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Entrepreneurship and Economic Growth – Conceptualization Choices in the Literature[4]

The literature agrees that entrepreneurship is linked to economic growth. Most research in this area seems to underline the positive relationship between the two. However, empirical studies often lead to little or even negative correlation. One of the reasons for the divergent research results is the differences in definitions and approaches used. The purpose of this article is to examine the definitions and conceptual models used in the literature and to show that there is no consensus among researchers. This fact suggests that great care is needed when evaluating and comparing research results from different sources.
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Introduction

The impact of entrepreneurship on economic growth and development has received considerable attention in the last few decades. It is linked to economic growth primarily through innovation, value creation and employment, but a number of other aspects (such as self-realization, market structure effects) are also at the center of interest. Nevertheless, empirical studies on the role of entrepreneurship in economic growth show mixed evidence (Stam 2008). This is partly due to the fact that each author uses different definitions, and the studies also use different variables and conceptual frameworks, making it almost impossible to compare the results of each work. To get an in-depth understanding of the question this paper aims to review the existing literature about entrepreneurship. The empirical evidence will be useful in identifying key ideas about the role of entrepreneurship in growth and in comparing the main results of these works. In addition, it will assist in finding further research topics and in selecting the most beneficial methodology. The structure of the study is the following: first the various ways in which entrepreneurship has been defined are introduced. This is followed by different structural frameworks for linking entrepreneurship to growth.

Entrepreneurship definitions

A unified definition of entrepreneurship has not yet been defined in the literature. Analysing and comparing various definitions is the first step in understanding the phenomenon.

The word entrepreneurship originated from the eighteenth century and was obtained from the French word "entrepreneur", which originally means someone who takes on a project or activity. Richard Cantillon[5] was the first to use this expression and in his work entrepreneurs were the prime directors of resources. Their occupations come with risks due to uncertainty, especially from competition and changing tastes. Hébert and Link (1989) analysed the entrepreneurship concept through three major intellectual traditions: the German Tradition (Thünen and Schumpeter), the Chicago Tradition (Knight and Schultz) and the Austrian

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[5] Cantillon completed his manuscript in 1730, but it was published only in 1755 and even then, it was published anonymously under the name of a defunct foreign publisher. The influence of Cantillon's manuscript was largely unknown and the book had fallen so far into neglect that William Stanley Jevons was said to have "rediscovered" it in the late 19th century (Cantillon 2010, p.15). For the English translation see: Cantillon 2010.

Tradition (Mises, Kirzner and Shackle), all of which are based on Cantillon's work, and created a "synthetic definition" of entrepreneur. They emphasize that entrepreneurship has a place in the world of economic dynamics and this fact brings aspects like imperfections, uncertainties, risk into the concept. During the conceptualization process we may sacrifice realism to gain precision. How much we can do this depends on what we want to achieve, to understand the foundations of economic life or to predict the course of events.

Maybe this trade-off is the reason why nowadays the discussion of entrepreneurship is complicated by its very complex nature and its lack of uniform definition. According to Kao (2002), entrepreneurship is a process in which something new or novel is created that serves the well-being of the individual, while also creating value for society However, entrepreneurship does not necessarily take the form of setting up a new business. As defined by the European Commission, entrepreneurship is a way of thinking, creating and developing an economic activity, combining risk-taking, creativity and/or innovation with appropriate management, within a new or existing organization (EC, 2003). In this sense, entrepreneurship can also be found within companies. The concept of intrapreneurship (Wennekers and Thurik 1999) or corporate entrepreneurship (Bouchard and Fayolle 2018) refers to the desire of large companies to achieve higher performance by increasing their entrepreneurial spirit. In increasingly turbulent and global environments, established firms cannot survive unless they are ready to be entrepreneurial (Bouchard and Fayolle 2018). Finally, the term "interpreneurship" implies that the entrepreneurial atmosphere and activities found in a family business are inherited from generation to generation (Kao 2002).

The concept of entrepreneurship has been extended with a new dimension, which is also of great importance today: social entrepreneurship. The key elements of this are public interest, social innovation and social justice (EC 2011). A social enterprise can be any type of organization as long as it has a social purpose and demonstrable social impact, as well as revenue from the market, sales or service provision (G. Fekete et al. 2017, Bereczk 2018).

It can thus be seen that the definition of entrepreneurship can be very varied. In the following, we attempt to examine what the focus of each definition is, and how the authors see the essence of the concept. We found three major focuses in the literature: entrepreneurship as the driver of innovation, entrepreneurship as opportunity recognition and entrepreneurship as the start-up process.

Entrepreneurship as innovation

According to Schumpeter (1980), entrepreneurs are the main triggers for economic development. He defines development as "the realization of new combinations" (Schumpeter 1980, 111), and the individuals whose function it is to carry them out are called entrepreneurs.
These new combinations (new products, new markets, new materials, and new forms of organizations) are the innovations themselves, according to Madarász (1980), there is a reciprocal and clear correspondence between innovation and entrepreneur in Schumpeter's work.
Drucker (1985) sees innovation as a specific tool of entrepreneurs, "the means by which they exploit change as an opportunity for a different business or a different service" (p. 19). Entrepreneurs need to search purposefully for the sources of innovation, the changes and the entrepreneur always searches for change, responds to it, and exploits it as an opportunity.
Miller distinguishes entrepreneurial and non-entrepreneurial firms. According to him, an entrepreneurial firm is one that "engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with "proactive" innovations, beating competitors to the punch" (Miller, 1983, p. 771). Meanwhile, he also emphasizes that entrepreneurship integrally related to variables of environment, structure, strategy, and leader personality.

Entrepreneurship as opportunity recognition

Other authors see opportunity recognition as a key element of the entrepreneurship concept. One scholar who is well known for acknowledging the concept of opportunity as a major element of entrepreneurship is Kirzner. As he wrote, "Entrepreneurship does not consist of grasping a free ten-dollar bill which one has already discovered to be resting in one's hand; it consists in realizing that it is in one's hand and that it is available for the grasping" (Kirzner 1973, p. 47).

According to Drucker (1985) the entrepreneur always searches for change, responds to it, and exploits it as an opportunity – this defines entrepreneur and entrepreneurship. In his view, innovation is a possible tool that helps exploit opportunities. Stevenson and Jarillo (1990, p.23) define entrepreneurship as frame of mind "by which individuals – either on their own or inside organizations – pursue opportunities without regard to the resources they currently control". This definition puts the focus on entrepreneurship as the pursuit of opportunity irrespective of organizational context (Brown et al. 2001). According to Shane and Venkataraman (2000), to have entrepreneurship, first entrepreneurial opportunities are needed. As the authors emphasize, the discovery of an opportunity is a necessary condition for entrepreneurship, but it is not sufficient – the decision about exploitation of the opportunity is also needed. They also state that entrepreneurship does not require, but can include, the creation of new organizations.

Entrepreneurship as self-fulfillment

The above approaches implicitly assume that entrepreneurship is driven to achieve business successes and the process itself is cognitive. However, some authors approach entrepreneurship from a behavioral point of view and emphasize its role of need for self-fulfillment (development, learning, meeting one's own challenge), independence and value creation in the entrepreneurial process. For example, Hamilton's calculations (2000) revealed that entrepreneurs had lower initial earnings, lower earnings growth and other disadvantages, and for them self-employment offers significant nonpecuniary benefits.
Founders who are driven by intrinsic (instead of extrinsic) motivation or who start a business to combine responsibilities, are better able to cope with stress and are more satisfied with their leisure time (Carree and Verheul 2012).

The GUESSS research[6] (Global University Entrepreneurial Spirit Survey) is the largest international collaboration dealing with entrepreneurial intention and student entrepreneurship that also addresses the individual level motivational factors (motives, preferences, social identity).

Entrepreneurship as business creation

Measuring opportunity recognition, innovation or motivational aspects of entrepreneurship is problematic. There is no question that the approaches described above (innovation, opportunity recognition, self-fulfillment) are relevant to the definition of entrepreneurship, but the enterprise- or individual- level approaches pose serious barriers to measurability, while business creation is easy to measure and easy to compile statistics about.

In part, perhaps, this is why some researchers identify entrepreneurship as setting up a new business. According to Lumpkin and Dess (1996) the essential act of entrepreneurship is new entry. This is a more measurable and quantitative way of definition. A typical example of it is the entrepreneurship definition of the Global Entrepreneurship Monitor (GEM). According to GEM, entrepreneurship is "any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (GEM Reports).

[6] The website of the research: http://www.guesssurvey.org/

The peculiarity of GEM research is that it deals not only with those who are already actually entrepreneurs, but also by examining entrepreneurial attitudes from the birth of the first ideas (nascent entrepreneurship).

The role of entrepreneurship in economic growth – models available in the literature

In the following, we will provide examples of what models and concepts the authors use to explain the relationship between entrepreneurship and economic growth. As we will see, the central elements of these can also be very diverse as is the methodology. Some researchers look at the relationship between business and economic growth by analyzing statistical data, others by relying on meta-analysis, and still others by extending existing macro-models.

Entrepreneurship: opportunity or necessity

It is very important what motivations the entrepreneur has. The difference between the performance and viability of a businesses created to take advantage of a good business opportunity and a business created because no better option exists can be significant. This is not only true at micro level. Whether the former, or the latter, is more characteristic of an economy is also decisive in terms of the impact of entrepreneurship on economic growth. GEM pays attention to these differences in motivations for starting a business and created separate measures of opportunity and necessity entrepreneurship[7]. These measurements allow a more accurate assessment of the relationship between entrepreneurship and economic growth.

Acs and Varga (2005) found that only opportunity entrepreneurship has a positive and significant effect on economic growth. Acs (2006) created an opportunity-necessity entrepreneurship ratio (using GEM data) and found a positive relationship between GDP per capita level of economies and this entrepreneurship ratio. Furthermore, he emphasized that self-employment, either in agriculture or in very small-scale industry, will not lead to economic development because there is no mechanism to link the activity to development.

Entrepreneurship and the stages of the development

At different stages of economic development, the nature of entrepreneurship (its motivations, size of the firm, etc.) and its contribution to economic growth vary. At low levels of national income, self-employment provides job opportunities. With increasing GDP per capita income, the emergence of new technologies and economies of scale allow larger and established firms to satisfy the increasing demand of growing markets and to increase their relative role in the economy. At the same time, the number of business start-ups decreases as people find stable employment. Finally, as further increases in income are experienced, the role played by the entrepreneurial sector increases again, as more individuals have the resources to go into business for themselves in a business environment that allows the exploitation of opportunities (Acs 2006). Policies and conditions also have to differ according to the actual development stage of the country.

The Global Competitiveness Report emphasizes that countries face challenges and priorities during the transition of economic development. It identifies three stages of development: the factor-driven stage, the efficiency-driven stage and the innovation-driven stage (Porter et al. 2002). Acs and Szerb (2009) showed the role of entrepreneurship during the different stages of development (Figure 1). The S-curve in the figure 1 suggests that in the factor-driven stage a relatively small amount of entrepreneurial activity is productive, that is, creates economic and/or social value. This increases sharply through the efficiency-driven stage and levels off in the innovation-driven stage of development. As institutions are strengthened, more entrepreneurial

[7] See the research website: https://www.gemconsortium.org/

activity is shifted towards productive entrepreneurship strengthening economic development (Acs and Naudé 2012).

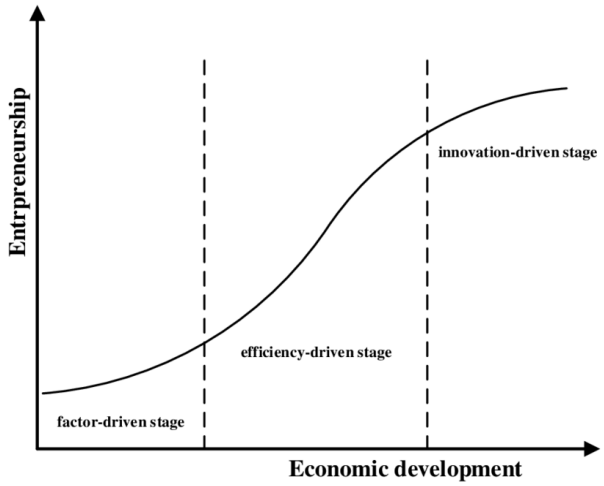

Figure 1. Entrepreneurship and the corresponding stages of economic development
Source: Acs and Szerb, 2009, p.10

By reviewing the literature on the relationship between development and entrepreneurship, Acs et al. (2008) came to the conclusion that the impact of institutional arrangements on various types of entrepreneurial activity may differ depending on a country's level of economic development. Countries in the factor-driven stage should focus on achieving stable institutional and macro-economic environments and increase entrepreneurial capacity, e.g., by enabling individuals and businesses to absorb knowledge spillovers. For countries in the innovation-driven stage, policy makers can positively affect entrepreneurship, including several ambitious types of entrepreneurship, by fostering entrepreneurship education and training, by stimulating outward FDI and international trade to facilitate export spillovers and by supporting role models.

According to the authors, a major shortcoming of GEM data has been the fact that it has not been able to effectively deal with the 'issue' of how to compare entrepreneurial activity in developed and developing countries. For example, low-income countries, such as Uganda, Peru and Ecuador, have very high levels of self-employment and therefore, have high levels of entrepreneurial activity as measured by the GEM program. High-income countries like Japan, Sweden and Germany have much lower levels of entrepreneurial activity as measured by the GEM program (Ács et al. 2008).

Van Stel et al. (2004) also used the GEM data of 34 countries to understand the relationship between growth and entrepreneurship. They found a significant non-linear effect: the Total Entrepreneurial Activity (TEA) rate[8] has a negative effect for the relatively poor countries, while it has a positive effect for the relatively rich countries. The results show that entrepreneurship matters; however, the effect of entrepreneurial activity highly depends on the level of development.

Entrepreneurship in the production function

The neoclassical model of the production function of Solow linked factors of production, labour and capital to output (Solow 1956). Romer and others have expanded the model to include

[8] The total entrepreneurial activity rate (TEA) is defined as that percent of adult population (18-64 years old) that is either actively involved in starting a new venture or the owner/manager of a business that is less than 42 months old (Reynolds et al. 2002).

measures of knowledge capital. Audretsch and Keilbach (2004) introduce a new factor into the model, this is entrepreneurship capital. Entrepreneurship capital is the capacity for economic agents to generate new firms. According to the authors, entrepreneurship capital "can contribute to output and growth by serving as a conduit for knowledge spillovers, increasing competition, and by injecting diversity" (Audretsch and Keilbach 2004, p. 9).

Using a specification of the Cobb-Douglas function, the authors created the following equation:

$$Y = \alpha K_G^{\beta 1} L_G^{\beta 2} R_G^{\beta 3} E_G^{\beta 4} e^{ei} , \qquad (1)$$

where

Y is measured as Gross Value Added corrected for purchases of goods and services, VAT and shipping costs,

K is the stock of capital used in the manufacturing sector,

L is labour (using data published by the Federal Labor Office),

R represents knowledge capital and was expressed as number of employees engaged in R&D in the public and in the private sector,

E is the entrepreneurship capital, computed as the number of start-ups in the respective region relative to its population, which reflects the propensity of inhabitants of a region to start a new firm.

G refers to Germany, where data was obtained from 327 German regions to undertake the study.

As the positive and statistically significant coefficients suggest, both physical capital and labor are important factors of production in determining output in German regions.

According to the calculations of the authors, entrepreneurship is a key factor in explaining variations in output across German regions. Regions with a greater degree of entrepreneurship capital have higher levels of output. Entrepreneurship capital is an important addition to the model of the production function. They also found that regions with higher entrepreneurship capital exhibit systematically higher levels of labor productivity. The authors believe that policies focusing on enhancing entrepreneurship capital can prove to be more effective than those targeting the more traditional factors (Audretsch and Keilbach 2004).

Entrepreneurship and institutions

The models presented above were macro models. They tried to describe the relationship between economic growth and entrepreneurship on the basis of macro or aggregated data. Accordingly, the definition of entrepreneurship has lost much of its complexity during the operationalization, in many cases being matched with the available enterprise statistics (number or proportion of enterprises). Below we present models that emphasize the need for simultaneous examination of the micro, meso and macro level due to the interdependencies and synergies between them.

Wennekers and Thurik, based on an overview of the literature, created a complex model for the illustration of entrepreneurship's impact on economic development. They provide a conceptual framework of three levels of analysis: individual, firm and macro-economic level (Figure 2).

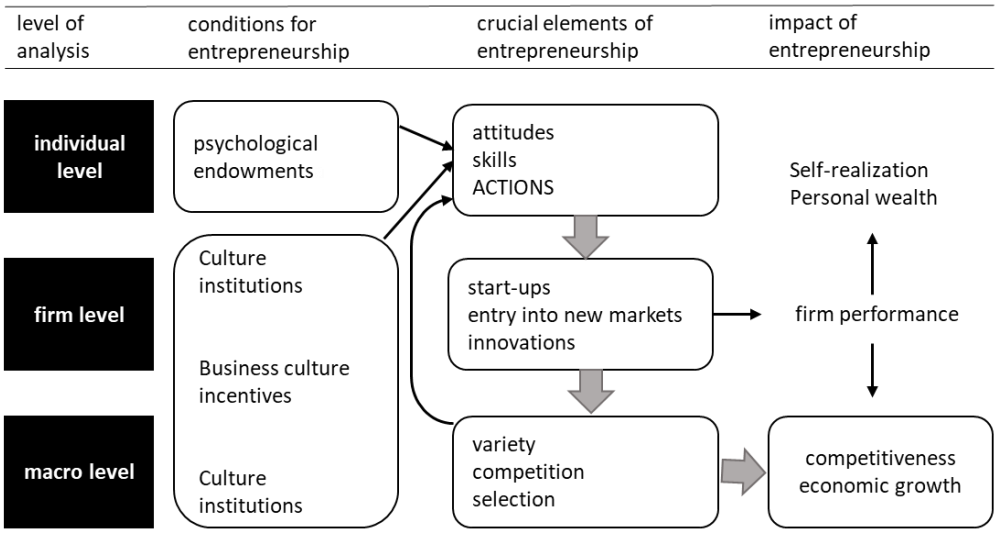

Figure 2. Framework for linking entrepreneurship to economic growth
Source: Wennekers and Thurik, 1999, p. 51

Besides psychological endowments of the population, conditions refer to the environment in which an individual carries out his or her entrepreneurial activities. It contains the national (or regional) cultural environment, and the internal culture of companies. The nature of the relationship between culture and entrepreneurship is still unknown, but according to the authors, cultural vitality, thriving sciences and a high tide in entrepreneurship often coincide. The institutional framework, both on the national level and within firms, defines the incentives for individuals to turn their ambitions into actions, and determines to what extent unnecessary barriers will hamper them. The importance of institutions for the development of entrepreneurship is paramount (Wennekers and Thurik 1999).

The model of the GEM is also worth mentioning. According to this framework, societal values about entrepreneurship include beliefs about entrepreneurship as a good career choice or the high societal status of entrepreneurs, which positively influence entrepreneurship. At the same time the ease of starting a new business promotes entrepreneurial activity. Individual attributes include demographic characteristics (gender, age, etc.), self-perceptions (perceived capabilities, perceived opportunities, fear of failure), and motives for starting a business (i.e., necessity versus opportunity). The social, cultural, political, and economic context directly influences entrepreneurship, and also indirectly affects it through societal values and individual attributes. Entrepreneurship, in turn, creates jobs and new value that then contribute to socio-economic development (GEM 2019).

Entrepreneurial activity encompasses multiple phases of the business process (nascent, new business, established business, discontinuation), potential impact (job creation, innovation, internationalization), and type of activity (such as total early-stage entrepreneurial activity or TEA, social entrepreneurial activity or SEA and employee entrepreneurial activity or EEA).

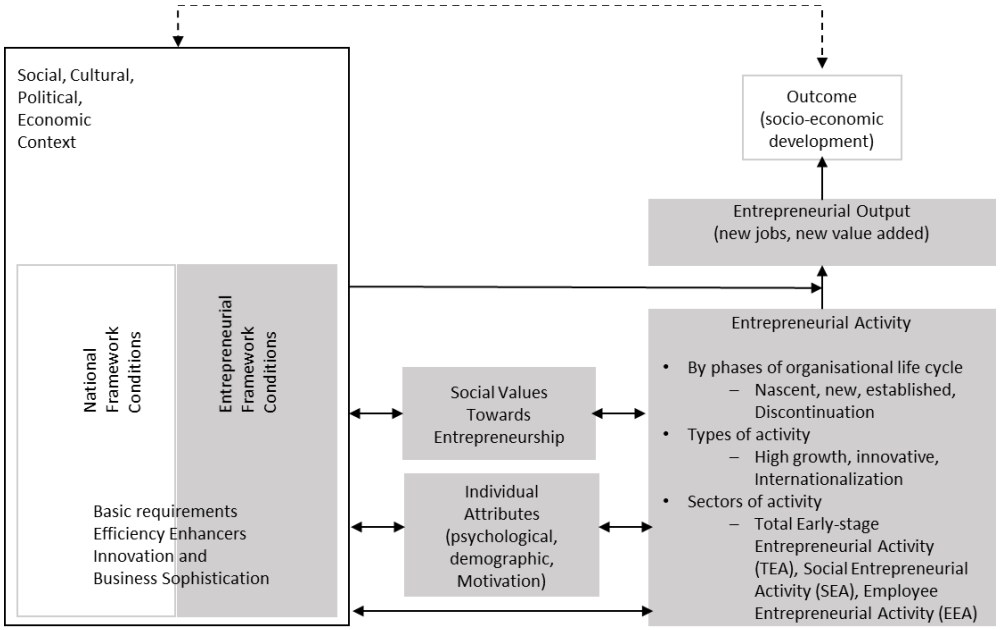

Figure 3. The GEM Framework
Source: GEM 2019

Entrepreneurial Ecosystems

Research suggests that the combined appearance of certain elements has a positive impact on business decisions and processes. The use of the term 'entrepreneurial ecosystem' is increasing in the literature (Isenberg, 2011). This term, taken from biology, refers to the interaction between living organisms and their environment. It is able to express the importance of the environment and the operational features of a complex system of relationships by establishing a link between the individual factors and elements.

The entrepreneurship ecosystem consists of hundreds of specific elements, but according to Isenberg (2011) these can be grouped into six domains: policy, finance, culture, support, human capital and markets.

The model of the World Economic Forum (2013) proposes eight pillars considered to make up an ecosystem: accessible markets; human capital and workforce; funding and finance; mentors, advisors and support systems; regulatory framework and infrastructure; education and training; major universities as catalysts; and cultural support.

Stam and Spigel outline a new business ecosystem model that incorporates elements identified in the literature and focuses on causation between the four most important ontological levels (framework conditions, systemic conditions, outputs, and outcomes) (Stam and Spigel, 2016) in response to frequent criticisms of ecosystem models. These criticisms concern the fact that the direction of causation is unknown (typically we only know that entrepreneurship and advanced ecosystems are related) and also the way in which each factor of the ecosystem interacts is not clear.

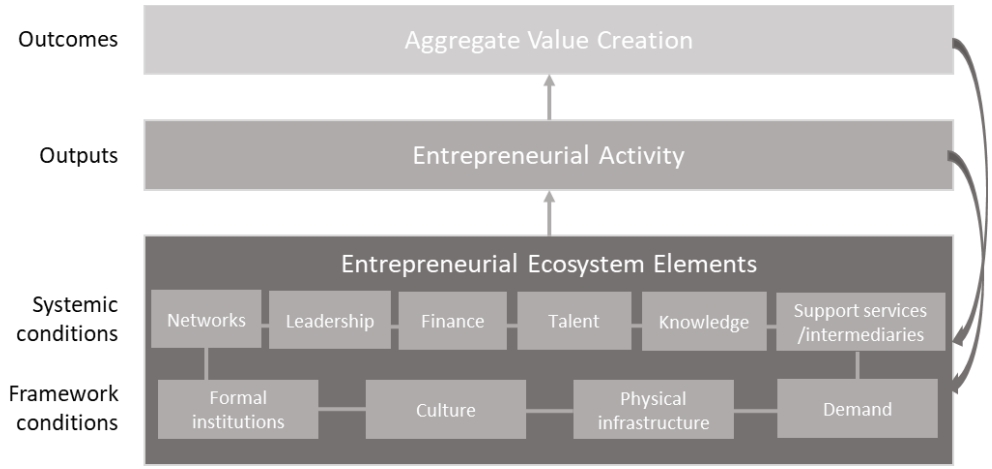

Figure 4. Key elements, outputs and outcomes of the entrepreneurial ecosystem
Source: Stam (2015) p. 1765

Examining the components of the ecosystem and evaluating their effectiveness may provide the opportunity for rational intervention, for changing the factors causing malfunctioning, namely for formulating policy recommendations (Szerb 2017). Acs et al. (2014) developed an index methodology, the Global Entrepreneurship and Development Index (GEDI), to highlight interactions between components of National Systems of Entrepreneurship that provide contextual grounding for entrepreneurial processes. According to the authors, this approach is useful in addressing the bottleneck problem of low performance of one or several constituent pillars and in focusing on the bottleneck that constitutes the weakest link amongst the pillars" (Acs et al. 2014, p.491). In 2016, the methodology was reviewed and renewed, leading to the index called the Global Entrepreneurship Index (GEI). The authors of the methodology view entrepreneurship as a concept of quality rather than quantity and they consider that both institutional and individual factors are vital in measuring entrepreneurship (Szerb et al. 2018).

Conclusion

Research results on the role of entrepreneurship in economic growth are often contradictory, a fact that is well known. By presenting some definitions of entrepreneurship and some conceptual frameworks, we were able to clarify that this is partly due to the fact that authors work with very different entrepreneurship concepts and develop different solutions during the operationalization. Some authors approach entrepreneurship with innovation, others with opportunity recognition, and others with a complex approach such as a combination of different factors like innovation, proactivity, risk-taking, development of new products, etc.

The complexity of approaches also raises measurement difficulties. First, the question is how to measure these factors credibly and how to transform them into macro data. The approaches whereby entrepreneurship is defined as running a business are easier to quantify. The advantage of these approaches is clearly that there is no obstacle to operationalizing the definition. While the macroeconomic measurement of innovation or opportunity recognition is a serious obstacle to making the concept measurable, measuring entrepreneurship as an entrepreneurial activity is very simple. We often encounter in the literature the problem that the authors apply a complex nominal definition (opportunity recognition, innovation, etc.) and then turn to a very simple operational definition (business density, ratio of start-ups) during the measurement.

Beside the individual aspects there are many other determinants that have a significant influence on the nature of the relationship between entrepreneurship and economic growth.

These are often overlooked in the literature as institutional factors (institutional economics), and sometimes we find the ecosystem approach in the literature. Both emphasize that formal institutions (education, taxation, economic policy) and informal determinants (culture, norms and values) influence the relationship between economic growth and entrepreneurship. We often find that these complex approaches remain within the theoretical framework of thinking. Research that has significant resources (large research teams and financial resources) can transform these theoretical frameworks into real measurements. This is the case with GEM, which, thanks to the Adult Population Survey (APS), can measure motivations and attitudes on an individual level. Once aggregated, they can be compared with macro data and can serve as a basis for international comparison.

As long as there is no uniform definition of entrepreneurship, it is difficult to compare research results. This requires the reader to be very careful in drawing conclusions from different studies.

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