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Entrepreneurial Creativity and Growth

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Abstract

The concept of creativity is multidimensional, helping to take advantage of entrepreneurial opportunities and favoring in this way economic growth. Next to this basic argument of neoclassical theory, which ignores the role of entrepreneurship in growth, the present chapter states that entrepreneurship should be included as a contributing factor of growth. Through this key argument, this chapter attempts to clarify the importance of creativity to entrepreneurial activity, concentrating on the factors that influence entrepreneurial creativity that in turn lead to economic growth, as well as to capture the way in which entrepreneurial creativity is affected by this procedure. These factors are knowledge and education, the management of disrupting technologies, spill-over creativity, the role of cultural background and personal characteristics of individuals, the motives and incentives of individuals, the existence of—and access to—resources, and the institutions that delineate the environment of action of the entrepreneur.

Keywords: entrepreneurship, creativity, growth, education, knowledge, institutions, cultural background, resources, motives, incentives, technologies

1. Introduction

One of the major challenges for the economies is to determine which specific factors can lead to economic growth. The basic argument of “Neoclassical Theory” is that economic growth is determined by labor, capital, and the level of technology [1], ignoring any direct effect that entrepreneurship may have.

Entrepreneurship causes economic growth, mainly due to the fact that the entrepreneur is a potential factor of production. Similarly, a country’s economic growth promotes entrepreneurship, since it increases total demand and generates needs that create a fertile ground for the development of entrepreneurship.

However, what are the qualitative characteristics that determine the quality of an entrepreneur and lead to business success? Many argue that the key to business success is the entrepreneur’s

passion [2, 3]. Others point out that it is the entrepreneur's leadership [4–6] suggesting that the five key characteristics of a successful entrepreneur are vision, work ethic, resilience, positive attitude, and passion. We—among others [7, 8]—suggest that the key is the role of creativity¹.

Creativity is considered a concept that is inherent in entrepreneurship [9–12]. Creativity—not the same with innovation [13], as we could say that innovation is applied creativity—is regarded as putting all brilliant ideas together and thinking of ways to make it happen. It interfaces with psychological factors; when the person feels euphoria and is in a good mood, he/she tends to increase his/her creativity [14]. Creativity is deemed an event of artistic expression, although its impact on the real economy is not exactly determined [15].

The new observed conditions that result from the ever-changing environment, globalization, the changing economic and political structures, new technologies, specialized customer demands, and the emphasis on the quality of products and services have led the economies to appreciate the factors shaping business development and creativity in the increasingly competitive world markets. Thus, in times—such as the recent ones—dominated by conditions of glaring uncertainty and low nominal rates of return, creative cognition plays an important role as it searches for the limited business opportunities and contributes to their successful realization [16]. The firms and the organizations that appear to have a high-level long-term performance are those that are more creative and innovative. Those firms and organizations use innovative ideas from others in order to create something unique, thus avoiding copying their ideas.

Through this general framework, the scope of the chapter is to highlight the way in which entrepreneurship contributes to economic growth through the effects of entrepreneurial creativity and, especially, through the factors affecting entrepreneurial creativity. The concept of creativity is multidimensional, helping to take advantage of entrepreneurial opportunities and favoring in this way economic growth. This is why the present chapter gets a bird's eye view of the most influential factors that determine entrepreneurial creativity.

The present chapter contributes to the relevant literature on the theory of creativity, clarifying creativity's importance to entrepreneurial activity. At the same time, the contribution of the chapter to the literature lies in the fact that it attempts to shed light on the relationship between entrepreneurship and growth, highlighting entrepreneurial creativity as a key factor for the promotion of entrepreneurship. We have the impression that there is no other respective research essay in the literature, grouping together and analyzing the impact of such a multitude of factors on entrepreneurial creativity—as most theoretical essays usually focus separately on a single factor and on how it affects creativity—while also illustrating a more integrated causal relationship between creativity (by researching the factors that affect it), entrepreneurship, and economic growth.

The structure of the chapter is as follows: Part 2 contains a literature review, highlighting the interconnection between entrepreneurship and economic growth. In parallel, great emphasis is

¹Maybe the key to business success is a combination of all above factors or even more factors. However, in this chapter, we focus on the role of entrepreneurial creativity.

given to the role of entrepreneurial creativity and how it is linked to entrepreneurship and, more broadly, to growth. Then, in Part 3, there is extensive reference to the factors that shape entrepreneurial creativity, which in turn is expected to lead to growth, thereby formulating a model of economic development. The last section, Part 4, presents the conclusions.

2. Entrepreneurship and creativity as growth accelerators

In the literature, conflicting views have been recorded on the role of entrepreneurship in growth. The lack of entrepreneurship in both the thinking and the models of growth is associated with the dominance of neoclassical economics as a mainstream school of thought. Traditional neoclassical theory holds that economic growth is determined by the supply of both labor and capital and the level of technology [1], ignoring, however, the direct effects of entrepreneurship on economic growth [17]. The absence of entrepreneurship in macroeconomic models has created intense concerns among economic theorists in recent decades [18].

Nevertheless, the contribution of entrepreneurship to economic growth is particularly important as it holds a position of causality [19]. The contribution at the microlevel lies in the fact that the entrepreneur is a key factor of production and contributes to any change and economic progress while, at the same time, it is the driving force for the production of innovation [9]. As a result, entrepreneurship causes economic growth. Respectively, at the macrolevel, the economic development of a country promotes entrepreneurship, as it increases demand and generates needs that create a fertile ground in the development of entrepreneurship. Audretsch [20] introduces the notion of “entrepreneurship capital” that refers to the institutions, culture, and historical context that is conducive to the creation of new firms. He points out that these factors, on the one hand, formulate the knowledge filter that stands between investments in knowledge, science and ideas and, on the other hand, formulate commercialization, ultimately driving economic growth [21].

Entrepreneurship is considered a major contributor to economic growth but understanding how creativity impacts on the process is also crucial [22]. Schumpeter’s theory [9] of economic development was a very important step for the establishment of the relationship between creativity and entrepreneurship. He proposed that creativity is an important driver for the entrepreneur to discover new business opportunities leading to economic growth. This is why Schumpeter’s theory could be considered not only a theory of economic growth but also a theory of creativity.

In recent decades, creativity and entrepreneurship have become increasingly interconnected in the relevant literature [10, 11, 23] even though in the past they were considered separate concepts [24]. Creativity and innovation are at the heart of the spirit of enterprise and provide a gateway for astute entrepreneurship [25]. Lee et al. [23] note that entrepreneurial activity, apart from the existence of an appropriate business climate, requires an environment where creativity and innovation can flourish. Pretorius et al. [26] state that creativity constitutes one of the most important entrepreneurial skills that are required for the successful start of the business process, while its significance is crucial not only during the launch of a new company

but also during the decisions that are taken throughout the entire business creation process [8, 27]. A productive change in a system is brought about by creative people [19].

Creativity constitutes the basic source of innovation and can lead to the creation of new firms and the improvement of existing products so that companies become more efficient and competitive [8]. A successful incorporation of creativity and technology in entrepreneurial activity can lead to the commercialization of the idea, the product or the service, thereby strengthening entrepreneurship [28]. Moreover, creative thinking is a particularly significant tool that allows the leader of a firm to form a business strategy and motivate the employees [29, 30].

3. How is entrepreneurial creativity shaped?

What are, however, the factors that shape entrepreneurial creativity, which in turn is expected to promote entrepreneurship and lead to economic growth? Below, we attempt to present a literature review of the most important factors that shape and influence entrepreneurial creativity, as they are presented in the literature. These factors are not necessarily related to one another, but their common feature is that they constitute factors that affect entrepreneurial creativity, positively or negatively. In this way, a model of economic development through entrepreneurial creativity—and its effects on entrepreneurship—is formed.

These factors—their contribution to entrepreneurial creativity is analyzed below—are as follows: (a) knowledge and education, (b) managing disrupting technologies, (c) spill-over creativity, (d) the role of the cultural background and the personal characteristics of individuals, (e) the motives and incentives, (f) managing resources, and (g) the institutional background.

3.1. The role of education and knowledge

Knowledge is considered a valuable commodity and concepts such as the exchange of knowledge and lifelong learning have become more and more prevalent in business practices and, hence, in innovation activities. The greater the knowledge base of an individual, the more the ideas and combinations of ideas that he can achieve, which in turn lead to the creation of new and innovative products and services.

However, the existence of the knowledge base by itself cannot guarantee the creation of new trends, as creativity includes the following three stages: (a) discovery, (b) invention, and (c) creation [31]. The way in which the education level affects creativity varies among individuals. Of particular importance is the role of the general environment of each person relative to the knowledge level, such as the level of uncertainty, the existence of information asymmetry, the existence of high transaction costs, etc. [21], resulting in the occurrence of differences among individuals in connection with their perceptions vis-à-vis discovery, invention and the production of new innovations [32, 33].

The concept and management of knowledge are subjects of systematic research in the attempt to find the causes of business development [34–37]. Proper knowledge management leads, in

turn, to the achievement of a competitive advantage, as a company or organization becomes more creative and innovative and, thus, more competitive and sustainable. Besides, through working practices, management systems and human resources, businesses, and organizations maintain an integrated wealth of knowledge that they, however, have to manage properly [38]. At the same time, the right management of knowledge leads to conditions under which knowledge spill-over to other companies and organizations is facilitated [39].

High levels of creativity and innovation are associated with high levels of education and positive attitudes toward science [40]. The importance of education lies in the fact that it encourages the individual to think—from an early age—in a certain way, by equipping him/her with the necessary tools that he/she will be able to use in the future so that he/she becomes creative and develops innovative ideas. If knowledge is used and utilized properly, it constitutes a competitive advantage for companies so that they become more sustainable, competitive and innovative. The challenge for companies is to be able to capture that knowledge and leverage it through their operation. Businesses have a built-in wealth of knowledge that is established in working practices, operating systems and human resources.

Finally, it is worth noting that the cognitive skills that a person has affect the level of his/her creativity and the search for business opportunities. The contribution of these skills is particularly critical as far as the utilization of available information and the highlighting of opportunities are concerned. They constitute key intellectual models that people use in order to organize and process the information that they receive [41]. The business process of growth requires a set of mental and cognitive abilities that allow the entrepreneur to search for and implement the opportunities that are presented to him/her. The use of cognitive structures is what might differentiate persons undertaking a business activity from the rest of the population. A number of studies have focused on this issue, examining the way in which traders use mental structures in order to make value judgments and identify market imbalances [42–44].

3.2. Managing disrupting technologies

Technology and innovation are key sources of growth in economic activity [45] and living standards. New technologies, which constitute a sharp change in capabilities or price/performance terms compared with substitute and competing products, or concern developments that drive accelerated rates of change or discontinuous capability improvements, are commonly characterized as “disrupting technologies” [46].

As new technologies now play a significant role in people's lives, it is considered necessary to find constructive ways to use them in a creative direction. New business opportunities, new potential customers, new products, and new investment options are some of the potential benefits of new technologies. A number of empirical studies [47–49] have led to the conclusion that there is a strong correlation between the implementation of scientific and technological creative outputs and entrepreneurial creativity [19]. So, there are optimistic scientists [50], also labeled as new technologists, who assume that the global economy is entering a fourth phase of industrial revolution and believe that new technologies will induce a significant increase in productivity [16].

However, some concerns have been expressed about the fact that the very “smart” and advanced technology kills creativity, even though the development of science and technology has pushed towards the facilitation of economic production and the daily needs of individuals. These critics argue that technological developments are likely to increase significantly and continuously the accumulation of knowledge, affecting the level of innovativeness of people given that the future generations wishing to innovate will face educational and knowledge burdens [51].

3.3. Spill-over creativity

The creativity diffusion level can vary substantially among countries or regions [52–57]. For example, it seems that areas and societies characterized by high levels of creativity achieve a higher level of new firm formation [23], due to a higher level of creativity spillover. Other recent studies have shown that creative activities are more concentrated in the metropolitan areas [58], while others have demonstrated that an artistic community can create conditions of greater creativity spillover [59–61].

Whether the creativity that has been created (creative capital) will be diffused in society or not has significant effects on the level of economic growth [62]. Thus, higher rates of economic growth are achieved by societies that display a greater tendency toward the diffusion of creative capital, have a social and economic environment that supports the exchange of ideas, and are characterized by a business environment that allows for the commercialization of new ideas [62].

3.4. The cultural background and personal characteristics

Constantly, an individual creates a knowledge background that reflects the cultural and institutional environment in which he/she lives but also his/her personal frame of mind, on the basis of which he/she rushes to understand and specify his/her practical needs and desires. When the needs and desires are fixed for a period of time, decisions have to be taken and actions have to be carried out, aiming at their satisfaction.

This procedure is based on the reasoning ability of each person, which is also a subjective capacity as the intellect of each individual presents a different ability to understand in depth all information available in his/her knowledge background, while at the same time he/she has to take this information into account and process it in order to take decisions and proceed with action [63–67]. At this stage, the cultural background offers a range of habits and rules that the person can use either as such, or as a guide in order to find the best solution, or which of the solutions that he/she has found is the best according to the criteria offered by his/her cultural and institutional background, so that he/she then proceeds with action [65, 66, 68]. Additionally, the personal creativity and personal emotional world of every human being come to diversify the reasoning behavior among people over what needs they choose to have and how they intend to go about satisfying them [69–71].

The dimensions of the cultural background comprise the social stereotypes that prevail in a society. The composition of social stereotypes in a society shapes the prevailing portfolio of social behavior. It is extremely important to determine whether the prevailing portfolio of a society or a population group favors conditions of growth or not.

A society or, more specifically, a company or an organization whose members are characterized by a variety of cultural traits, is more likely to be driven towards the production of innovation [72] and encourage creativity. The reason is that groups with different cultural characteristics adopt new ways of perception, a feature that promotes creativity. Also, in groups where creativity and orientation to individual achievements are encouraged, higher rates of innovative activity are observed. Additionally, the greater the freedom of individuals to express their views, the greater the likelihood for the formulation of new ideas and creative effects [73]. In societies with greater emphasis on individualism, a greater diffusion of creativity and innovation is observed, as opposed to in-group collectivistic societies in which diffusion is restricted in the context of the group alone [33].

Thus, the personal creativity of every human being and his/her personal emotional world come to diversify the reasoning behavior among people over what needs they choose to have and how they intend to go about satisfying them [69–71, 68].

Additionally, one of the major factors affecting the level of creativity is the frame of mind of the individual. The following factors affect negatively the frame of mind of individuals with regard to the creativity that they display [74]: (a) The standardization of thought and the absolute dominance of reason. The way in which our productive mental abilities operate is affected by our previous experiences, while the human mind has logical analysis and imagination. During the first years of a person's life, mental activity is dominated by imagination. Critical-rational thinking begins to grow later. However, as the requirements of social adjustment and adaptation to the way the school functions force the person to use logical thinking more, creativity is inhibited and becomes inactive. (b) The lack of confidence and self-esteem in creative skills, under the escort of fear of errors and ridicule. The result is that, gradually, any creative powers of the individual go idle. (c) The social pressure to conform to social norms that fight against the person's predisposition for creative production. (d) The psychological insecurity toward the new and the unknown. This fear, increased excessively in some cases of individuals, makes these people highly insecure to explore new ideas.

3.5. The role of motives and incentives

An "incentive" is something that motivates, rouses, or encourages (when stopped being given, the individual stops being motivated), while a "motive" is an engine inside the individual; an incentive to act; a reason for doing something; anything that prompts a choice of action. Incentives and motives are a key source of stimulation of individual creativity [75, 76]. The lack of incentives, motivation, and rewards is a basic obstacle for the development of creativity [75, 76]. Human needs and objectives are related in the context of a logical sequence that starts from the needs and passes through incentives (remunerative, financial, moral, coercive, or natural) to organize goals and finally have human activity activated [33]. Translating creativity into innovation is a function of multiple incentives [77]. McCraw [78] supports that business incentives are generally equivalent to the incentives for creation.

Motives can be divided into two types, intrinsic and extrinsic, and both kinds of motivations appear to play roles as determinants of creative behavior. Intrinsic motives depend on internal sources of the entrepreneur such as the need for self-actualization or simply the

pleasure that one gains from being creative and producing creativity, wellness, and spontaneity. Conversely, extrinsic motives are the result of pressure and low self-esteem. This is a creative behavior that can become the response to external circumstances and the external environment of the entrepreneur, for example, an experimental requirement or environmental needs. Entrepreneurial creativity requires a combination of intrinsic and extrinsic motivation, which arises when there is a combination of personal interest and the promise to receive a reward, confirming competence, supporting skill development, and enabling future achievement [79].

Motives arise from the needs of the individual [80], guide people to behave accordingly, form the attempt to achieve goals [81] that are set, and depend on the external environment. In this way, they influence the primary startup of human action—the direction, extent, and systematic appearance of free behavior. Simultaneously, goal-setting activates behavior and directs choices and, thus, people get to differ as to the objectives set and how to reach them. Moreover, the motives behind business activity vary widely and define its objectives. These motives are related to the profit potential for livelihood purposes, the identification and utilization of business opportunities, and reasons directly related to creativity and innovation.

In the literature, there is a plenty of discussion concerning the degree to which the effect of rewards on creativity can be positive or negative, making it clear that the motives define to a great extent the creative performance of entrepreneurs. On the one hand, [82–84] state that rewards are appropriate and desirable for creative performance. Nickerson [85] claim that given that an important factor for creative accomplishment is establishing purpose and intention to be creative, rewards can encourage such a creative orientation. On the other hand, Kohn [86] argues that it is not possible to bribe people to be creative and [87] conclude that working for reward can be damaging to both intrinsic interest and creativity.

3.6. Managing resources

The availability of resources is a particularly critical element in order to form creative capital in a company, an organization or a society. For this reason, apart from the existence of the necessary resources, proper management is particularly significant.

In literature, there are differentiations as to what is considered a resource, the proper management of which could lead to creative processes, as some claim that a resource comprises fixed entities [88, 89], while others consider it anything that arises from malleable objects shaped by individuals [90–92]. However, perhaps more correctly, a resource could be defined as an object that is used in a way that renders it useful [90, 92, 93].

The connection of resources with the achievement of creative results [93] is also ambiguous in the literature, as there are researchers who argue that the existence of abundant resources is a key component for the development of creativity [89], while others claim that the limited resources also promote creativity as the difficulty (due to limited resources) in resolving the various processes requires a higher level of creativity [94, 95].

3.7. The institutional background

A key factor influencing the level of entrepreneurial creativity is the institutional environment, which may be economic, political, cultural, and social [96, 19]. The “general national framework conditions”—such as economic, social, political, and cultural factors—create the variety of established business conditions, and “entrepreneurial business conditions”—such as the interventionist policies of governments—create the variety of entrepreneurial activity [97].

The different types of institutional background are interconnected. Originally, the cultural background affects the social institutional environment, which in turn affects the quality and operation of political institutions. Then, the political institutions shape the system of economic institutions, which in turn create structures and incentives for action on individuals. The prevailing economic institutions ultimately determine the distribution of wealth and the degree of economic growth.

In particular, the economic environment is associated with creativity mainly through wealth, economic stability, and the existence of capital and taxation [98–100]. Accordingly, the political environment is related with creativity through political freedom and the degree of the centralization of power [101, 102]. Furthermore, the protection of property rights seems to be fundamental in economic growth [103–106] and then in creativity and, hence, in entrepreneurship, as entrepreneurship thrives through secured property rights that can be used in voluntary exchanges based on contracts. In addition, as pointed out earlier, the cultural environment factors are general attitudes and beliefs about entrepreneurial activity and the presence of entrepreneurial role models [107, 68]. Finally, regarding the influence of the social institutional environment on creativity, we should note that creative thinking is inherent in all people, but the manner and intensity of its cultivation varies from one to the other, as the broader social environment affects decisively whether and how the creative ability of individuals is created.

4. Concluding remarks

The present chapter analyzed the most significant factors that affect entrepreneurial creativity, with entrepreneurial creativity being one of the decisive factors of the concept of entrepreneurship that, in turn, constitutes one of the factors that form the notion of economic growth. Thus, it is an attempt to contribute to the study of the role of entrepreneurship on economic growth, through the study of the effects of entrepreneurial creativity and the factors affecting it, in an effort to register entrepreneurship as a contributing factor of growth, beyond the basic argument of Neoclassical Theory, which ignores its role.

The factors that were analyzed as the primary shapers of entrepreneurial creativity were selected on the basis of the relevant literature on creativity theory. These factors are not necessarily interdependent and do not affect solely creativity, but also other factors of economic activity. Throughout the analysis, these factors are as follows: (a) knowledge and education, which are regarded as valuable concepts, increasingly prevalent in business practices and innovation activities and hence in creativity, (b) managing disrupting technologies,

given that the development of technology, particularly in the last century, is in a position to change the consumption model, create new needs, produce new goods and services, disrupt the status quo, and change the way in which people live, think and work, etc., and so their management is regarded as particularly important, (c) spill-over creativity, given that whether the creativity that has been created will be diffused in society or not has significant effects on the level of economic growth, (d) the role of the cultural background and the personal characteristics of individuals, as it is extremely important to determine whether the prevailing portfolio of cultural stereotypes favors -through creativity—the conditions for growth or not, (e) the motives and incentives, which are the key to the activation of an individual's creativity and the lack of incentives, motivation, and rewards are basic obstacles for the development of creativity, (f) the availability of, and access to, resources that will lead to creativity, and (g) the institutional background that describes the operational environment of the entrepreneur.

The aforementioned factors and the way in which they affect creativity and, thus, entrepreneurship and economic growth can be summarized in **Figure 1**.

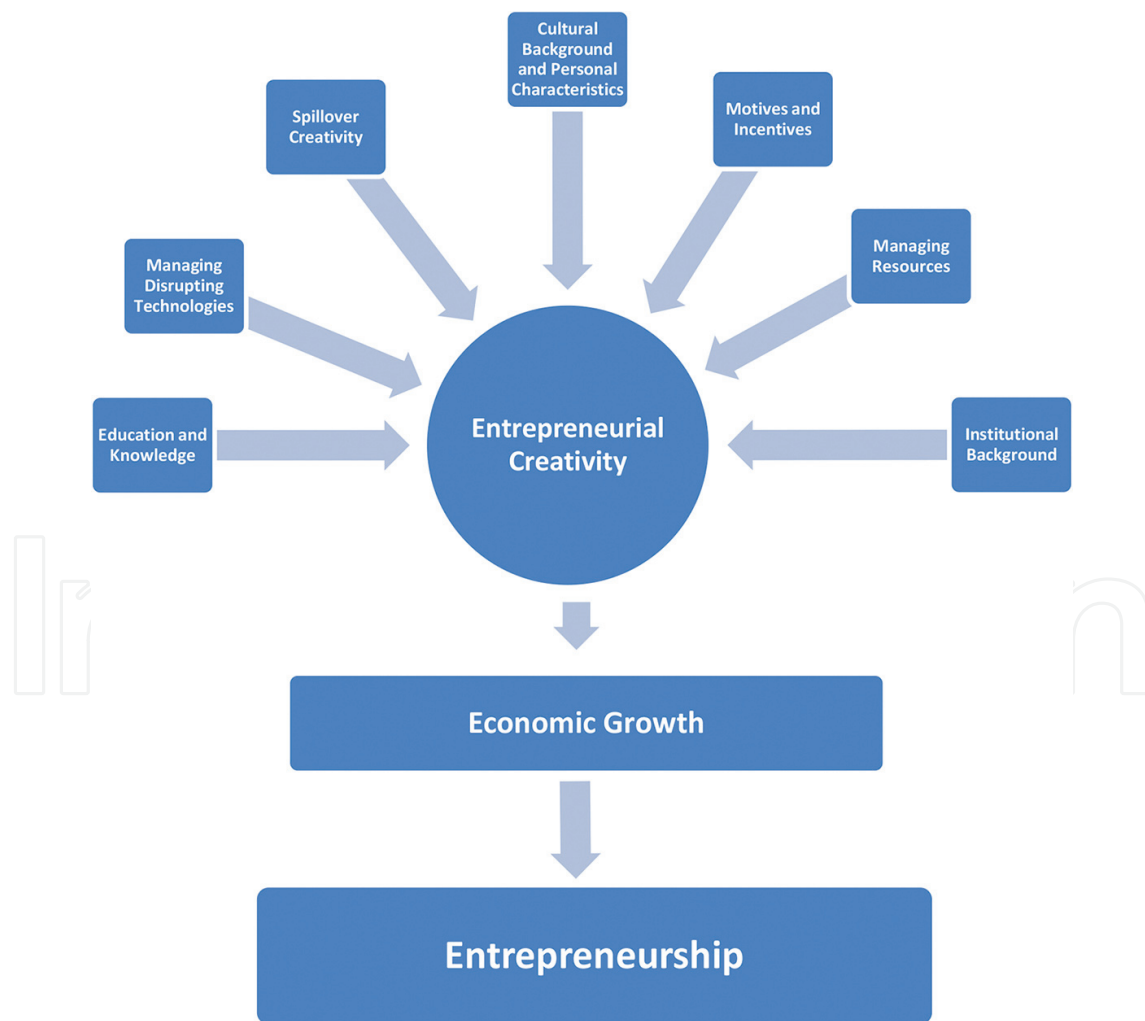


Figure 1. Factors shaping entrepreneurial creativity.

Thus, the sequence of relations is as follows: the key factors analyzed here form entrepreneurial creativity, which in turn shapes entrepreneurial activity. Now, entrepreneurial activity is in turn considered one of the most significant factors of economic growth.

Apart from the existence of an appropriate business climate, successful entrepreneurial activity requires an environment where creativity can flourish. The notion of entrepreneurial creativity is perceived as one of the most important entrepreneurial skills, during both the start and the operation of an entrepreneurial activity, as well as a factor that leads to greater levels of efficiency and competitiveness, shaping the business strategy and the motives of the employees. The firms and organizations that appear to have a high-level long-term performance are those that are more creative and innovative.

At the same time, the entrepreneurial growth literature is extensive. Entrepreneurship is the engine of growth of the economy and society, as it utilizes the available resources, employs the labor force, secures revenue for the entrepreneurs and the state, and thus improves social welfare and the position of an economy in the global economic environment.

In terms of policy implications, the analysis of the present chapter can be a notable spark for entrepreneurs, business leaders and economic policy-makers, as several factors are presented that, if managed, can lead to the achievement of greater levels of entrepreneurship and, thus, economic growth. So, for example, entrepreneurs, business leaders and economic policy-makers should—through investment in human capital (education, training, and specialization)—try to expand the knowledge base of the employees, in order to lead to more ideas and combinations of ideas, while they should also manage knowledge appropriately through, for instance, the development of proper knowledge management systems. At the same time, in this way, individuals will be better prepared to manage the available resources in a more effective way. Additionally, they must be in a position to provide individuals with the appropriate motives and incentives, given that entrepreneurial creativity requires a combination of personal interest and the promise for the receipt of a reward, thereby confirming competence, supporting skill development, and enabling future achievement. In addition, they must be ready to confront the challenge of the emergence of disrupting technologies and prepare their workforce appropriately for this change, in order to gain a competitive advantage relative to other companies. Furthermore, economic and social policy-makers should be able to create an institutional background that will promote creativity (e.g., conditions of economic stability, existence of capital and effective taxation, political freedom, protection of property rights) that in combination with an appropriate cultural background (e.g., formation of groups with different cultural characteristics or groups characterized by an emphasis on achievements, freedom of individuals to express their views, greater emphasis on individualism) will lead to a greater tendency toward the diffusion of creative capital. Such an environment has to support the exchange of ideas and allow for the commercialization of new ideas.

As mentioned throughout the chapter, entrepreneurial creativity constitutes a driving force of entrepreneurial activity. Other aforementioned characteristics that shape it are registered in the literature, such as the entrepreneur's passion, leadership, vision, work ethic, resilience, and positive attitude. Therefore, perhaps it would have been necessary to take into account the impact of the rest of the characteristics—that lead to business success—on entrepreneurship.

This point might be considered a shortcoming, even though the goal of the present study was to highlight the special role of entrepreneurial creativity—through the factors that affect it—in entrepreneurship and, more broadly, in the key issue of economic growth. Moreover, a shortcoming is that the impact of the factors analyzed in entrepreneurial creativity, the impact of entrepreneurial creativity on entrepreneurship and, thus, the impact of the latter on economic growth are not verified empirically by the analysis of the present chapter.

Future research could try to eliminate the shortcomings of the present chapter by concentrating on an empirical verification of the way entrepreneurial creativity is formed as well as on how it then affects entrepreneurship, which then shapes economic growth. Further topics to be investigated could involve more factors other than entrepreneurial creativity, such as entrepreneur's passion, leadership, vision, work ethic, resilience and positive attitude, thereby achieving a more integrated approach to the shaping of entrepreneurial activity and its impact on economic growth.

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References

- [1] Solow R. A contribution to the theory of economic growth. *The Quarterly Journal of Economics*. 1956;**70**(1):65–94.
- [2] Cardon MS, Wincent J, Singh J, Drnovsek M. The nature and experience of entrepreneurial passion. *Academy Management Review*. 2009;**34**(3):511–532. DOI: 10.5465/AMR.2009.40633190
- [3] Chen XP, Yao X, Kotha S. Entrepreneur passion and preparedness in business plan presentations: a persuasion analysis of venture capitalists' funding decisions. *Academy Management Journal*. 2009;**52**(1):199–214. DOI: 10.5465/AMJ.2009.36462018
- [4] Davies BJ, Davies B. Strategic leadership. *School Leadership & Management*. 2004;**24**(1):29–38.
- [5] Hirschi G, Jones M. Affects of strategic leadership on business success—a cross-cultural analysis from a resource based view. *MIBES Transactions*. 2009;**3**(1):1–18.
- [6] Westwood R, Johnson T. *The five characteristics of a successful entrepreneur*. San Clemente, CA: Sourced Media Books, LLC.

- [7] Heunks FJ. Innovation, creativity and success. *Small Business Economics*. 1998;**10**(3):263–272.
- [8] Ko S, Butler JE. Creativity: a key link to entrepreneurial behavior. *Business Horizons*. 2007;**50**(5):365–372.
- [9] Schumpeter JA. *The Theory of Economic Development*. New York: Oxford University Press; 1911 [1934].
- [10] Gilad B. Entrepreneurship: the issue of creativity in the market place. *The Journal of Creative Behavior*. 1984;**18**:151–161. DOI: 10.1002/j.2162-6057.1984.tb00379.x
- [11] Whiting BG. Creativity and entrepreneurship: how do they relate? *Journal of Creative Behavior*. 1988;**22**:178–183.
- [12] Nystrom H. Creativity and entrepreneurship. *Creativity and Innovation Management*. 1993 ;**2**(3):237–242.
- [13] Ward TB. Structured imagination: The role of conceptual structure in exemplar generation. *Cognitive Psychology*. 1994;**27**:1–40.
- [14] Isen AM. Positive affect, cognitive processes, and social behavior. *Advances in Experimental Social Psychology*. 1987;**20**:203–253.
- [15] Polman E, Emich KJ. Decisions for others are more creative than decisions for the self. *Personality and Social Psychology Bulletin*. 2011;(21317316).
- [16] Petrakis PE, Kostis PC, Kafka KI. Secular stagnation, faltering innovation, and high uncertainty: new-era entrepreneurship appraisal using knowledge-based thinking. *Journal of Business Research*. 2016;**69**(5):1909–1913.
- [17] Smith D. The role of entrepreneurship in economic growth. *Undergraduate Economic* 2010;**6**(1):1–19.
- [18] Wennekers S, Thurik R. Linking entrepreneurship and economic growth. *Small Business Economics*. 1999;**13**(1):27–56.
- [19] McMullan WE, Kenworthy TP. *Creativity and Entrepreneurial Performance: A General Scientific Theory*. New York: Springer; 2015. DOI: 10.1007/978-3-319-04726-3
- [20] Audretsch D. The emergence of the entrepreneurial society: The 2008 Geary Lecture. *The Economic and Social Review*. 2009;**40**(3):255–268.
- [21] Audretsch D. Entrepreneurship capital and economic growth. *Oxford Review of Economic Policy*. 2007;**23**(1):63–78.
- [22] Baumol W. *The Free Market Innovation Machine: Analysing the Growth Miracle of Capitalism*. Princeton: Princeton University Press; 2002.
- [23] Lee SY, Florida R, Acs ZJ. Creativity and entrepreneurship: a regional analysis of new firm formation. *Regional Studies*. 2004;**38**(8):879–891.

- [24] Stein MI. *Stimulating Creativity: Vol. 1. Individual Procedures*. New York: Academic Press; 1974.
- [25] Okpara FO. The value of creativity and innovation in entrepreneurship. *Journal of Asia Entrepreneurship and Sustainability*. 2007;**3**(2):81–131.
- [26] Pretorius M, Millard SM, Kruger ME. Creativity, innovation and implementation: management experience, venture size, life cycle stage, race and gender as moderators. *South African Journal of Business Management*. 2005;**36**(4):55–68.
- [27] Argyris C. *Overcoming organizational defenses*. New Jersey: Prentice Hall; 1990.
- [28] Fillies IA, Rentschler R. The role of creativity in entrepreneurship. *Journal of Enterprising Culture*. 2010;**18**(1):49–81. DOI: 10.1142/S0218495810000501
- [29] Darling J, Gabrielson M, Seristo H. Enhancing contemporary entrepreneurship: a focus on management leadership. *European Business Review*. 2007;**19**(1):4–22.
- [30] De Jong JPJ, Den Hartog DN. How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*. 2007;**10**(1):41–64.
- [31] Burus D. *Creativity and Innovation: Your Keys to a Successful Organisation* [Internet]. 2013. Available from: huffingtonpost.com/danielburus/creativity-and-innovation_b_4149993.html
- [32] Petrakis PE, Kostis PC. The effects of cultural background, and knowledge creation and impact on self-employment and entry density rates. *Review of Economics and Finance*. 2013;**3**(2):18–32.
- [33] Petrakis PE. *Culture, Growth and Economic Policy*. New York and Heidelberg: Springer; 2014. 250 p.
- [34] Nonaka I. A dynamic theory of organizational knowledge creation. *Organization Science*. 1994;**5**(1):14–37.
- [35] Smith P. Knowledge sharing and strategic capital, The importance and identification of opinion leaders. *The Learning Organization*. 2005;**12**(6):563–574. DOI: 10.1108/09696470510626766
- [36] Randeree E. Knowledge management: securing the future. *Journal of Knowledge Management*. 2006;**10**(4):145–156.
- [37] Dalmaris P, Tsui E, Hall B, Smith B. A framework for the improvement of knowledge intensive business processes. *Business Process Management Journal*. 2007;**13**(2):279–305.
- [38] Petrakis PE, Kostis PC. The role of knowledge and trust in SMEs. *Journal of the Knowledge Economy*. 2015;**6**(1):105–124. DOI: 10.1007/s13132-012-0115-6
- [39] Griliches Z. The search for R&D spillovers. *Scandinavian Journal of Economics*. 1992;**94**:29–47.
- [40] Lee KY. *The Singapore Story: Memoirs of Lee Kuan Yew*. Singapore: Times Editions; 1998.

- [41] Wright M, Stigliani I. Entrepreneurship and growth. *International Small Business Journal*. 2012;**31**(1):3–22. DOI: 10.1177/0266242612467359
- [42] Bandura A. *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall; 1977.
- [43] Gaglio CM, Katz J. The psychological basis of opportunity identification: Entrepreneurial alertness. *Small Business Economics*. 2001;**16**(2):95–111.
- [44] Mitchell CA, Gurung R, Kong AM, Dyson JM, Tan A, Ooms LM. Inositol polyphosphate 5-phosphatases: lipid phosphatases with flair. *IUBMB Life*. 2002;**53**(1):25–36.
- [45] Mokyr J. *The lever of riches: technological creativity and economic progress*. New York: Harper & Row: Oxford University Press; 2011.
- [46] Manyika J., Chui M., Bughin J., Dobbs R., Bisson P., Marrs A. *Disruptive Technologies: Advances That Will Transform Life, Business, and the Global Economy*. McKinsey Global Institute. McKinsey & Company; May 2013.
- [47] Dean TJ, Meyer GD. New venture formations in manufacturing industries: a conceptual and empirical analysis. In: Churchill N, Birley S, Bygrave W, Muzyka D, Wahlbin C, Wetzel W, editors. *Frontiers of Entrepreneurship Research*. Babson Park: Babson College; 1992. p. 173–187.
- [48] Dean TJ, Brown RL, Bamford C. Differences in large and small firm responses to environmental context: strategic implications from a comparative analysis of business formations. *Strategic Manage Journal*. 1998;**19**:709–728.
- [49] Eckhardt JT, Shane SA. Industry changes in technology and complementary assets and the creation of high-growth firms. *Journal of Business Venturing*. 2011;**26**(4):412–430.
- [50] Dervis K. *The Future of Economic Progress* [Internet]. 15 April 2014. Available from: Project-syndicate.org
- [51] Jones BF. The burden of knowledge and the "Death of the Renaissance Man": is innovation getting harder? *The Review of Economic Studies*. 2009;**67**(1):283-317.
- [52] Bille T, Schulze GG. Culture in urban and regional development. In: Ginsburgh VA, Throsby D, editors. *Handbook of the Economics of Art and Culture*. 1st ed. Amsterdam: Elsevier; 2006. p. 1051–1100.
- [53] Chapain C, Comunian R. Enabling and inhibiting the creative economy: the role of the local and regional dimensions in England. *Regional Studies*. 2009;**44**(6):717–734.
- [54] Scott AJ. *On Hollywood. The Place, the Industry*. Princeton: Princeton University Press; 2005.
- [55] Florida R. *Who's your city? How the Creative Economy Is Making Where to Live the Most Important Decision of Your Life*. New York: Basic Books; 2008.
- [56] Florida R, Mellander C, Qian H. Creative China? The university, tolerance, talent in Chinese regions development. The Royal Institute of Technology Centre of Excellence for Science and Innovation Studies, CESIS Electronic Working Paper Series. 2008;**145**

- [57] Cooke P, Lazzaretti L, editors. *Creative Cities, Cultural Clusters and Local Economic Development*. Cheltenham: Edward Elgar; 2008.
- [58] Lacour C. & Puissant S. (2008) *Medium-Sized Cities and the Dynamics of Creative Services*. Cahiers du GREThA, n 2008-08. Pessac: France.
- [59] Florida R. *The rise of the creative class*. New York: Basic Books; 2002.
- [60] Gertler M, Gates G, Florida R, Vinodrai T. *Competing on Creativity: Placing Ontario's Cities in North American Context*. Research Report. The Urban Institute, Washington DC. 2002;
- [61] Sanchez-Serra D. *Artistic creative clusters in France: a statistical approach*. *Artistes et territoires créatifs en Europe*. 2013;2:6–18.
- [62] Audretsch D, Belitski M. *The role of the creativity spillover of entrepreneurship in reconciling the innovation paradox*. *Academy of Management Journal*. 2014;1:17569–17569.
- [63] Simon HA. *A behavioral model of rational choice*. *Quarterly Journal of Economics*. 1955;69(1):99–118.
- [64] Simon HA. *Models of Man*. New York: John Wiley & Sons; 1957.
- [65] Hodgson GM. *Economics and Institutions: A Manifesto for a Modern Institutional Economics*. Philadelphia: Polity Press, Cambridge and University of Pennsylvania Press; 1988.
- [66] Hodgson GM. *The ubiquity of habits and rules*. *Cambridge Journal of Economics*. 1997;21(6):663–684.
- [67] Lavoie M. *Foundations of Post-Keynesian Economic Analysis*. Aldershot: Edward Elgar; 1992.
- [68] Loasby BJ. *Time, knowledge and evolutionary dynamics: why connections matter*. *Journal of Evolutionary Economics*. 2001;11(4):393–412.
- [69] Dequech D. *Expectations and confidence under uncertainty*. *Journal of Post Keynesian Economics*. 1999;21(3):415–430.
- [70] Dequech D. *Bounded rationality, institutions, and uncertainty*. *Journal of Economic Issues*. 2001;35(4):911–929.
- [71] Dequech D. *The New Institutional Economics and the theory of behaviour under uncertainty*. *Journal of Economic Behavior and Organization*. 2006;59:109–131.
- [72] Majidi M. *Invest in Diversity as a Competitive Advantage. A Vision on Cultural Diversity*. Rochester NY: ADP publication; 2010.
- [73] Barnett HG. *Innovation: the basis of cultural change*. New York: McGraw Hill; 1953.
- [74] Paraskevopoulos JN. *Creative Thinking in School and Family*. Athens, Greece: Corali Editions; 2004.

- [75] Friedman RS, Forster J. The effects of approach and avoidance motor actions on the elements of creative insight. *Journal of Personality and Social Psychology*. 2000;**79**:477–492.
- [76] Markman KD, Lindberg MJ, Kray LJ, Galinsky AD. Implications of counterfactual structure for creative generation and analytical problem solving. *Personality and Social Psychology Bulletin*. 2007;**33**:312–324.
- [77] Yusuf S. From creativity to innovation. *Technology in Society*. 2009;**31**(1):1–8.
- [78] McCraw TK. *Prophet of Innovation: Joseph Schumpeter and Creative Destruction*. Cambridge: Harvard University Press; 2007.
- [79] Amabile TM. Entrepreneurial creativity through motivational synergy. *The Journal of Creative Behavior*. 1997;**31**:18–26. DOI: 10.1002/j.2162-6057.1997.tb00778.x
- [80] Maslow A. Higher and lower needs. *Journal of Psychology*. 1948;**25**:433–436.
- [81] Lawler EE. *Motivation in Work Organisations*. San Francisco, California: Jossey-Bass Inc. Publishers; 1994.
- [82] Winston AS, Baker JE. Behavior analytic studies of creativity: a critical review. *Behavior Analyst*. 1985;**8**:191–205.
- [83] Eisenberger R, Armeli S, Pretz J. Can the promise of reward increase creativity? *Journal of Personality and Social Psychology*. 1998;**74**:704–714.
- [84] Eisenberger R, Rhoades L. Incremental effects of reward on creativity. *Journal of Personality and Social Psychology*. 2001;**81**:728–741.
- [85] Nickerson RS. Enhancing creativity. In: Sternberg RJ, editor. *Handbook of Creativity*. Cambridge, England: Cambridge University Press; 1999. p. 392–430.
- [86] Kohn A. *Punished by Rewards*. Boston: Houghton Mifflin; 1993.
- [87] Hennessey BA, Amabile TM. Creativity. *Annual Review of Psychology*. 2010;**61**:569–598.
- [88] Pfeffer J, Salancik GR. *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper & Row; 1978.
- [89] Amabile TM, Conti R, Coon H, Lazenby J, Herron M. Assessing the work environment for creativity. *Academy of Management Journal*. 1996;**39**:1154–1184.
- [90] Feldman MS. Resources in emerging structures and processes of change. *Organization Science*. 2004;**15**:295–230.
- [91] Dutton JE, Worline MC, Frost PJ, Lilius J. Explaining compassion organizing. *Administrative Science Quarterly*. 2006;**51**:59–96.
- [92] Feldman MS, Worline M. Resources, resourcing, and ampliative cycles in organizations. In: Cameron KS, Spreitzer GM, editors. *The Oxford Handbook of Positive Organizational Scholarship*. Oxford: Oxford University Press; 2012. p. 629–641.

- [93] Sonenshein S. How organizations foster the creative use of resources. *Academy of Management Journal*. 2014;**57**(3):814–848.
- [94] Nohria N, Gulati R. Is slack good or bad for innovation? *Academy of Management Journal*. 1996;**39**:1245–1264.
- [95] Ohly S, Fritz C. Work characteristics, challenge appraisal, creativity, and proactive behavior: a multi-level study. *Journal of Organizational Behavior*. 2010;**31**:543–565.
- [96] Shane S. *A general theory of entrepreneurship: the individual-opportunity Nexus*. Cheltenham: Edward Elgar; 2003.
- [97] Reynolds PD, Hay M, Camp SM. *Global Entrepreneurship Monitor 1999 Executive Report*. Kauffman Center for Entrepreneurial Leadership at the Ewing Kaufman Foundation; 1999.
- [98] Audretsch D, Acs ZJ. New-firm startups, technology, and macroeconomic fluctuations. *Small Business Economics*. 1994;**6**(6):439–449.
- [99] Djankov S, Ganser T, McLiesh C, Ramalho R, Shleifer A. The effect of corporate taxes on investment and entrepreneurship. *American Economic Journal: Macroeconomics*. 2010;**2**(3):31–64.
- [100] Bruce D, Mohsin M. Tax policy and entrepreneurship: New Time Series Evidence. *Small Business Economics*. 2006;**26**(5):409–425.
- [101] Roll R, Talbott J. Political freedom, economic liberty, and prosperity. *Journal of Democracy*. 2003;**14**(3):75–89.
- [102] Weymouth S, Broz JL. Government partisanship and property rights: cross-country firm level evidence. *Economics & Politics*. 2013;**25**(2):229–256.
- [103] North DC. *Structure and Change in Economic History*. New York: W.W. Norton & Co; 1981.
- [104] Rosenberg N, Birdzell LE. *How the West Grew Rich: The Economic Transformation of the Industrial World*. New York: Basic Books; 1986.
- [105] Rodrik D, Subramanian A, Trebbi F. Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*. 2004;**9**:131–165.
- [106] Acemoglu D, Johnson S. Unbundling Institutions. *Journal of Political Economy*. 2005;**113**(5):949–995.
- [107] Rutherford M. *Institutions in Economics*. Cambridge: Cambridge University Press; 1994.