation. Out of the total responses, there were 81 males, making up 72.3% of the total, and 31 females, accounting for 27.7%. For instance, 13.4 percent of the participants were younger than 30, 10.7 percent were aged 31 to 35, 17.9 percent were aged 36 to 40, 24.9 percent were aged 41 to 45, and 32.1 percent were older than 46. Out of the respondents, 31 individuals (28.2 percent) possessed an undergraduate degree, 38 individuals (34.5 percent) possessed a bachelor's degree, 33 individuals (27.3 percent) possessed a master's degree, and 11 individuals (10 percent) possessed a PhD. Regarding professional backgrounds, 45% of respondents had a major in management, 52.3% had a major in engineering, 1.8% had a major in humanities, and 0.9% had a major in medicine.

Results and discussion

Data was collected and examined from 112 distinct entrepreneurial teams that resided in Pakistani government-funded incubators. Teams under consideration the composition was primarily



comprised of 99 (88.4 percent) startups originating from university incubators, with 11 (9.8 percent) emerging from government incubators, and two (1.8 percent) stemming from non-profit incubators. Out of the new businesses, 61 percent had capital below NT\$10 million, 24.8 percent had capital between NT\$10-50 million, 6.7 percent had capital between NT\$50-100 million, and 7.6 percent had capital exceeding NT\$100 million. Every new business endeavour obtained an average investment of NT\$28.85 million. Typically, most entrepreneurial teams comprised of five or more individuals. Out of the total number of new businesses, 38 of them, which accounts for 35.2%, had a workforce size ranging from 10 to 29 employees. Additionally, 7 new businesses, or 6.5%, had a workforce size ranging from 30 to 49 employees. Furthermore, 27 new businesses, or 25%, had a workforce size exceeding 50 employees. There were around 32 employees, or fewer than 10 employees present. On average, 36 employees, which accounts for 33.3% of the total. Table 1 indicates that there is no statistically significant correlation between entrepreneurial leadership and the generation of patents by new ventures ($b = -0.02$, $t = -0.23$).

Consequently, Hypothesis One is there is a lack of assistance. The current finding does not provide positive support for the previous studies due to several possible reasons. Firstly, the attributes of entrepreneurial leadership, such as risk-taking, innovativeness, and pro-activeness, are distinct and separate from those of transformational leadership. Transformational leadership encompasses components like inspirational motivation, intellectual stimulation, idealised influence, and individualised consideration. The entrepreneurial leadership construct proposed in this paper serves as an initial approach to assess the attributes of lead entrepreneurs in fiercely competitive and volatile settings. The reason for this is that the demand for entrepreneurial leadership in stable environments may be diminished (Gupta et al. 2004). Furthermore, the present study's focus is restricted to nascent small or medium-sized enterprises, which may diverge from prior investigations conducted on expansive Multinational Corporation

**Table 1**

Variables	Model 1		Model 2		Model 3	
	b	t	b	t	b	t
Control variables						
Entrepreneurial team size	0.41	3.12**	0.43	3.25**	0.45	3.64***
Firm size	-0.16	-1.17	-0.15	-1.01	-0.12	-0.84
Independent variables						
Entrepreneurial team leadership			-0.02	-0.23	-1.74	-2.36*
Creativity in entrepreneurial teams			0.17	1.65 ⁺	-2.70	-2.22*
Interaction effect Leadership ¥ Creativity					3.80	2.35*
R ²	0.12		0.15		0.20	
DR ²	0.12		0.05		0.06*	
Model F	5.35**		3.5*		4.10**	
df	2, 88		2, 85		1, 85	

Notes: The variable patent creation is counted as cumulative numbers of patent creation divided by the established years.

* $p < 0.01$, * $p < 0.05$, ** $p < 0.01$; *** $p < 0.001$

Table 2 displays the correlations among all of the variables examined. The correlation analysis reveals a strong and positive correlation ($r = 0.60$) between the number of patents generated by new ventures and the size of the firm. P-value is less than 0.01." Hypothesis 2 posits that there is a direct and meaningful correlation between entrepreneurial leadership and creativity in entrepreneurial teams, with a correlation coefficient of 0.41 and a significance level of $p < 0.01$. This implies that in the face of turbulent environments, prominent entrepreneurs are more inclined to embrace risk, take proactive measures, and engage in innovation. Moreover, this will incentivize members of entrepreneurial teams to employ their ingenuity more efficiently in exploring market prospects and optimizing the utilization of scarce resources. This discovery offers corroborating evidence that aligns with prior research, such as the study conducted by Greenberger and Sexton in 1988.

**Table 2**

N=112

Variables	Mean (SD)	1	2	3	4
1 Entrepreneurial team size	4.38 (3.00)	–			
2 Firm size	31.62 (41.92)	0.60**	–		
3 Entrepreneurial leadership	4.36 (.42)	0.04	0.05	–	
4 Creativity in entrepreneurial teams	3.91 (.54)	-0.15	-0.11	0.41**	–
5 Patents creation	1.05 (2.24)	0.09	0.27**	0.03	0.12

Notes: The variable patent creation is counted as cumulative numbers of patent creation divided by the established years.

** $p < 0.01$ (two-tailed test).

Conclusion

This article presents an empirical investigation examining the role of creativity as a moderator in the relationship between creativity and innovation within high-tech entrepreneurial teams in Pakistan. This pertains to the correlation between entrepreneurial leadership and the innovative capacity of new businesses, as well as the connection between entrepreneurial teams and this correlation. An essential discovery of the paper is that, within the framework of a new business endeavor, entrepreneurial leadership has the capacity to stimulate entrepreneurial team members to produce a greater number of innovative ideas. The second finding suggests that lead entrepreneurs who exhibit higher levels of risk-taking, proactivity, and innovation can effectively foster creativity among their entrepreneurial team during the process of patent creation. Furthermore, it suggests that integrating a more advanced form of entrepreneurial leadership and a greater quantity of innovative teams into a new business endeavor can lead to a rise in the number of patents granted by the endeavor. Although this paper makes a substantial contribution



to our comprehension of the impacts of entrepreneurial leadership and team creativity on patent creation, it is important to acknowledge certain research limitations that need to be resolved. A constraint of the study was its reliance on patent creation as the sole measure of innovative capacity in high-tech industries for new ventures. Subsequent investigations could incorporate various metrics to assess the level of novelty exhibited by emerging enterprises. An additional aspect to take into account is that employing patents as a metric for gauging innovation in high-tech sectors may not be suitable for all categories of enterprises. A further constraint was that the questionnaire was completed by only one respondent per company. Consequently, we were unable to ascertain the consensus within the group. Significant cross-cultural disparities in the efficacy of entrepreneurial leadership are prevalent at the individual level, manifesting in varying needs, values, and beliefs. Hence, this could pose a noteworthy concern. Amidst a range of organizations and societies (Child, 1981; Gupta et al., 2004). One possible future trajectory is the aggregation of data. Multiple raters provided data on the measured variables to tackle the issue of agreement within the organization. The present study has solely examined the functions of entrepreneurial leadership and entrepreneurial teams in the patent creation process, constituting the study's third constraint. Enhancing the research framework can be achieved by integrating more substantial contextual factors. The complexity of organizational behavior surpasses that of other forms of behavior due to its involvement of numerous contextual and individual factors.

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