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Additional Information

Leadership Styles and Innovative Entrepreneurship: An International Study

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This research attempts to empirically examine the relationship between leadership styles and innovative entrepreneurship through regression analysis, using a sample of 43 countries and data from Global Entrepreneurship Monitor and Global Leadership and Organizational Behavior Effectiveness. In light of institutional approaches and specifically based on the normative dimension, the main findings of the study indicate that participative leadership and higher education represent the strongest explanatory factor in the variance of the current rates of innovative entrepreneurship. This study has contributions for both researchers and policymakers on new firm creation (entrepreneurship) and on the generation of innovation within organizations (intrapreneurship).

INTRODUCTION

The importance of entrepreneurship in general and innovative entrepreneurship in particular for the improvement of societies in terms of both economic and social aims is generally accepted (Wennekers and Thurik 1999; Audretsch 2012). Also, leadership is considered a core component of entrepreneurial and innovation processes (Vecchio 2003; Gupta et al. 2004). New ventures and especially innovative entrepreneurship need the leadership of founders, who initially define the mission of their organizations, set specific goals, and organize and motivate the efforts of their employees (Ensley et al. 2006). However, the specific social environments in which the founders have been socialized condition those personal characteristics.

The fields of leadership and entrepreneurship have undergone similar development in many ways (Perren and Burgoyne 2002; Vecchio 2003; Cogliser and Brigham 2004; Ensley et al. 2006). However, the existing research largely analyzes leadership and entrepreneurship separately. On the one hand, social psychology focuses on leadership styles (Steinberg 2005; Walumbwa 2008) and, on the other, entrepreneurship as a new firm creation process is analyzed from different perspectives —economic, psychological, sociocultural, etc. (Veciana and Urbano 2008; Jennings et al. 2013; Stenholm et al. 2013; Thornton et al. 2011; Yu et al. 2013). There are few authors who specifically deal with the relationship between organizational leadership and entrepreneurship (Perren and Burgoyne 2002; Ensley et al. 2003; Vecchio 2003; Cogliser and Brigham 2004; Ensley et al. 2006;) or innovation (van de Ven 1986; Amabile 1988; Damanpour 1991; Halbesleben et al. 2003; Gupta et al. 2004; Elenkov et al. 2005). Also, the majority of these works are generally focused on the individual and organizational levels, not on the country level. Furthermore, studies that discuss the relevance of leadership in innovative entrepreneurship are practically nonexistent.

The present research attempts to empirically examine, from the institutional approach (North 1990; Scott 2001; North 2005), the relationship between leadership styles and innovative entrepreneurship. By using a sample of 43 countries, it is statistically demonstrated through regression analysis that both participative leadership and higher education have a significant and positive impact on innovative entrepreneurship (percentage of nascent entrepreneurs affirming that few or no businesses offer the same product, in 2009). Many implications derive from this research. On the one hand, government policies could contribute to the generation of future entrepreneurs, and especially innovative entrepreneurs, by supporting learning programs that promote participative leadership (through universities and business schools). On the other hand, from the perspective of organizations, although choosing or promoting participative leaders may have the unintended consequence of managers leaving the organization and becoming

innovative competitors, firms might also benefit from cooperating with the latter in initiatives that trespass organizational efficiency boundaries. That is, mutual knowledge would not be lost if departing leaders are participative, because they are potentially valuable in building future business alliances.

Following this brief introduction, the article is structured in four sections. First, the conceptual framework of the research is developed, distinguishing leadership and entrepreneurship literature and proposing an integrative model. Next, the methodology used is presented, followed by a discussion of the main empirical results. Finally, the conclusions and future research lines of the study are highlighted.

CONCEPTUAL FRAMEWORK AND HYPOTHESES PROPOSED

The literature review shows that the term *innovation* has been conceptualized in different ways depending on the perspective adopted by researchers (Schumpeter 1934; Damanpour 1991). The only feature common to all definitions is that innovation implies novelty (Damanpour 1991). Innovation is a subjective concept and whether an activity qualifies as innovative depends on the perspective of the observer (Koellinger 2008). In this sense, researchers have used input measures such as R&D expenditures or innovation outcomes such as patents. Others have focused on technological progress and innovation. Likewise, the literature indicates that the innovation concept captures what is distinctive about the nature of entrepreneurship, but it has shown that new firms differ in their degree of novelty: innovative and imitative entrepreneurship.

The innovative entrepreneurship concept includes product or market innovations, innovative technological processes, and novel organizational designs (Schumpeter 1934; Davidsson and Wiklund 2001). Similarly to Koellinger (2008), in our research we focus on innovative entrepreneurship, and we consider that a product, service, or production process does not need to be new to the world to have an economic impact. On the contrary, it is sufficient if the innovation is new to the market under scrutiny.

As we mentioned before, many factors are pointed out to explain innovative entrepreneurship (economic, psychological, sociocultural, etc.). Authors such as Shapero and Sokol (1982) have suggested that cultural values influence national rates of innovation. Hayton et al. (2002) in their literature review of national culture and entrepreneurship found few studies at the country level. Concretely, Shane (1992, 1993) suggests that countries may differ in their rates of innovation because of the cultural values of their citizens. Thus, Shane (1992), using data from a sample of 33 countries in 1967, 1971, 1976, and 1980, found that national rates of innovation are positively correlated with individualism and power distance. Later, Shane (1993), using data from 33 countries in 1975 and 1980 revealed that rates of innovation are positively linked with individualism and negatively correlated with uncertainty avoidance and power distance. Davidsson (1995) analyzes the interaction among structural characteristics, culture, beliefs concerning entrepreneurship, and entrepreneurial intentions and shows that the prevalence of certain values affects levels of regional rates of new-firm formation. Also, Davidsson and Wiklund (1997) found both values and beliefs have a positive effect, small but significantly, on regional

new-firm formation rates. Mueller and Thomas (2001) showed that entrepreneurial orientation, defined as internal locus of control combined with innovativeness, is more likely in individualistic, low-uncertainty avoidance cultures than in collectivistic, high-uncertainty avoidance cultures. Thus, the institutional framework conditions the behavior of individuals (North 1990, 2005) and, consequently, the characteristics of these institutions are reflected in the organizations and specifically on the innovation. Also, some researchers have considered the institutional approach in the study of organizational behavior (DiMaggio and Powell 1983; Scott 2001). In this line, institutions impose restrictions on behavior and define legal, moral, and cultural boundaries, setting off legitimate from illegitimate activities (Scott 2001).

Scott (2001) identifies regulative, normative, and cultural-cognitive systems as a vital ingredient of institutions. In this study we focus on the normative system, which consists of social norms, values, beliefs, and assumptions about human nature and human behavior that are socially shared and carried by individuals. Normative systems define goals or objectives (e.g., winning the game or making a profit), but also designate the appropriate ways to pursue them (e.g., conceptions of fair business practices). At the organizational level, other institutional theorists define the main practices within industry as the field's dominant practices for organizing (DiMaggio and Powell 1983) and this field's dominant practices are followed by new firms, according to the strategies adopted by their leaders. In general, organizations and, specifically, innovative new firms and their leadership styles are similar to environments, and they reflect a socially constructed reality (Berger and Luckman 1966). Thus, the institutional context at the country level, and specifically the normative system, affects innovative entrepreneurship and leadership.

The literature on institutional environment and change has recognized the importance of leaders, especially at the country level (Jones and Olken 2009). Likewise, leadership style is determined primarily by the institutional context rather than personal traits (Cooper and Brady 1981), although style is and must be responsive to and congruent with member expectations regarding proper behavior. Also, the entrepreneurs are immersed in their values and culture, and they tend to adopt leadership behaviors that are favored in that culture (House et al. 2004).

In this study we operationalize the normative dimension through leadership styles. With respect to the studies that analyze leadership styles and leaders' attributes (Morrison 2000; Barker 2001; House et al. 2004; Zaccaro and Banks 2004;), it is important to highlight the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project carried out by House et al. (2004) in which six dimensions or styles of leadership are considered: (1) team-oriented (the ability to build a common purpose), (2) self-protective (ensuring the safety and security of self and group),

(3) participative (the degree to which others are involved in decisions), (4) humane (includes compassion and generosity), (5) autonomous (individualistic, independent attributes), and (6) charismatic (visionary and inspirational). GLOBE analyzes the interrelationship between societal culture and organizational leadership, and as mentioned earlier, many authors focused on the influence of culture on entrepreneurial activity and innovation. In addition, the literature that analyzes the relationship between organizational leadership and innovation is increasing. Van de Ven (1986) develops a framework based on four basic concepts (ideas, people, transactions, and context) and four central problems (developing ideas into good currency, managing attention, part-whole relationships, and leadership) are important in studying the innovational process. Damanpour (1991), through a meta-analysis, shows that organizational innovation is statistically associated with managerial attitudes. Woodman et al. (1993) propose an interactional framework for organizational creativity and innovation; Halbesleben et al. (2003) suggest that awareness of temporal complexity dimensions has a significant impact on the leader competency set that is critical for leading people effectively in innovation-focused projects; Jung et al. (2003) affirm that leadership style is one of the most influential factors on innovation. In fact, the literature suggests that leaders can affect followers' innovation and creativity, establishing a work environment that encourages them to try different approaches without fear of negative results (Amabile et al. 1996). Gupta et al. (2004) develop the construct of entrepreneurial leadership, concluding that the effectiveness of entrepreneurial leadership might vary across cultures, and Elenkov et al. (2005) find that strategic leadership behaviors are associated with both product-market as well as administrative executive innovation influence, suggesting that effective strategic leadership has a pervasive effect on organizational innovation. Therefore, leadership contributes to the emergence of innovation ("internal" as the generation of new ideas within the organization and "external" as innovative entrepreneurship).

Thus, we suggest the following hypothesis:

Hypothesis 1. There is a positive relationship between leadership styles and innovative entrepreneurship.

As we have argued before, leadership is critical in creating a context that fosters innovation; however, a special kind of supportive leadership is necessary (van de Ven, 1986). Generally, studies have focused on transformational leadership, such as Jung et al. (2003) who found a direct and positive link between transformational leadership and organizational innovation. However, in the context of innovation, Krause (2004) suggests that transformational leadership might be less important, despite the great discussion about it. In fact, freedom and autonomy are more important factors of influence on innovation than transformational and charismatic

leadership (Krause, 2004). Also, Dorfman et al. (2004), using data from the GLOBE project, show that participative leadership is positively related to societal and organizational cultures' values of humane orientation (people are generally very tolerant of mistakes), performance orientation (the collective encourages and rewards group members for performance improvement and excellence) and gender egalitarianism, and negatively related to uncertainty avoidance (most people lead highly structured lives with few unexpected events). The above values are favorable to innovative entrepreneurship. In this sense, other authors find that democratic and collaborative leadership increases the probability of creative outcomes (King and Anderson 1990; Woodman et al. 1993). Also, the literature suggests that the free exchange of information is crucial for creativity and innovation (Amabile 1988; King and Anderson 1990; Woodman et al. 1993) and that the process of reflection has an influence on innovation (Somech 2006) through the identification of problems and the production of creative solutions. Krause (2004) finds that granting degrees of freedom and autonomy is positively related to the generation and testing of ideas. Thus, participative leadership enhances creativity and innovation, whereas more autocratic styles seem likely to diminish it (King and Anderson 1990; Woodman et al. 1993). Also, according to Goble (1972), participative leadership offers possibilities to increase organizational effectiveness, involving all the members of the organization at all the levels of the decision-making process and motivating them to accomplish results and innovate.

Therefore, we suggest the following hypothesis:

Hypothesis 2. There is a positive relationship between participative leadership style and innovative entrepreneurship.

METHODOLOGY

In order to test the hypotheses presented in the previous section, we constructed a model that includes leadership styles and innovative entrepreneurship, plus a number of control variables:

$$IE_i = a + b_1LS_i + b_2CV_i + u_i; \quad \delta 1 \text{P}$$

where

IE_i : Innovative entrepreneurship LS_i :

Leadership styles

CV_i : Control variables

$i = 1, 2, \dots, 43$ countries

$H_0: b_{1,2,3} = 0$

Our dataset contains cross-section information at a national level. The total number of observations in the multivariate OLS estimation is constrained by the information that is currently available in two different data sources: the Global Entrepreneurship Monitor (GEM) and the previously mentioned GLOBE. The 2009 GEM project covered a total of 54 countries; the intersection with available GLOBE data produced a sample of 27 observations. Thus, the dataset was expanded and for all analyzed countries we included data of the last year of participation in the GEM project between 2006 and 2008. The final sample size was 43 countries. In Table 1 description of the variables used in this study is presented.

As shown in Table 1, the GEM data is used as a source of information for the dependent variable in this research (many authors utilized GEM data in the field of entrepreneurship; for example: Alvarez and Urbano 2011; Estrin et al. 2013; Knörr et al. 2013; Reynolds et al. 2005; Valdez and Richardson 2013). The Adult Population Survey (APS), which corresponds to interviews randomly collected among the adult population aged 18–64, is used to obtain

TABLE 1 Description of the Variables

Type	Name	Description	Source
Dependent variable	Innovative entrepreneurs	Percentage of nascent (0–3 months) and young (3–42 months) firms reporting that no or few businesses offer the same product	GEM ^m
	Autonomous	Individualistic and independent attributes	GLOBE ^{mm}
Independent variables: Leadership styles	Charisma	The ability to inspire and motivate	
	Humane	Includes compassion and generosity	
	Participative	The degree to which others are involved in decisions	
	Self-protective security	Ensures the safety and	
	Team	of self and group The ability to build common purposes	
Control variables	Education	Percentage of adults with post-secondary degree involved in nascent (0–3 months) and young (3–42 months) firms.	GEM
	Ln (GDP)	Natural logarithm of gross domestic product (GDP) at purchasing power parity (PPP) per capita, US dollars	IMF ^{mm}

Note: ^m GEM – Global Entrepreneurship Monitor; ^{mm} GLOBE – Global Leadership and Organizational Behavior Effectiveness; ^{mmm} IMF – International Monetary Fund, World Economic Outlook Database, October 2009.

information on entrepreneurship specifically related to the level of entrepreneurial activity (TEA, total early-stage entrepreneurial activity). The TEA index shows the percentage of nascent (0–2 months) and young (3–42 months) entrepreneurs among the population. Also, the GEM survey includes questions relating to the innovativeness of the business idea of those individuals who qualify as nascent entrepreneurs. Specifically, entrepreneurs are asked about the expected degree of competition in the market they wish to enter. The percentage of nascent and young firms reported that no or few business offer the same product was labeled as innovative entrepreneurs. This measure is related with two types of innovation, according to Schumpeter (1934), such as the introduction of a new good or the opening of a new market.

With regard to the six leadership GLOBE variables, they result from a two-stage factorial exercise derived from an initial large set of questions addressed to 17,300 middle managers in 951 organizations in 62 countries. Initially, the GLOBE team identified a large number of “attributes” of leadership. After the data collection they assigned many of these attributes to 21 “primary leadership dimensions.” Statistical procedures also enabled these 21 primary dimensions to be further consolidated into six key “global leadership dimensions” (see House et al. 2004, for a detailed methodological description).

The impact of the model’s main explanatory variables (leadership styles) is measured after correcting for the effect of other variables that have shown a potential influence on innovative entrepreneurship. Authors such as Carree et al. (2002) and Wennekers et al. (2005) suggest a U-shaped relationship between a country’s rate of entrepreneurial activity and the level of economic development. Also, Shane (1993) shows that per capita income is an important economic variable in determining national rates of innovation, thus, we included income per capita as control variable. In addition, Koellinger (2008) presents empirical evidence about the positive effect of higher education on innovative entrepreneurs; consequently, we introduced as control variable the percentage of adults with postsecondary degrees involved in nascent (0–3 months) and young (3–42 months) firms. Both control variables correspond to the same year as the dependent variable.

RESULTS AND DISCUSSION

Table 2 shows the descriptive statistics and correlation matrix for all of the variables. As expected, innovative entrepreneurship is correlated with leadership styles and also with control variables.

Given the correlations among several independent and control variables, we tested for the problem of multicollinearity, one that might affect the significance of the main parameters in the regressions through variance

TABLE 2 Descriptive Statistics and Correlation Matrix

	Mea	Std	Min	Max	1	2	3	4	5	6	7	8
1. Innovative	4.41	3.07	0.53	13.91	1.00							
2. Autonomous	3.89	0.46	2.27	4.65	-0.15	1.00						
3. Charisma	5.87	0.28	4.93	6.46	0.25	-0.13	1.00					
4. Humane	4.82	0.37	3.82	5.53	0.36 ^m	-0.08	0.48 ^{mm}	1.00				
5. Participative	5.38	0.42	4.61	6.09	-0.01	—	0.29 ^m	-0.14	1.00			
6. Self protective	3.40	0.39	2.55	4.21	0.40 ^{mm}	0.17 ^{mm}	-0.12	0.36	-0.76 ^{mmm}	1.00		
7. Team	5.79	0.22	5.11	6.21	0.35 ^m	-0.25	0.81 ^{mm}	0.33	0.19	0.08	1.00	
8. Education	12.3	9.80	3.29	52.63	0.91 ^{mmm}	-0.17	0.20	0.36 ^m	-0.11	0.45 ^{mm}	0.31 ^m	1.00
9. Ln(GDP)	16.67	0.84	14.76	17.67	-0.61 ^{mmm}		0.02	-0.07	-0.38 ^m	0.43 ^{mm}		—
	0.67 ^{mmm}	-0.25										
		-0.70 ^{mmm}										

Note: mmm $p < .001$, mm $p < .01$, m $p < .1$.

inflation-factor (VIF) computations. The VIF values were low (lower than 5.16). Also, according to the Breusch–Pagan test (p -value $\frac{1}{4}$ 0.0042), there were problems of heteroskedasticity, thus we calculated robust standard errors. Finally, the Ramsey regression specification-error test for omitted variables indicated no specification problems (p -value $\frac{1}{4}$ 0.1152).

Table 3 presents the models considered in this research and reports the coefficients for heteroskedasticity corrected OLS for different models. In the final rows, we also report the coefficient of determination (R-squared), the Akaike criterion (AIC), and the Schwarz criterion (BIC).

Model 1 in Table 3 reports the estimated coefficients obtained in a model in which only the control variables are included. This first model explains almost 86% of the innovative entrepreneurship variation across countries. Although previous literature indicates a significant correlation between entrepreneurial activity and income level (Carree et al. 2002; Wennekers et al. 2005), in this case, the coefficient of $\ln(\text{GDP})$ is not significant, possibly for the significant correlation with higher education shown in Table 2.

Model 2 shows that the inclusion of the normative dimension, measured as leadership styles, increases the R-squared up to 86.07%. Later, in Model 3, a stepwise analysis was used to select the most predictive variables from all six leadership styles and control variables.

Compared with Model 1, the R-squared shows little increase and the AIC and BIC measures are reduced, suggesting that Model 3 is better than Model 1 and Model 2 at explaining innovative entrepreneurship. The

TABLE 3 Explaining Innovative Entrepreneurship (Latest Available Year).

	Model 1		Model 2		Model 3	
	Coe	Robust Std	Err Coe	Robust Std	Err Coe	Robust Std
<i>Leadership styles</i>	f	f		f		
Autonomous			0.196	0.462		
Charisma			0.569	1.12		
Humane			−0.063	0.683		
Participative	1.660 ^{mmmm}			0.817	1.749 ^{mmmm}	0.688
Self Protective	1.683 ^{mm}			0.904	1.587 ^{mm}	0.780
Team	−0.050			1.241		
<i>Control Variables</i>						
Education	0.299 ^{mm}	0.03	0.273 ^{mm}	0.039	0.267 ^{mm}	0.030
$\ln(\text{GDP})$	0.188	0.32	0.134	0.379		
Cons	−2.427	5.764	−19.374 ^{mm}	8.918	−13.719 ^{mm}	5.923
<i>No of observations</i>	43		43		43	
Prob >F	0.0000		0.0000		0.0000	
R-squared	0.8386		0.8607		0.8576	
Root MSE	1.2662		1.2762		1.2047	
AIC	145.2172		150.9042		141.844	
BIC	150.5008		166.755		148.889	

Note: ^{mmmm}significant at $p \leq 0.01$; ^{mm}significant at $p \leq 0.05$; ^msignificant at $p \leq 0.1$.

previous models show that leadership styles have a significant impact on innovative entrepreneurship, thus it supports Hypothesis 1. This result is in accordance with Jung et al. (2003), who show the importance of leadership styles for innovation.

In addition, model 3 shows that participative and self-protective leadership styles have a significant influence on innovative entrepreneurship. In models 1 and 2, in which the measure of participative leadership appears, its coefficient is different from 0 at levels of significance of 95%. This evidence clearly supports Hypothesis 2 in the line of research by King and Anderson (1990), Somech (2006), and Woodman et al. (1993), who associate collaboration, free exchange of information, and the process of reflection with the innovative process.

A final consideration refers to the possibility that endogeneity produces biased results. We have carried out an extensive search among the instruments that have generally been used in the long-term economic development literature: colonial settlers' mortality (see Acemoglu et al. 2001), legal origins, and countries' latitudes and religions (La Porta et al. 1999). None of these variables provided any valid instrument for testing the direction of causality. Also we have tested the relationship suggested by Wennekers et al. (2005) that business ownership is strongly determined by uncertainty avoidance. Basically these endowments showed low correlation with participative leadership (i.e., no endowment or group of endowments provided a suitable instrument).

CONCLUSIONS

This article examines the relationship between the normative dimension, measured by leadership styles, and innovative entrepreneurship. By using a sample of 43 countries, it is statistically demonstrated through regression analysis that participative leadership, defined as the degree to which others are involved in making and implementing decisions, has a significant and positive impact on innovative entrepreneurship, with the latter being defined as the percentage of nascent entrepreneurs who affirm that few or no businesses offer the same product.

Our study suggests, in light of an institutional approach, that the normative dimension determines innovative entrepreneurship; specifically, among leadership styles, the differences observed in participative and self-protective leadership across countries represent the strongest explanatory factor in the variance of the current rates on innovative entrepreneurship. A step toward the understanding of the interplay between managerial styles and innovation, the article points out that participative leadership plays a significant role in promoting innovative entrepreneurship. Participative leadership may result basically from specific learning processes through the process of socialization

(Berger and Luckman 1966), which is part of the normative dimension of institutions. Also, a nonuniform distribution of learning processes across individuals would imply that the production of participative leaders relies on a variety of selection mechanisms. One selection process would be supplied by government support programs to promote new-firm innovativeness. It would be interesting to discover the extent to which candidates showing participative attributes are more or less likely to be offered government support in the process of starting up a firm.

Also, our empirical study shows that the percentage of adults with postsecondary degrees involved in nascent (0–3 months) and young (3–42 months) firms increases entrepreneurial innovativeness. The promotion of entrepreneurship may depend on how participative students are allocated within the educational system, with management schools (and tertiary education in general) playing a critical role. A selection of students that relies on factors other than talent or creativity (i.e., income level, sex, or race) might reduce the likelihood that the education system will contribute to the production of future entrepreneurs. In a similar vein, another selection mechanism might operate in existing organizations. Whether organizations allow people with participative attributes to be recruited (and promoted through the hierarchies) could be critical for potential future entrepreneurs to acquire the experience and skills needed.

Hence, a possible extension to our article would be to analyze whether these selection mechanisms enable the placement of individuals with attributes associated with participative leadership in the appropriate contexts. Additionally, potential for research exists in analyzing the learning processes offered by specific institutions once these filters are passed. Such a study would reveal which support bodies, academic institutions and organizational training programs contribute most to the development of participative leadership and its characteristics, and how talented participative leaders are converted into innovative entrepreneurs. Finally, filtering and learning processes that promote participative leadership are also likely to produce innovation in terms of organizational intrapreneurs (“internal” entrepreneurs as generators of new ideas within the organization) or entrepreneurs (“externals”) as creators of new innovative firms (Bjornskov and Foss 2013; Castrogiovanni et al. 2011; Urbano et al. 2013). In this line, further research would also be needed to understand the extent to which intrapreneurship generates the knowledge necessary for a participative leader to visualize him- or herself as a future entrepreneur. Our research may also be extended to understand the interfirm competitive dynamics when both executives of established firms and new innovative entrepreneurs are participative leaders. One interesting issue here would be to study the extent to which participative leaders actively promote interfirm participative learning processes, such as those described by Steiner and Hartmann (2006): joint project teams, tender preparation groups, benchmarking clubs, and so on. In connection to this, another aspect to be

explored is whether participative leaders do create the needed context for business cooperation (vertical and/or horizontal) between incumbent firms and new entrepreneurs, allowing the establishment of dynamic innovative networks, clusters, and industrial districts.

Finally, concerning the methodological limitations, future research lines may improve the measurement of both dependent and independent variables, try to establish the causal relationships in cross-sectional data, and use multilevel modeling to address the issues of unobserved heterogeneity within the context of a cross-country and cross-individual.

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