

THE ROLE OF ENTREPRENEURSHIP IN REGIONAL ECONOMIC DEVELOPMENT: CHALLENGES IN MEASURING REGIONAL ENTREPRENEURSHIP

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Abstract:

This paper is a review on entrepreneurship, considered an important source of growth at regional level, as the theoretical literature concludes. However, empirical research results show an unclear contribution of entrepreneurs to economic development. The challenge for the empirical literature is to find the right proxies for entrepreneurship in order to capture the main features of entrepreneurial behavior that drive the success of business and have the potential to impact the regional economy. The paper reviews methodologies developed in the empirical literature focusing on indicators that measure entrepreneurship and on their capacity to include information about cultural background, risk attitude, innovative potential and other aspects that might influence the role of entrepreneurship on regional economic development. Based on the theoretical background, we make a critical evaluation of the efficiency of the synthesized indicators to capture the essential aspects of entrepreneurship.

Keywords: SME's, entrepreneurship, regional economic development.

JEL codes: R10, O10.

1. Introduction

The emerging interest in entrepreneurship and its capacity to influence economic growth appears in a context in which the development of information technology and communications has determined the occurrence of new business ideas, products and services. The connection between innovation and new small and medium enterprises and the fact that they positively influence each other's growth has become more evident and captured the attention of an increasing number of economists.

The focus on entrepreneurship as a key factor for economic development is becoming increasingly important because „individuals rather than large firms are the leading factor in new knowledge creation” (Szerb, et. al., 2013). Innovation is not anymore a characteristic of oligopolistic markets with high budgets for research and development, but rather a characteristic of small enterprises. Entrepreneurship develops and spreads innovation due to its flexibility, fast growth capacity, knowledge-transfer capacity and competitive environment. This can only be possible on free markets that do not limit the entry of new firms and allow unrestrained and consequently efficient allocation of resources.

The subject is of primary interest in the context of the Europe 2020 economic growth strategy, which includes complex measure to stimulate the dissemination of the valuable assets and growth potential embedded in regions towards the national level. The most efficient carrier of these benefits is entrepreneurship.

The purpose of this paper is to outline the advantages and disadvantages of the most widely used indicators that measure entrepreneurship based on the following criteria: the capacity to cover the most aspects mentioned in the acknowledged definitions of entrepreneurship, the capacity to attract benefits from the regional environment and the capacity to influence economic growth starting at regional level.

We begin by comparing the most commonly accepted definitions of entrepreneurship, we continue by explaining why the regional dimension is the

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appropriate dimension for analyzing entrepreneurship, tracing the most important components of the environment in which entrepreneurship is formed. On this ground we classify indicators for entrepreneurship and we outline their most prominent advantages and disadvantages. Finally we extract conclusions regarding the most important qualities that an indicator must have in order to include the majority of features that compose a class of growing, innovative, value creating and impact determinant entrepreneurship.

2. Defining entrepreneurship in the economic literature

Defining entrepreneurship is the first step in finding the right indicator to assess regional entrepreneurship.

Since the concept of „entrepreneurship” first appeared, it continuously evolved and started to have different senses in economic literature. Starting with the most simple meaning, an entrepreneur is someone who owns a business. But most economists add several qualities needed by someone who would be included in this category: risk takers in the perspective of profit making, uncertainty bearers (Knight, 1921), dynamic innovators (Schumpeter, 1934), anticipators of uncertain events such as demand (von Mises, 1949) or opposingly, spontaneous learners who identify and take advantage of new opportunities as they appear, innovators as developers of new products or new markets or methods of production (Hébert and Link, 2006) or creators of new combinations of ideas and resources (Landström, 2005). In most cases the concept of entrepreneurship is defined according to what it creates: value creation, job creation and knowledge spillovers (Szerb et. al., 2015).

Our purpose is not finding the most accurate definition of an entrepreneur, but the that of entrepreneurship as a dynamic economic phenomenon that determines economic growth.

Baumol (1990 and 1993) attributes a societal value to entrepreneurship because he considers that productive entrepreneurship together with human creativity are needed to combine resources in a profitable way. This results into economic growth and its catalysts can only be developed in a good institutional environment. Other authors attribute special attention to businesses with a completely different scope: those which do not aim at making a profit, but rather at making a social impact (Shockley and Frank., 2011).

In the view supported by this paper, entrepreneurship as a determinant of economic growth is not only the result of the activity of entrepreneurs as individuals, but also the impact of the institutional environment on the activity of entrepreneurs together with their capacity of adapting to this environment (find market opportunities).

The social networks in which entrepreneurs take part have a defining role for the success of the entrepreneur (Kloosterman and Rath 2001, p. 192), who, through these social networks, has access to key resources such as capital, knowledge, supplier and distribution networks, human resources. Combining these resources in a skillful way creates added value. This ability belongs to the entrepreneur. Moreover, certain authors believe that entrepreneurship develops better in an entrepreneurial culture (Andersson and Koster, 2011). Stough (2016) considers that governance and institutions together influence economic development through the impact that they have on entrepreneurship because they “define a county or region’s culture”.

Sousa (2013) classifies two types of definitions for entrepreneurship: functional and occupational, with the purpose of identifying the indicator that best includes firms that bring important economic value. Whereas the occupational definition comprises individuals that have small firms or who starts a new business, the functional definition

refines this category to small business owners that have an impact on economic development. The last definition is based mainly on several bibliographic references from the Austrian school of economics and retains only business owners that follow profit by taking market opportunities, are risk takers and innovative.

From a perspective that separates businesses that produce growth from those that do not, Baumol (1990) distinguishes between productive, unproductive and destructive entrepreneurship. Productive entrepreneurship creates new jobs, non-productive improve the income of the entrepreneur comparing to the situation when the same person was an employee. Destructive entrepreneurship happens when a business gains monopoly when the market is in a difficult situation, taking advantage on the consumers' liability (for example in conflict areas or areas that are recovering after natural disasters).

In the author's opinion, only productive entrepreneurship as defined by Baumol (1990) is the entrepreneurship that is consistent to the functional definitions characterized by Sousa (2013) because it is the only one that can produce economic growth based on innovation, improvement of business processes, creation of new products, introducing new business models, etc. Moreover, the increase in entrepreneurship and especially entrepreneurship that determines economic growth is mostly presented on free markets that allow business people to express creativity and where public investments are directed to stimulating innovation.

Resuming the definitions in the literature, we find that there is a general preoccupation for identifying the class of entrepreneurs who are more than business owners, having a positive impact on economic development. For that entrepreneurs need production factors, both tangible and intangible (R&D, human capital, knowledge, etc.), several personal qualities and a good environment to develop their businesses. Due to the variety and complexity of the factors, using a good indicator that best describes entrepreneurship remains a big challenge in the empirical literature.

3. The environment and its role in the development of entrepreneurship

Starting with Porter's (1990) diamond model that outlines several factors which determine the competitive advantage in geographic space and Marshallian agglomeration externalities, the focus moved on the environment in which entrepreneurship development increased. The access to specialized resources plays an important role for the success of a business. Creating the right environment to increase resource availability and quality and to ease the mechanisms for accessing these resources has become an important preoccupation in the regional policies of the European Union.

The European Commission defines two concepts related to the environment of entrepreneurship in the REDI (Regional Entrepreneurship Development Index) Report: (1) Entrepreneurship Ecosystems represents "entrepreneurship support policies and initiatives from policy perspective" and (2) Systems of Entrepreneurship means "entrepreneurial dynamic that ultimately drives productivity growth in regions" (Szerb, et. al., 2013).

These concepts, which complete each other, serve in the design of the entrepreneurship policies which are taken at regional level.

However, there are several economists that attribute a lower importance to the environment in which entrepreneurship develops, considering that innovation has a leading role and the capacity to innovate belongs to the entrepreneur him/herself.

The adaptability and flexibility of individual entrepreneurs is, in the author's opinion, by far higher than that of any institution (university or research center in case of innovation). This is in essence what entrepreneurship means: immediately allocating

resources where productive opportunities appear. Consequently, concerning measures taken to increase innovation, the establishment of the research direction in a very organized framework is too restrictive and might lead research results in a wrong direction or might simply limit them. In the author's view, the role of institutions in providing the available and specialized resources is to assure the freedom of entrepreneurial activity and the main setting that form the specialized education and public infrastructure in the same direction in which entrepreneurs tend to develop because they identify market opportunities. So institutions must act as private entities that respond to the customers' needs. For example Turkish Airlines realized the importance of the geographic position of Istanbul and identified the opportunity of an airline hub. So Turkey developed existing airports and built new airports which helped Turkish Airlines to follow its expansion strategy based on airport transfers/flight connections that could take place in Istanbul. So public spending was directed in investments that overlapped the development strategies of private companies based on productive opportunities identified by entrepreneurs. Henrekson and Johansson (2011) have a similar opinion about the role of the institutional framework. In the case of a protectionist environment which builds entry barriers of new firms or postpones the exit of underperforming firms, there are important delays in efficiently reallocating resources, which contradicts entrepreneurial behavior and damages the entrepreneurial activity.

4. The regional dimension used in assessing entrepreneurship and its impact on economic development

In the EU Commission entrepreneurship is not a phenomenon that evolves based solely on the actions of individuals, but also based on the context and the environment that the individual evolves in (Szerb, et. al., 2013) The EU Commissions studies regional entrepreneurship, considering the region to be the most specific environment. Variables at regional level are not only more precise – smaller than country level and reflect to regional externalities, agglomeration and spillover effects. The region is the administrative dimension where specific regulations exist, EU policies are designed, EU funds are directed, being also a territorial unit for which statistics are widely available and harmonized. Szerb, et. al. (2013) analyze the following categories of determinants of a high-quality entrepreneurs: (1) Spatial externalities (agglomeration economies, population growth, region size and market potential, industrial specialization, (2) Clustering, network and capital, (3) Education, human capital and creativity, (4) Knowledge spillovers, universities and innovation (knowledge spillovers, innovation, protection of property rights, finance) and (5) The state (government size, regulations, corruption).

All these determinants are important for the evolution of entrepreneurship and for the way it impacts economic growth. But the challenge regarding available statistical data is to find the right indicators that show how environment adapts to the specific needs of the entrepreneurs regardless of their origin and nationality: eliminating market barriers and also easing the access of entrepreneurs to specific resources (through regional policies that develop these resources).

Identifying the features of entrepreneurship that are regionally specific is important for finding the right indicator for entrepreneurship taking into consideration its potential to provoke economic growth starting at regional level. In the next paragraph we outline some of the main features of entrepreneurship that are regionally specific. We aim at providing arguments that the regional level is the most appropriate for

analyzing entrepreneurship because, in the author's opinion, it is the level where the impact on economic development first appears, ultimately spreading at national level.

The specification is that administrative divisions of regions (subnational level) are only tools to obtain statistical information and implement policies. However, the role of regional institutions is entirely relevant because their impact takes place at the same level where they act.

We identify the following components of regional entrepreneurial environment:

a) The firm density is an evidence that the environment is dynamic and it shows if the environment is developed or not. It belongs more to the occupational definition, without showing anything clear about the quality of the entrepreneurial environment.

b) Developed networks and the firm belongingness to a network or several networks brings market opportunities closer and speeds up reactions. They also allow a more efficient diffusion of resources. Networks are more likely to form at regional level because the embeddedness of an entrepreneur takes place in the immediate proximity, according to personal experiences, family relations, previous workplaces, etc.

c) The industry that is mostly developed in the region is more likely to release entrepreneurs in the same industry. Partly because of the knowledge that he/she has accumulated and partly due to the networks that he/she has embedded in. Herein adds the availability of specialized resources.

d) But because launching a business in the same industry means working in a competitive environment, the entrepreneur is stimulated to come up with a new business model, new type of strategy, new product, etc. In short, entering a well-known but competitive market allows success only to innovators. This is how innovation is also created in agglomerations which are spread on small geographic surfaces, generally belonging to regions.

e) The cultural affinity towards entrepreneurship is a factor that appears and develops at mostly at regional level. Its roots are in the historical background and the specific characteristics of people and communities of people. Risk attitude is also part of culture and a personal characteristic of the individual in the same time. The propensity and the personal skills for entrepreneurship develops in communities where small businesses are part of tradition. In time, some communities gained more sophisticated skills which drove to the development of larger businesses. Some entrepreneurial communities are newer, especially in businesses based on innovation, and young people evolve and are educated in such an entrepreneurial culture. It is important to mention that the cultural feature is the one that takes less into account the regional administrative borders.

f) The regional institutional framework shapes the entrepreneurial in a remarkable way through a wide range of channels which depend on the functionality of institutions and how public spending is channeled: education, infrastructure, level of bureaucracy, tax administration, functionality of public administration, cooperation projects between public and private entities, cross-border cooperation projects, etc. Nevertheless it is the national institutions and regulations that matter mostly, at regional level only secondary policies are developed, especially in the case of non-federal countries. For example: general taxes, the level of corruption, labor laws and regulations, bankruptcy legislation, and the openness of the economy is determined at national level (Acs et. al., 2013).

Due to these factors, the way that regional entrepreneurial climate forms over time tends to be perpetual and self-reinforcing. The influence goes both ways: entrepreneurs influence the environment and the environment impacts the future development of entrepreneurship.

The next section synthesizes the main indicators usually used to measure entrepreneurial environment. Afterwards we outline their advantages and disadvantages.

5. Indicators that measure entrepreneurship

The indicators that we outline in this section are different options to show either the level of entrepreneurship, the quality and dynamism of the entrepreneurial environment and they can also represent determinants of the development of future entrepreneurial initiatives. We classify these indicators according to the components of regional entrepreneurial environment that we identified in the previous section. We associated each indicator to one of the definitions of entrepreneurship formulated by Sousa (2013): occupational (*) and functional (**). Indicators that are not marked with stars measure the environment rather than entrepreneurship and, in the author's view, do not enter in any of the definitions of entrepreneurship.

Components of regional entrepreneurial environment	Indicators	The use if the indicator
Density	Number of small businesses (Malecki, 1994)*	Individual occupation, level of entrepreneurship, number of risk-takers
	Share of small businesses (Lee et al, 2004)*	Individual occupation, level of entrepreneurship, share` of risk-takers
	Number of new jobs created by small firms**	Job creation by entrepreneurs
Networks	Number of contracts of small firms (both suppliers and clients) or number of clients and suppliers**	How well connected firms are
	The number of new clients per year**	Dynamics of networks expansion
	Average employment period	The shorter the period, the employee makes new connections. This can also create difficulties for firms.
Industry	All the other indicators applied to a certain industry or the share of this industry on the whole*/**	A high number of firms in a certain industry indicates a competitive industry and can show a high differentiation of the products/services and a high innovation rate.
Innovation	Number of business (new or old) which entail innovation (Malecki, 1994)**	Filters and retains only innovative firms
	Number of firms that introduced product and/or process innovations**	Filters and retains only innovative firms
	Number of new products per small firm in a certain period of time**	Innovation frequency in small firms
	Number of new firms that have export activities**	Highly innovative firms are also export competitive. It also shows networking.
Culture	Average firm size – (Lazear, 2005)*	In what extent employers have been prepared for entrepreneurship because in small firms, employees are acquainted to diverse activities of the whole business organization
	Start-up rate (Canever et al, 2010)*	Shows that entrepreneurship is self-reinforcing and draws the culture of a community
Institutions and regulations	Firm entry: either completely new firms or branches or subsidiaries of existing firms (native from another region of the country or from another country)*	Free market or low entry barriers
	Average time to start a new firm	Bureaucracy that directly impacts firms
	Number of cooperation projects between small firms and public institutions**	How much are institutions acting as economic agents. It also shows the network embeddedness.
	Share of small firms as private providers of traditionally public services: health, insurance, public transportation, utilities,	The higher the number, the more liberalized the economy is and a less oligopolistic market.

	etc.**	
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Source: the table was compounded by the author.

The first observation is many of these indicators cover several categories of components of the entrepreneurial environment. This is an advantage because they express more than one characteristic of entrepreneurship, from those expressed in the definitions.

Some indicators belong more to the occupational definition of entrepreneurship (Sousa, 2013). They have the following advantages: easy to measure, easy to find in statistics, very clear what they include. Moreover, if the number of new companies grows, it means that the market conditions are favorable, more entrepreneurs anticipate success. Their disadvantages are: they do not distinguish between the types of firms from the perspective of their potential to influence economic growth, cannot distinguish between firms with different capacities to innovate and different results of their innovative activities, they do not show the dynamics (the growth potential).

The indicators included in the functional definition (Sousa, 2013) have the following advantages: they show the quality of entrepreneurship, in the analysis one can retain only the sample above a certain level that is expected to have the capacity to influence economic growth, they capture the innovative capacity and the capacity to take opportunities taken from the market, the institutional flexibility and the background. Their disadvantage is the short statistical data availability, the dependence on firm level data collected through surveys.

Even though the indicators relevant for the functional definition are more adequate for describing the entrepreneurial activity that has a substantial influence on economic development, it is hard to comprise all the characteristics and influences from the environment in one indicator.

6. Conclusions

Entrepreneurship has been measured in several ways in the economic literature in the attempt to evaluate its impact on economic development. First we explained why the regional dimension is the right level for such analysis. Then we established that the challenges come from the conditions that the indicator of entrepreneurship must meet: to include only small firms, with high growth potential and value creation potential and to include characteristics of the entrepreneurial environment because it provides the incentives for growth.

Synthesizing the most common indicators used in the literature we conclude the qualities of an indicator which captures regional entrepreneurship:

- It must comprise only entrepreneurial initiatives so it should exclude recently opened subsidiaries of large multinational companies. For example Fritsch and Mueller (2006) eliminate new businesses with more than twenty employees in the first year of their existence.
- Any indicator that is used must take into consideration as many as possible from the environment determinants of entrepreneurship: density, networks/connectivity, industry, innovation, culture, institutions and regulations.
- Stressing once again the importance of the environment, the start-up appearance and growth must be related to the size and economic potential of each region. So the entrepreneurship rate is preferred to absolute measurements.
- Even if the indicator takes into consideration the determinants, they must be carefully chosen to avoid misinterpretation. For example, there are significant limits when only small firms with R&D activity are used to prove innovation. The European Community Innovation Survey (CIS) shows that it is not mainly

the investments in R&D that determine innovation in small firms, but capital equipment and input-embodied innovation and design innovation.¹

- Connectivity is a key factor for the impact. If the entrepreneur is not well connected in environment the impact of his/her activity will be limited.

Finally, to capture more of the effects from the environment and to decant the entrepreneurship that determines growth, a composite index might be the most appropriate because even if, the outlined measurements meet several conditions at a time, none of them is thorough. To continue the research we plan to empirically test the impact of entrepreneurship on regional development using different alternatives of indicators, including composite versions, taking into consideration the conditions concluded by this paper.

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¹ Classifie, n., enhancing the competitiveness of smes through innovation.

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