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**Institutions and Entrepreneurship as Drivers of Development:
The Role of Entrepreneurial Knowledge.**

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Abstract

This paper presents a critical review of the fast-growing comparative research on the relationship among institutions, entrepreneurship and development. A special emphasis is drawn on the role of entrepreneurial knowledge when providing some insights about the incentives through which institutions affect entrepreneurship and growth. The aim of this dissertation is twofold. First of all, departing from the existing literature, to provide an overview on how institutions and entrepreneurship may influence the development of a country. Secondly, the analysis is brought forward by taking into account the importance of entrepreneurial education and training as drivers of growth. It is established a causality link between institutional quality, entrepreneurship and development, but it is also shown that institutions are the fundamental cause of differences in prosperity across countries.

Keywords: development, institutions, entrepreneurship, growth

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List of Acronyms

APS Adult Population Survey

CK Codified Knowledge

EEA Employee Entrepreneurial Activity

EK Entrepreneurial Knowledge

FDI Foreign Direct Investment

GEM Global Entrepreneurship Model

GDP Gross Domestic Product

NES National Expert Survey

NFC National Framework Condition

NSF National Science Foundation

OECD Organisation for Economic Co-operation and Development

R&D Research and Development

SEA Social Entrepreneurial Activity

TEA Total Early-stage Entrepreneurial Activity

TK Tacit Knowledge

TFP Total Factor Productivity

WEF World Economic Forum

U.S United States

“We cannot usefully model economic change until we understand the process. A good model entails a prior comprehension of the complex factors making up that process and then a deliberate simplifying to the crucial elements. Understanding is a necessary prerequisite missing in the economist’s rush to model economic growth and change.”

- Douglass C. North (Understanding the Process of Economic Change, 2005)

Introduction

The gap among average income levels in the world’s richest and poorest nations is incredibly large. Niger, the poorest economy for which we have national income statistics, has a per-capita GDP of \$427.4, compared to Norway \$97,299.6. What accounts for this enormous difference? Why do some countries achieve economic growth while others stagnate? What can be done in order to induce economic growth and improve the living standards in a society?

Although there is still little consensus on the answers to these questions, in the voluminous literature on this subject two strands of thought stand out. First, there is a long and distinguished line of theorizing that places its focus on institutions and more specifically on the role of property rights and the rule of law. This position is generally associated with Douglass North (1990) and Acemoglu, Johnson, and Robinson (2001). Other views deserving to be taken into account are also the ones of Rodrik, Knack and Keefer, and Mauro respectively focusing on the influence of institutional quality on economic growth, measured in terms of property rights, contracts enforcement and corruption. A second strand emphasizes the role of entrepreneurship as driver of economic growth. There is a consistent amount of literature to be taken into account as noteworthy in this field, including the works by Audretsch (1995), Klepper (1996), Jovanovic (2001), Acs (2006), van Praag and Versloot (2007).

The starting point of this paper is a critical observation of both approaches separately in an effort to assess each one's reciprocal validity. In the first chapter, an overview of the different definitions attributed to the concept of institutions, together with a deep investigation on the interplay between different institutional frameworks and economic development is provided. In the second chapter, the analysis proceeds by taking into consideration the role of entrepreneurship, by providing some insights on the various definitions of the notion of entrepreneurial activity. Then, it continues by exploring the methodology and information presented by the Global Entrepreneurship Monitor and

lastly, it investigates on the mutual causal relation between development and the entrepreneurial phenomenon, considering as well the drivers of the entrepreneurial process.

Subsequently, the analysis is brought forward in an attempt to reconcile these two strands, identifying institutions as the fundamental cause of development, as well as the main driver of entrepreneurship, and assessing the role of entrepreneurial activity as a proximate cause of development.

The purpose of this progressive system of analysis is to grant the means necessary to explore the impact of the three different relationships considered: first, the causality from institutions to development; secondly, causality from entrepreneurship to development; and finally, causality between institutions and entrepreneurship. This threefold classification is offered in order to shed light on the deeper determinants of economic development and to allow a clearer comprehension on why some societies innovate, accumulate, and hence develop, while others do not.

The third chapter illustrates the relationship between institutions and entrepreneurship by providing an overview of the recent empirical and theoretical evidence and evaluating the different impact of the relevant institutional factors on opportunity-driven and necessity-driven entrepreneurship.

Finally, the fourth chapter focuses very specifically on the role of human capital and entrepreneurial knowledge. By drawing the distinction between tacit and codified knowledge, this last chapter attempts to emphasize the centrality of entrepreneurial knowledge in the process of opportunity identification and exploitation, and consequently its significance in the improvement of both levels and quality of entrepreneurial activities and development.

1. Institutions

“Throughout history, institutions have been devised by human beings to create order and reduce uncertainty in exchange. Together with the standard constraints of economics they define the choice set and therefore determine transaction and production costs and hence the profitability and feasibility of engaging in economic activity. They evolve incrementally, connecting the past with the present and the future; history in consequence is largely a story of institutional evolution in which the historical performance of economies can only be understood as a part of a sequential story.”

- Douglass C. North (Institutions, 1991)

1.0 - A Brief Overview

The aim of this chapter is to set an introductory framework for the analysis. It is crucial to investigate deeply the main concepts concerned, so that the whole reasoning will flow smoothly on a solid base. First of all, the role of institutions in some of the major development theories is taken into account. The main objective here is first to provide a proper definition about what institutions are, in order to analyze their central role in the field of development and to further explore the connected relation with entrepreneurship in the subsequent sections.

1.1 - Why Institutions?

During the last twenty years, economic literature has progressively investigated the role of institutions in stimulating growth and facilitating economic transitions. Nevertheless, despite the attentions dedicated by heterogeneous branches of research to the correlation between institutions and growth, it still has not been reached a general consensus on which institutions matter and how they influence economic growth. The aim of this section is to provide a clear picture of the role of the institutions on economic development and to pinpoint specific institutional characteristics responsible for different economic outcomes. However, the objective pursued is not to provide an ideal and univocal institutional framework responsible for stimulating economic growth, but to highlight precisely that, even if there are some institutions essential to increase market development, there is no homogenous institutional structure able to produce the same effects in different countries and different contexts. Nevertheless, the analysis of the relationship between institutions and economic development is crucial in order to assess the link between institutions, development and economic growth.

The claim that institutions matter has received strong support in the recent literature. In the field of political economy, the existence of an institutions-to-growth link started gaining momentum from the mid 1990s. The articles published respectively by Stephen Knack and Philip Keefer and then by Paolo Mauro (“Institutions and Economic Performance” and “Corruption and Growth”) signed the beginning of a new generation of research dedicated to testing the proposition that institutions do matter for economic performance in a cross-country setting. Knack and Keefer (1995), relying on data for up to 97 countries for the period 1974-89, focused on the role of property rights and contract enforcement regulation, in order to establish that the quality of institutions is crucial to stimulate growth and investment. On the same strand, Mauro (1995) analyzed the negative relation between corruption and economic growth, concluding that institutions do matter in determining the economic performance of countries. In the same fashion, Alesina (1998), measuring institutional quality through bureaucratic efficiency, the presence of the rule of law, protection of property rights and absence of corruption, proved that an efficient institutional structure is crucial to support growth.

Taken together, the above-mentioned generation of research, dedicated to testing the causal nexus between institutional framework and economic growth in a cross-country setting, represented a major breakthrough in empirical research about economic development. “Moreover, the existence of an institutions-to-growth link has appeared to address some of the anomalies of old and new growth theories, which were not able to explain the absence of general convergence or why the most rapid growth tends to occur in a subset of low-income countries” (Olson 1996; Knack 2003). In addition to this, contemporary and subsequent literature seemed to provide support to these findings, even if not unanimously. For example, North stressed out the role of secure property rights and effective contract enforcement in creating the political conditions for growth and prosperity.

“Institutions provide the incentive structure of an economy; as that structure evolves, it shapes the direction of economic change towards growth, stagnation, or decline.” (North, 1991)

This new orientation towards the institution-to-growth link was also highlighted in the World Development Report 2002 “Building Institutions for Markets” which focused on the conditional institutional convergence: relatively poor countries may undergo rapid growth if they adopt good institutions. But, even if standardized institutional settlements are created for accomplishing identical objectives, this does not mean that similar institutions, set in two different countries, affect their respective economic, political and social system in the same way. On the contrary, institutions can lead their countries to different outcomes in terms economic performance. However, the fact that identical institutions set in different countries can lead to different results does not imply the non-

existence of some institutions essential to stimulate economic growth. Rather, it underlines that it is not sufficient to just export an institutional receipt in order to stimulate growth, but that complementary adjustments in the political, economic and social contexts have to be undertaken in order to ensure the effectiveness of the institutional structure. In the words of Douglass North: *“economies that adopt the formal rules of another economy will have very different performance characteristics than the first economy because of different informal norms and enforcement. The implication is that transferring the formal political and economic rules of successful Western economies to third-world and Eastern European economies is not a sufficient condition for good economic performance.”* (North, 1994)

In the light of the growth of the institutional issue’s leading role, these findings uncovered a methodological problem concerning what the term “institutional” effectively meant. In the next section, I intend to investigate and elaborate on the role of institutions in the performance of economies by providing an overview on the different definitions of institutions and measurements of institutional quality.

1.2 - Definition and Measurement of Institutions

In order to conduct an analysis on the relationship between institutions and economic growth, an appropriate definition of institutions is needed. Douglass North argues that:

“Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic. Institutional change shapes the way societies evolve through time and hence is the key to understanding historical change”. (North, 1990, p 3)

There are three main features of institutions in this definition that deserve to be highlighted: first of all, they are “humanly devised” and thus the result of the collective choice of the society; secondly, they are at the same time, both “the rules of the game” and “constraints” on human behavior; and finally, their impact is expressed through incentives. These are the key features responsible for the economic outcome in a given country.

Douglass North’s definition of institutions is useful for a preliminary understanding of the institutional context, but it can also be considered very broad since it incorporates many components of the economic, political and societal organization of a society. As such, it does not provide by itself sufficient information to investigate the fundamental causes of the tremendous cross-country

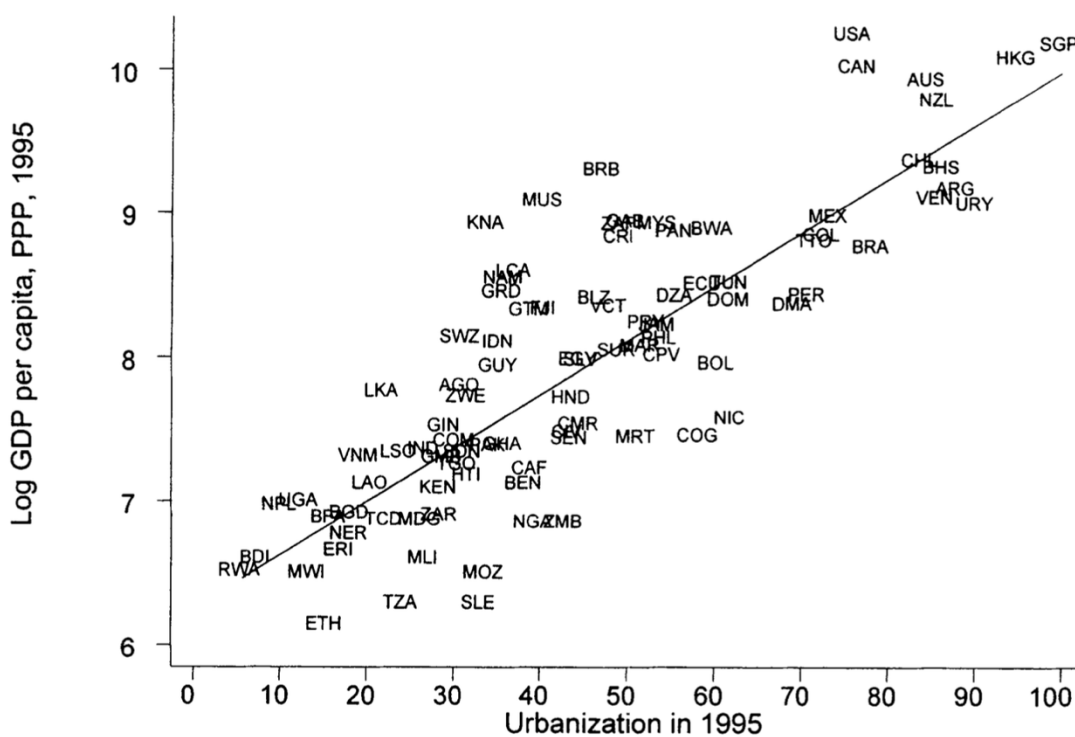
differences in the way economic and political life is organized. The aim of this section is thus to identify which institutional characteristics are responsible for these differences. This broad definition of institutions is therefore only a starting point to be followed by a deeper analysis.

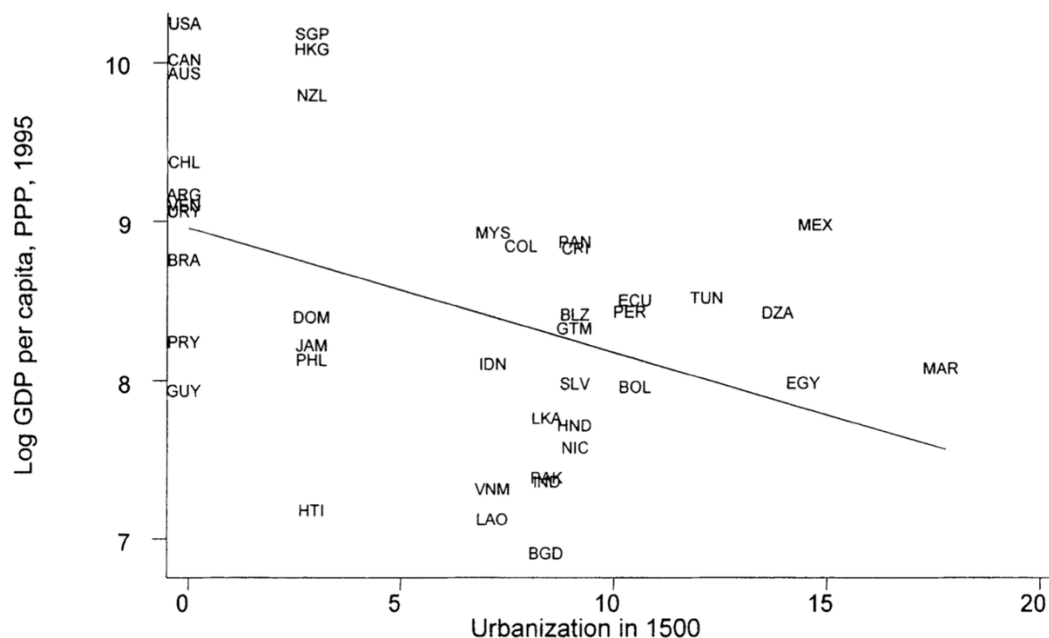
In order to have a better understanding of the concept of institutions it is important to make some distinctions: firstly, between political and economic institutional settlements and secondly, between formal and informal ones. On the one hand, economic institutions, such as property rights or contract enforcement procedures, are responsible for shaping economic incentives, by regulating contracting possibilities and influencing the allocation of resources. Political institutions as the form of government, the presence of constraints on politicians' elites and of the separation of powers, on the other hand, determine political incentives and the distribution of political power. Moving on, when we talk about formal institutions we refer to those rules which are codified, for example in a constitution. Instead for what concerns informal institutions, they denote customs related to how formal institutions are used to distribute of power, determine social norms, and avoid social conflicts/maintain equilibrium. In this context, the main determinants of significant institutional cross-country differences are: (1) the enforcement of property rights; (2) the legal system; (3) the corruption rate; (4) the form of government (e.g. democracy vs. dictatorship); (5) the nature of the constraints on politicians and political elites.

Assessing the role of institutions on economic growth is not an easy task. Indeed, the latter develop following different paths among societies, but in some cases it is possible to distinguish specific similarities suggesting the presence of a common determinant which influenced the overall development of one or more countries. One example in this context is presented in the works of Acemoglu, Johnson, and Robinson (2001). They examined the institutional path in a large number of colonies, especially those in Africa, Central America, the Caribbean, and South Asia, from the late fifteenth century, in which European powers set up "extractive states". This kind of institutional structure did not involve almost any protection of property rights nor provided a system of check and balances against the government. In fact, the definition of extractive state relies precisely on this type of institutional arrangement installed in the colonies where Europeans did not settle, in order to facilitate the process of extraction of resources in the short run. The evidence in Acemoglu, Johnson and Robinson (2002) points out that it was in the densely-settled and relatively-developed areas that Europeans had the incentive to install the worst institutions, namely those facilitating the extraction of resources without any respect for property rights.

Nevertheless, the result of this colonization strategy was the long term phenomenon defined by Acemoglu, Johnson and Robinson (2002) as the reversal of fortune. The reversal of fortune refers to the tendency among the formerly relatively rich countries colonized by European powers from 1500 to be at present times relatively poor, while poor ones grew rich thanks to the introduction of institutions encouraging investment. In other words, European dominance coincided with the imposition of different institutions and social power structures in different parts of the world, depending on whether or not colonizers were to be subjects themselves of the institutional structure. Acemoglu, Johnson and Robinson (2002) empirical evidence documenting the reversal of fortune in the less developed civilizations of North America, Canada, New Zealand and Australia, confirms their hypothesis emphasizing the importance of institutions of private property in encouraging productive opportunities, investments and thus economic growth.

Figure 1. Log GDP per Capita in 1995 against the Urbanization Rate in 1500 and 1995





Source: Acemoglu, Johnson and Robinson, 2002

The above figures display the institutional reversal resulting from European colonialism, using data on urbanization patterns as proxies for economic prosperity, both in 1500 and in 1995. Even if the theoretical relation among urbanization and economic prosperity is extremely complex, it is clear that there is a positive correlation between urbanization and GDP per capita in 1995 and a negative one between the 1500 and 1995. In other words, the introduction of institutions encouraging investment in poor regions by European colonizers in 1500 resulted in future economic prosperity in the very same areas around 1995.

Therefore, on these premises it is clear that according to Acemoglu (2008), the main determinants of cross-country differences in income per capita are differences in economic institutions. Indeed, though institutional structures are tough to change and endure for long periods of time, often with unforeseen and unplanned consequences, different institutional arrangements across countries are still the result of different collective choices. These choices are the outcome of long-standing and deep-rooted political and social challenges, which are responsible for shaping each national institutional framework. Therefore, different collective choices are the reflection of differences in political environments and of heterogeneous distributions of power. The past influences the present and future, therefore, it is essential to clarify the way in which collective choices affect incremental institutional change and the nature of path dependence of a given country. As a result, understanding both

development and underdevelopment entails understanding why different countries either reach economic growth or get stuck in political equilibria that result in bad economic institutions. In order to puzzle out the issue of development, a clear discernment of the instruments necessary to move a society from a bad to a good institutional equilibrium is essential. Countries can reform their institutions as a result of collective choices and move from stagnation to growth.

1.3 - Do Institutions Cause Growth?

“It has been already demonstrated that economic institutions (such as property rights, regulatory institutions, institutions for macroeconomic stabilization, institutions for social insurance, institutions for conflict management, etc.) are the major source of economic growth across countries” (Rodrik 2007).

Following these premises, it is clear that economic concepts such as incentives, competition, fiscal sustainability, contract enforcement and property rights do not correspond directly to institutional forms, but are some of the main components embedded in the notion of economic institutions. The latter, together with the standard constraints of economics, is responsible for significantly influencing investments in physical and human capital, technology, and the industrial production process. Indeed, economic institutions retain a crucial role in determining production costs and in reducing transaction costs, so that potential gains from trade become realizable. Moreover, as it has already been said, they are also important determinants for economic growth other than being decisive elements in the distribution of resources. In other words, economic institutions are responsible for determining the profitability and feasibility of engaging in economic activity (North, 1991).

Dani Rodrik (2002) in order to understand the differential performance of economies through time used, as measurement of institutional quality, a composite indicator of a number of elements that capture the protection afforded to property rights as well as the strength of the rule of law. According to him: “the presence of clear property rights for investors is a key, if not the key, element in the institutional environment that shapes economic performance” (Rodrik, 2002). The results of his study pointed out that when investors are convinced that their property rights are protected, average investment increases and the whole economy experiences growth. Still, nothing in Rodrik’s analysis implies a preference for which form property rights should take. Taking into consideration the experiences of China and Russia, he points out that it cannot be concluded that enforcing a private property-rights regime would produce better results than alternative forms of property rights.

To conclude, when investigating about the fundamental causes of cross-country income differences, “economists have a difficult time arriving at unanimous agreement, but there are some general principles where they are able to find common ground. It is agreed that incentives matter and that the institutional environment in which the economic agent acts serves as an incentive structure which guides and influences action. Moreover, it is widely agreed that the entrepreneur is the catalyst of economic progress” (Boettke and Coyne, 2003).

2. Entrepreneurship

" For many commentators this is the era of the entrepreneur. After years of neglect, those who start and manage their own businesses are viewed as popular heroes. They are seen as risk-takers and innovators who reject the relative security of employment in large organizations to create wealth and accumulate capital. Indeed, according to many, economic recovery ... is largely dependent upon their ambitions and efforts."

- Robert Goffee and Richard Scase (1987)

2.0 - A Brief Overview

The concept of entrepreneurship represents a crucial and enchanting component of recent economic history. Two main features of entrepreneurship require to be highlighted in order to reach a clear understanding. Firstly, the economic community has recognized the central role of entrepreneurship as one of the fundamental drivers of economic growth. Secondly, notwithstanding its central role in economic development, research on entrepreneurial activity occupied scholars for many years and, indeed to this day, there is still no consensus on of its exact meaning.

Indeed, it was in the last two decades that entrepreneurship's critical role in stimulating a country's economic growth has been highlighted. The compelling image of entrepreneurship as an ambiguous and enigmatic phenomenon has stimulated a consistent level of interest and a great number of studies in the relevant fields of research. Despite the significant commitment of scholars in providing definitions of entrepreneurship, as of today, there is not a definition which is commonly shared.

When addressing the topic of entrepreneurship, there are several essential concepts and interrogatives which need to be clarified, such as: "What makes an entrepreneur?", "Does entrepreneurship contribute to economic growth?", "What determines cross-country differences in levels of entrepreneurial activity?". In the next sections of this chapter, I will seek to examine the answers to these and other questions, by taking into analysis different academic readings.

2.1 - Solving Some Definitional Problems About Entrepreneurship

Notwithstanding the conspicuous number of academic efforts which attempted to provide a clear and inclusive image of entrepreneurship, the latter has remained an ambiguous and complex concept to

define. In order to reach a deeper understanding of this phenomenon, in this section I will seek to provide an overview on how entrepreneurship has been studied in the relevant literature, both in terms of definitions and measurement.

The word entrepreneur originates from the French word “*entreprendre*” meaning “to undertake”. Therefore, seen in a business context, entrepreneurship means to start a business. The first to make reference to the entrepreneurial process was the Irish-French economist Richard Cantillon, around 1730. According to him, entrepreneurship corresponded to any sort of self-employment and involved risk as a key variable, implying that the entrepreneur is the one “who bore the risks associated with purchasing inputs at a given price to produce and sell later at an uncertain price” (Cantillon, 1755).

Subsequently, in the economic field, many scholars have refined on Cantillon definition, contributing to the elaboration of different aspects of entrepreneurship. For example, another French economist and businessman, Jean-Baptiste Say, expanded Richard Cantillon’s idea and defined the entrepreneur as an Organiser of a business (Hollander, Samuel, 2005). On the same strand, according to Frank Knight (1921): “Entrepreneurs attempt to predict and act upon change within markets, taking the role in bearing the uncertainty of market dynamics. Entrepreneurs are required to perform such fundamental managerial functions as direction and control”. These two definitions highlight another feature to be added to the picture of the entrepreneur as a risk-taker, namely its leadership capacity in the organization and management of a business.

Nevertheless, the turning point, representing the expansion of the notion of entrepreneurship, was reached by Joseph Schumpeter in 1934. His theory centered the attention around the role of entrepreneurial innovation as the key driver of economic growth. “The entrepreneur is the innovator who implements change within markets through the carrying out of new combinations. The carrying out of new combinations can take several forms: 1) the introduction of a new good or quality thereof, 2) the introduction of a new method of production, 3) the opening of a new market, 4) the conquest of a new source of supply and new materials and parts, 5) the carrying out of the new organization of any industry” (Joseph Schumpeter, 1934). Schumpeter’s definition therefore widens the concept of entrepreneurship by introducing a new variable: innovation. In this context, innovation is perceived as the process of identifying market opportunities and using innovative approaches to exploit them in a business context. A key element to be highlighted here is the role of the entrepreneurial activity in moving the market away from the equilibrium. In fact, according to the Schumpeterian view: “the economic system was conceived as a closed circular flow, being in a state of equilibrium through the continuous reiteration of the flows between buyers and sellers” (Schumpeter, 1934).

Schumpeter's stress on innovation has received strong support, as numerous subsequent scholars drawn their definitions starting from his interpretation. For example, Bolton and Thompson (2000) have defined an entrepreneur as "a person who habitually creates and innovates to build something of recognized value around perceived opportunities". On the same line, Shane & Venkataraman consider an entrepreneurial opportunity as: "an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes, and raw material through organizing efforts that previously had not existed" (Shane & Venkataraman, 2000; Venkataraman, 1997).

The other breakthrough view about entrepreneurship, deserving to be discussed, is the one of Israel Kirzner: a scholar of the Austrian school. Kirzner refined the academic understanding of entrepreneurship by offering a distinctive view, contrasting with the Schumpeterian one, which conceived the entrepreneurial activity as an equilibrating process, driven by the entrepreneur's alertness to profit from uncharted advantages of opportunities. For Kirzner, alertness, and therefore discovery, is characterized by "knowing where to look for knowledge" (Kirzner, 1973).

To sum up, while the Schumpeterian view conceives the figure of the entrepreneur as an innovator destroying the economic equilibrium, Kirzner's entrepreneur is prompt to arbitrage and exploit unexplored opportunities, directing the market towards equilibrium.

As we have seen, the concept of entrepreneurship has a wide range of meanings. Taking into consideration also the contribution of more recent studies, focusing on the entrepreneurial activity, what continues to stand out is the uncertainty revolving around this topic. This ambivalence has been expressed by economic actors with the employment of always different and sometimes contrasting definitions of the term. For instance, in the 1997 Economic Survey of the Organisation for Economic Co-operation and Development (OECD) entrepreneurship was defined as "the dynamic process of identifying economic opportunities and acting upon them by developing, producing and selling goods and services". In 'Fostering Entrepreneurship', the OECD's book part of the Jobs Strategy, the concept of entrepreneurial activity was defined as "...the ability to marshal resources to seize new business opportunities". In a publication on Youth Entrepreneurship of 2001, the figure of the entrepreneur was equated to the one of someone who is self-employed, namely: "an entrepreneur is anyone who works for himself or herself but not for someone else". Finally, in 'Drivers of Growth' being another 2001 OECD publication, it has been stated that "the concept of entrepreneurship generally refers to enterprising individuals who display the readiness to take risks with new or innovative ideas to generate new products or services".

Entrepreneurship is a very complex phenomenon and individuals attach different meanings to this word. According to the definitions provided, the entrepreneur, on the one hand, is a person possessing management skills and characteristics apt to pioneer change and innovation, while taking risks. On the other, anyone who is self-employed could be considered an entrepreneur. Nevertheless, as a result of this chronological perspective, even if it is clear that confusion and contentions continue to subsist around this notion, a number of commonalities emerge. The definitions examined so far should be considered as complementary to each other, rather than distinctive and antagonist. Indeed, many recognize that entrepreneurs seek to generate value, some stress out their risk-taking attitude, others the role of innovation and, others highlight the arbitrage role of the entrepreneur. Eventually, it could be suggested that any entrepreneurship indicator should make reference to the value generated by entrepreneurial activities, either through the creation, change or expansion of a business or by identifying new products, processes or markets and profiting from them.

2.2 - The Global Entrepreneurship Monitor

The Global Entrepreneurship Monitor (GEM) is the world's foremost study of entrepreneurship. It is a multi-country survey effort initiated in 1999 with 10 countries as a joint project between Babson College (USA) and London Business School (UK). Nowadays, this program covers both developed and developing countries. The GEM's Global Reports track rates of entrepreneurship and assess the main features, motives, and ambitions of entrepreneurs, while taking into account the attitudes of different societies towards this activity. In the 2015/2016 GEM Global Report, it is possible to find high quality data based on 60 economies completing the Adult Population Survey (APS) and 62 economies completing the National Expert Survey (NES). The latter is an extremely comprehensive report and an incredibly useful tool to enhance the understanding of the entrepreneurial phenomenon. At the beginning, its aim was only to reach an inclusive understanding about why some countries are more 'entrepreneurial' than others. However, nowadays, GEM's Reports correspond to the richest resource of information about entrepreneurship, both at global and national level.

The GEM project is radically distinctive from other entrepreneurial indicators for it provides data consistent across countries. In fact, not only it is capable of tracking informal entrepreneurial activities which official statistics do not capture, but one of its major strengths is the uniform application of definitions and data collection across countries, resulting in more straightforward and detailed international comparisons. Indeed, whilst all countries individually collect official data on entrepreneurial indicators, such as the rate of self-employment and the size of distribution of firms, almost none of these registry sources would be comparable across countries. These categories of

official data sources provide different sets of definitions of relevant variables, therefore making cross-national comparisons almost impossible.

Nonetheless, a major, but past, shortcoming of the GEM project has been its inability to address the issue of comparisons of rates of entrepreneurial activity between developed and developing countries. At the heart of the question lies the fact that, as measured by the GEM program, in low-income countries, like Uganda, Peru and Ecuador, results accounted for very high levels of self-employment and therefore of entrepreneurial activity; while in high-income countries, like Japan, Sweden and Germany, GEM data showed much lower levels of entrepreneurial activity. The solution devised by GEM researchers to these incongruences was to distinguish between opportunity and necessity entrepreneurship. The former refers to the development of a business in order to exploit a perceived business opportunity, while the latter to start a business only because one is pushed into it. In collecting data both on opportunity and necessity entrepreneurship, the resulting data accounted for higher levels of both measures in developing countries, compared to developed ones. However, another factor deserving to be taken into account corresponds to the likelihood that the answers of many respondents could have been distorted by the enticement to argue that they are pursuing a business opportunity, rather than admitting of having been pushed towards entrepreneurship (conceived as self-employment) because they had no other option. “Moreover, the relationship between necessity entrepreneurship and economic development is most likely negative in low-income countries, as it is most likely positive in high-income countries. This must be further balanced by the fact that some low-income countries, like India and China, have high levels of opportunity entrepreneurship, at least in certain parts of the country, and countries like Japan have very low levels of opportunity entrepreneurship and low growth” (Acs Z. J., 2007). As a result of these inconsistencies, from the 2004 Global Entrepreneurship Report, the opportunity-necessity ratio was used as a composite indicator of entrepreneurial activity and economic development.

The 2015 GEM survey saw the participation of sixty-two economies and was responsible for ranking them according to the stage of economic development and on the base of their global geographic regional structure. The classification structure of these economies that was made on the basis of the level of economic development was adapted from the World Economic Forum (WEF). Whereas, the classification by geographic region was adapted from the United Nation’s composition of the world’s macro geographical regions. The data collected in each economy relied on primary data of an Adult Population Survey, consisting of at least 2,000 randomly selected adults between 18–64 years of age. Lastly, through a National Expert Survey, experts’ opinions about different components of

entrepreneurship are collected by national teams.

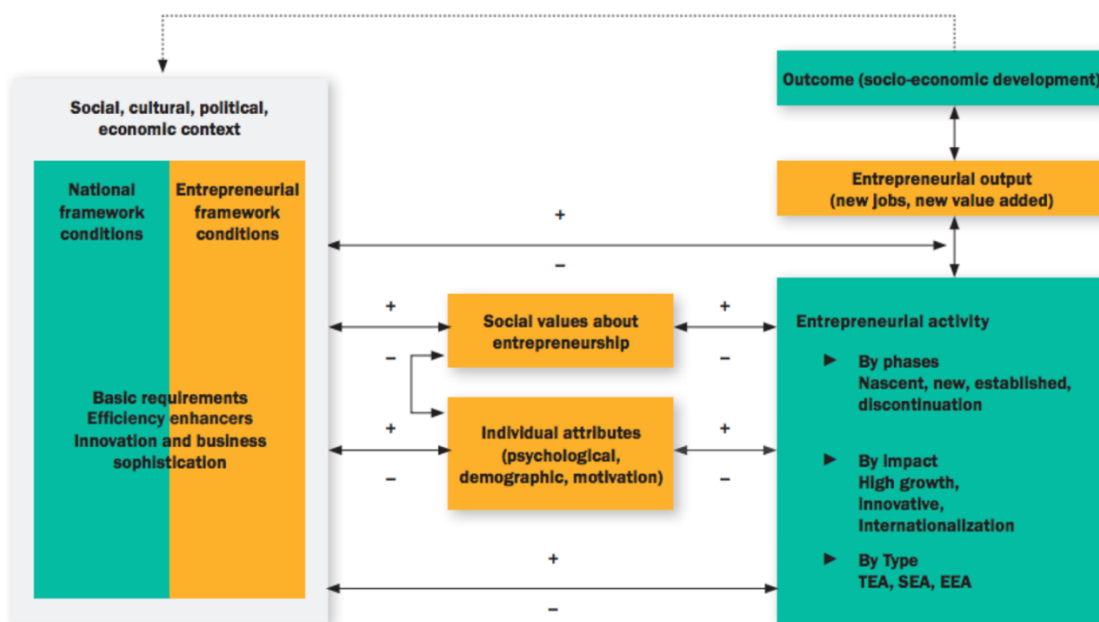
The GEM conceptual framework is capable of portraying the multiple sides of entrepreneurship, while taking into account and acknowledging the proactive, innovative and risk-responsible entrepreneurial attitudes of individuals and the impact of national contexts on entrepreneurial activities. Indeed, what is particularly relevant is GEM’s conceptualization of the interdependent relation between entrepreneurship and economic development.

“In this respect, the GEM survey:

- ▶ Uncovers factors that encourage or hinder entrepreneurial activity, especially related to societal values, personal attributes and the entrepreneurship ecosystem.
- ▶ Provides a platform for assessing the extent to which entrepreneurial activity influences economic growth within individual economies.
- ▶ Uncovers policy implications for the purpose of enhancing entrepreneurial capacity in an economy.” (GEM 2015/16 Global Report)

“The starting point of the first GEM model was the recognition that, in order to implement new business activity, there was a need to set up a series of entrepreneurial conditions and both entrepreneurial capacities and opportunities” (Amoros and Bosma, 2014).

Figure 2. The GEM Conceptual Framework

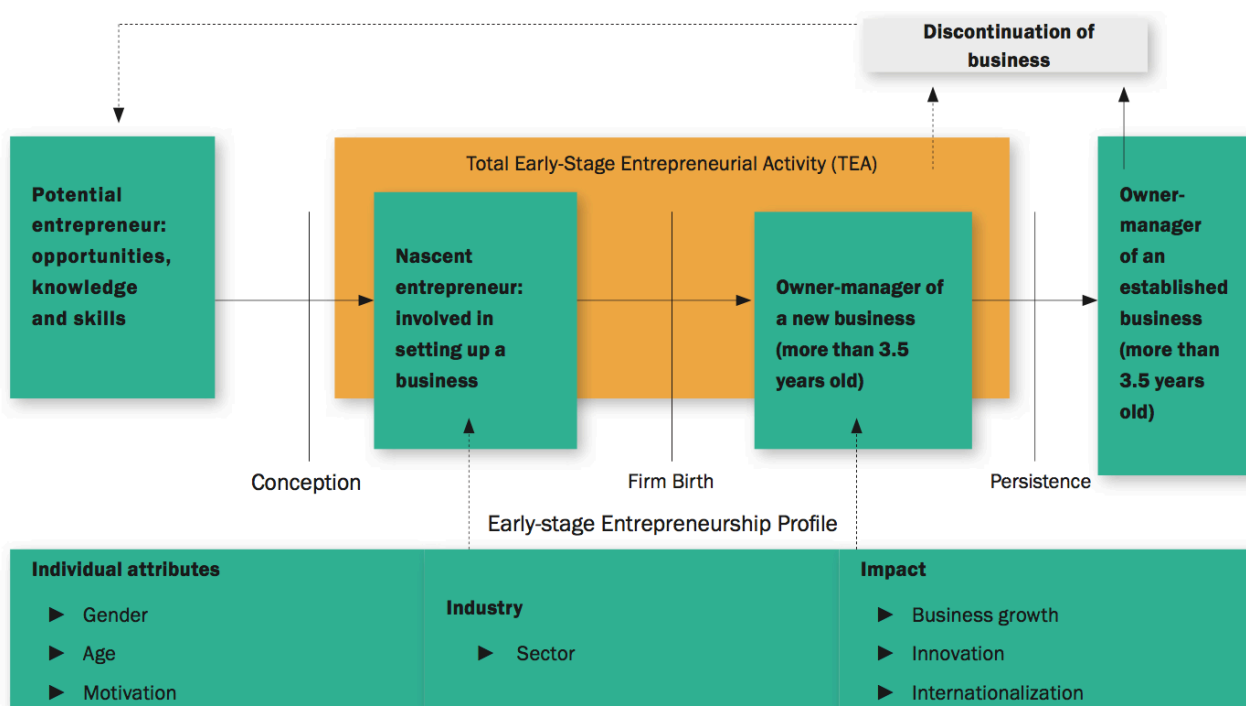


Source: GEM 2015/16 Global Report

Figure 2 provides an insight of the specific GEM methodology, illustrating which are the main concepts and indicators which influence entrepreneurship and economic development and how these fundamental elements interact among them.

- The national context at societal, cultural and economic level is represented through National Framework Conditions (NFC). The NFC represent the progression of societies through three phases of economic development: 1) factor-driven; 2) efficiency- driven; 3) innovation-driven. This distinction is based on the classification of the World Economic Forum, according to which in the world there are three different phases of economic development based on GDP per capita and the share of exports comprising primary goods (Amoros et al., 2014).
- The Entrepreneurial Framework Conditions encompasses the factors influencing entrepreneurial activity, namely: “entrepreneurial finance, government policy, government entrepreneurship programs, entrepreneurship education, Research and Development (R&D) transfer, commercial and legal infrastructure, internal market dynamics and entry regulation, physical infrastructure, and cultural and social norms” (GEM 2015/16 Global Report).
- Societal values about entrepreneurship such as: the societal evaluation of entrepreneurship, entrepreneurs’ societal status and the media’s representation of entrepreneurship in the economy are important determinants of the level of entrepreneurial activities. Consequently, in the GEM Conceptual Framework, such aspects are taken into account together with individual attributes, including psychological traits (perceived capabilities and opportunities, fear of failure), demographic characteristics (gender, age, etc.) and motives to start a business (i.e., necessity vs. opportunity).
- Eventually, entrepreneurial activity is analyzed by phases, by impact and by type. The different phases encompassed in the business process are: nascent business, new business, established business and business discontinuation. In this context, the potential impact of entrepreneurship is expressed in terms of job creation, innovation, internationalization.
Finally, the entrepreneurial classification for the type of activity includes: Total Early-stage Entrepreneurial Activity (TEA), Social Entrepreneurial Activity (SEA) or Employee Entrepreneurial Activity (EEA).

Figure 3. Model of Business Phases and Entrepreneurship Characteristics Represented in GEM



Source: GEM 2015/16 Global Report

The purpose of Figure 3 is to provide a clearer picture of the business phases and characteristics referred to in Figure 2, in order to reach a deeper understanding about the process of the establishment of entrepreneurial activities. Indeed, two of GEM’s most noteworthy features are: the capacity to recognize entrepreneurship as a process and the ability of its measures to capture the characteristics of all the different stages - from the identification of an opportunity, through the setting up of a new business, to reaching the status of an established business.

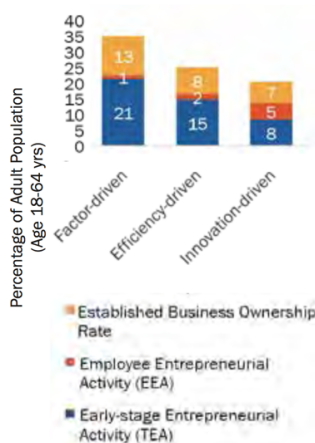
As we have seen in the above figures, entrepreneurial activities encompass several business phases: nascent, new business, established business and discontinuation. In this context, the indicator capturing the entrepreneurial phenomenon in the best way possible is the Total Early-stage Entrepreneurial Activity (TEA). The latter assesses the incidence, in terms of percentage, of the working age population currently owning or managing start-ups – defined as economic activities less than 3 months old or nascent entrepreneurship – and new businesses – defined as activities less owned for more than three months, but not more than 42 months.

Another classification directly related to the indicator of Total Early-stage Entrepreneurial Activity is the one provided by the World Economic Forum (WEF) classifying economies according to their

level of development. As we already mentioned, in the WEF classification, there are three different phases of development: factor-driven, efficiency driven and innovation driven. The factor-driven phase is characterized by the presence of subsistence agriculture and of extraction businesses, relying heavily on unskilled labor and natural resources. The efficiency-driven phase, on the other hand, is ruled by an increasingly competitive and industrialized economy as well as by an enlarged support of economies of scale, accompanied by increasingly dominant capital-intensive large organizations. The last and most advanced phase of development, which is the innovation-driven phase, involves economic businesses increasingly based knowledge-intensive features and on the expansion of the service sector.

Average TEA rates are usually higher in factor-driven entrepreneurship and tend to decrease with higher levels of economic development. Accordingly, as it is shown in figure 4 the latest TEA records show an average 21% for factor-driven entrepreneurship, 15% for efficiency-driven one and 8% for innovation-driven entrepreneurial activity.

Figure 4. Development Phase Averages for Total Entrepreneurial Activity, Employee Entrepreneurial Activity and Established Business Ownership across 60 economies



Source: GEM 2015/16 Global Report

To conclude, from the information gathered above, it can be seen that the data carefully analyzed by GEM researchers allow a harmonized assessment of the level of national entrepreneurial activity for all participating countries. GEM carefully analyzes of the role of entrepreneurship in national economic growth as well as granting a deep understanding and valuable insights on the features and characteristics of environments associated with entrepreneurial activity. Furthermore, the GEM conceptual framework is able to shed light on factors positively or negatively influencing the

propensity to start a business. Last, but not least, GEM's surveys ease the collection of information regarding either individual or business characteristics, as well as explaining the causes and consequences of different entrepreneurial experiences in different economic environments.

2.3 - Entrepreneurship and Economic Development

Almost without exceptions, academic studies on entrepreneurship are concerned with the economic benefits connected with entrepreneurial activities. But, how is entrepreneurship good for economic growth? The answer to this question seems to be simple, as the entrepreneurial activity leads to the creation of new businesses, in turn new businesses produce jobs, intensify competition, and might even bring about increases in productivity levels, thanks to technological change. Indeed, entrepreneurship can lead to substantial benefits in terms of employment, productivity, competitiveness or innovation. In these circumstances, high levels of entrepreneurial activity drive increases in economic growth. Reality, however, is much more complex. The simple conception of entrepreneurship as any kind of self-employment can produce misleading results, thereof high levels of entrepreneurial activity may be complementary either to the presence of substantial bureaucratic barriers to the formal creation of a new business, or to the inability of the economy to offer conventional wage-earning job opportunities. In such circumstances, high levels of entrepreneurship may be correlated slow economic growth and lagging overall development. Nevertheless, by adopting a proper conception of entrepreneurship it is possible to investigate about the dynamic interplay between entrepreneurship and economic development, avoiding misleading results.

2.3.1 - From Development to Entrepreneurship

In order to achieve a deeper understanding of the relation between development and entrepreneurship, one shall consider the three major stages of development according development economists. The first stage is characterized by the specialization of the economy towards small-scale manufacturing and agricultural production. In the second stage, the production system switches from small-scale production to manufacturing. The third stage, is marked by the shift from manufacturing production to a service economy. The main feature of the first stage, experienced by almost all economic systems, is to be found in the high rate of non-agricultural self-employment corresponding to smallest manufacturing and service firms. On the contrary, the second stage's salient characteristic is to be found in the decreasing rate of self-employment. The reason behind this expectation is that: as the economy becomes more and more prosperous, because of the presence of individuals possessing different endowments of managerial ability, the average size of firms should increase as a

result of the existence of better managers running companies. Indeed, in such circumstances marginal managers would realize they can profit more by becoming someone else employees. “In this model of economic development, increases in the capital stock either through private enterprise, direct foreign investment, or government ownership will increase the returns to wage work relative to entrepreneurial activity. Furthermore, the relationship between entrepreneurial activity and economic development would be negative. That is, as the economy becomes more developed we should find fewer people pursuing entrepreneurial activity” (Acs Z., 2006). Finally, the main feature of the third stage corresponds to an increase in the level of entrepreneurial activity.

For over a century, empirical evidence showed a trend relating to firm-size distribution which exhibited a switch from small firms to larger organizations, at least in developed country. Yet, from the 1970s, a growing number of studies identified a reversal of this trend and recent research confirmed this with data coming from developing countries, accounting for the period between the 1970s and 1980s. On the same line of research, empirical evidence concerning developed countries showed a shift from larger corporations toward entrepreneurial activity.

The motives behind this shift are threefold. Firstly, since in the final stage of development the share of manufacturing in the economy experiences a decrease, while the business service sector expands, economy-wide average firm size declines, as a result of the smaller size of service firms relative to manufacturing ones. Therefore, the final outcome is an increase in the number of entrepreneurial opportunities because of the increased amount of service firms. Related empirical evidence can be detected in the experiences of the United States (U.S) and in some European countries as Germany and Sweden. The second motive lays in the post-war period, when biased technological change concentrated in industries strongly linked with entrepreneurial activity. Thereupon, upgrades in information technologies led to increases in entrepreneurial activities because of the consequent reduced costs and the increased efficiency in the exchange of information. Thirdly, according to Aquilina, Klump and Pietrobelli, in economies characterized by high levels of aggregate elasticity of factor substitution, it is reasonable to foresee not only a higher level of development, but also more entrepreneurs and a higher number of smaller firms.

Hence, what it is reasonable to ultimately conclude is that: in economies in the first or second stage, entrepreneurship and economic development are negatively related, as the majority of the population would shift from self-employment to wage employment; on the other side, in developed economies, it is reasonable to expect a positive correlation between entrepreneurship and economic development, for people would shift from wage work to entrepreneurial activities.

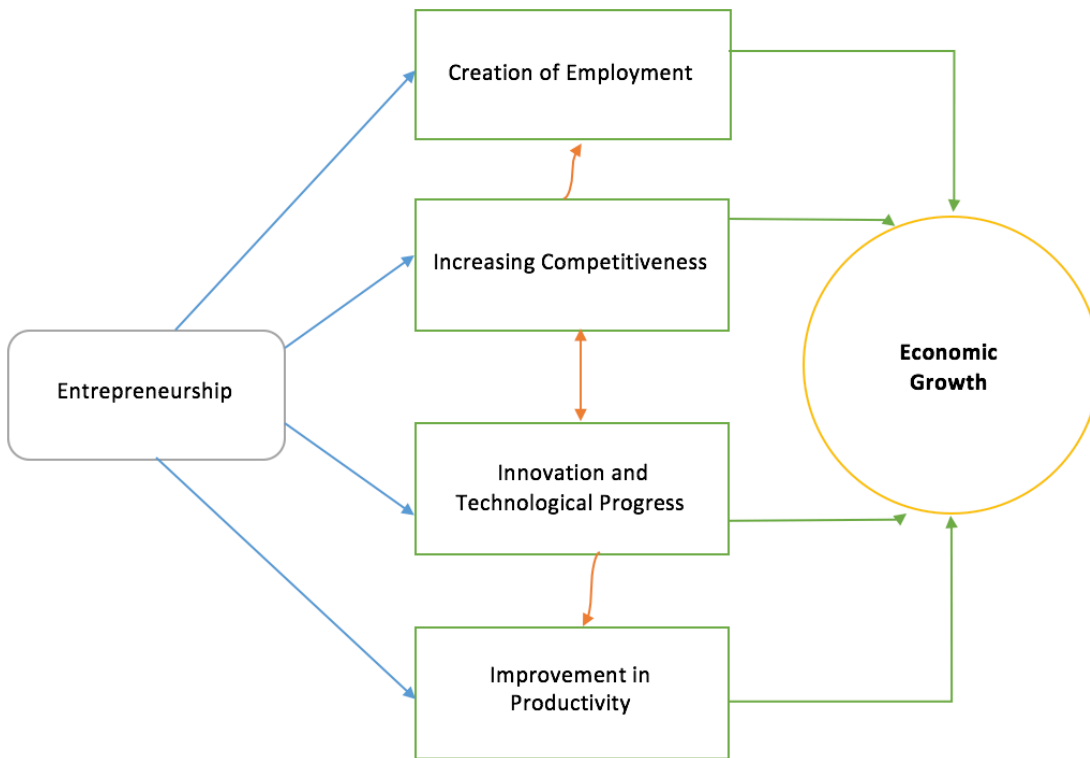
2.3.2 - From Entrepreneurship to Development: Literature Review

Since the days of Schumpeter (Schumpeter, 1934), economists have been making contributions to the academic literature on entrepreneurship. An overview of the most significant historical contributions, including those of Cantillon, Say, Mill, Knight, Schumpeter, and Kirzner, has already been provided in the previous sections. Nevertheless, in order to advance our understanding of the entrepreneur's role in the economy it is important to further explore other academic contributions to the analysis of this phenomenon.

Whatever their specific contribution, economists have agreed that entrepreneurship matters. Schumpeter notably compared entrepreneurs to 'agents of creative destruction' responsible for bringing about change in the economic system. Later on, Audretsch (1995), Klepper (1996) and Jovanovic (2001) developed the first theories recognizing the evolution of the industrial economy. According to their works, entrepreneurial activity stimulates and generates economic growth. In Schmitz's (1989) theoretical model of endogenous growth, where the creation of new businesses is considered as an endogenous factor to growth, increases in the share of entrepreneurial activity are thought to generate boosts in production and increases economic growth. Moreover, Reynolds et al. (1999) revealed that differences in entrepreneurial activity accounted for one-third of the differences in national economic growth rates. On the same strand, Zacharakis et al. (2000), conducting a study in sixteen developed countries, found that entrepreneurship was responsible for approximately one-half of the differences in GDP growth between countries. "More recently, Henderson (2002) showed that entrepreneurs significantly impact economic activity in particular at local level, by fostering localized job creation, increasing wealth and local incomes, and connecting local economies to the larger, global economy. The research seems to conclude that productive entrepreneurial activity is the primary source of economic growth" (Sobel R. S., 2008).

Conclusively, theoretical literature focusing on the relationship between entrepreneurship and economic growth identifies different channels through which the entrepreneurial activity may generate economic benefits, namely: the creation of employment (Blanchflower, 2000; Salgado-Banda, 2004; Acs et al., 2005; Parker, 2009), improvements in innovation and technological progress (Schumpeter, 1934; Acs and Audretsch, 1988; Mairesse & Mohnen, 2001), increases in productivity (Aghion & Howitt, 1998; Lever & Nieuwenhuijsen, 1999; van Praag, 2007) and rises in competitiveness (Eliasson, 1996; Kirzner, 1973). These entrepreneurial channels of contribution to economic growth, revealed in the literature, are resumed in Figure 5.

Figure 5. Entrepreneurship and Economic Growth: the links



2.3.3 - General Summary of Entrepreneurial Channels of Contribution to Economic Growth

After having identified the main channels through which entrepreneurial activities contribute to economic growth, it is necessary to present a proper reading of these factors and investigate on how they contribute to prompt economic development. Thereof, the analysis is now brought forward with the scrutiny of the indicators employed to measure their impact. The reasoning will proceed as follows: the creation of employment, innovation, productivity and finally, competitiveness.

As we have seen, entrepreneurial activity is responsible for influencing the quantity and quality of employment generated in a given economic system. An indicator used to measure the quantity of employment generated is the firm growth, which is obtained comparing the number of jobs created relative to the size of the firm. On the other hand, an indicator used to measure the quality of employment is the remuneration offered to employees, which is obtained applying other primary indicators such as wage levels, benefits (e.g. health insurance), and the use of productivity-related-pay (PRP). Nevertheless, another final indicator measuring the quality of employment is: the level of job satisfaction of employees in a given firm, compared to the one of employees in counterpart firms.

Moving on to the vast notion of innovation, it can be seen that a plurality of indicators can be employed for its measurement. In fact, in order to assess a firm's innovative output, as well as its overall production of innovations, both quantitative and qualitative measures are necessary. Empirical measures, applied as quantitative indicators, comprise research and development (R&D) expenditures, patents, and the creation of new products or technologies. Likewise, the quality of these innovations is determined by patent citations and the overall relevance, however quantified. Furthermore, and by the same token, the commercialization together with the endorsement of innovations are measures applied to determine the value of innovation's contribution to the economy.

Additionally, the relevant indicators measuring the contributions of entrepreneurs to productivity are: the relative firm contribution to a country's gross domestic product (GDP) or GDP growth (i.e. total value added) as well as labor and factor productivity, related to the efficiency of production or the contribution to GDP per worker. Yet, the final or residual indicator is the total factor productivity (TFP), also known as "technical progress" indicator defined as the combination output per unit of capital and labor.

Finally, the notion of competitiveness is often used in relation to a country's macroeconomic performance. Thereof, increases in competitiveness are revealed in the capacity a company to successfully compete in international markets and improving productivity and efficiency in the context of international specialization. Specific indicators of relative competitiveness are produced by the Organisation for Economic Co-operation and Development (OECD) and are based on the export unit values of manufactures, unit labor costs in manufacturing and consumer price indices.

All in all, it is correct to argue, also according to empirical research such as the one of van Praag and Versloot (2007), that entrepreneurs have a crucial role in the process of economic growth. As a matter of fact, entrepreneurship is responsible for high levels of employment creation and, along with this, on average entrepreneurs are usually more satisfied than employees, even if they have lower median incomes, more volatile and less secure. Moreover, although entrepreneurs' contribution with investments in innovation is no superior to the one of their counterparts, and it is shown that they produce fewer innovations, the quality of their innovations seems to be higher and the productivity of these innovations is more efficient, to the extent that they outweigh the former factors. Additionally, entrepreneurial activities show relatively high growth rates of value added and productivity. In regard to the last entrepreneurial contribution channel taken into consideration, it is sufficient to point out the role of competitiveness in creating the necessary context for

entrepreneurial activity to emerge and prosper. In fact, while entrepreneurship drives upgrades in competitiveness, competitiveness enables economic diversification and contributes to large scale employment growth, therefore stimulating economic growth.

This analysis allows to draw a meaningful conclusion about the contribution channels of entrepreneurial activities to the economy, that is to say that the economic benefits of entrepreneurial activities are spelled out in terms of employment generation, innovation, productivity growth, and increases in competitiveness. However, there are still two other issue deserving to be further examined in order to obtain a clear picture, namely: ‘What drives entrepreneurship?’ and ‘Which are determinants of the level of entrepreneurial activities in a given country?’. The next section and the next chapters will be dedicated precisely to the attempt of answering to these questions.

2.4 - What Drives Entrepreneurship?

After having unraveled the centrality of entrepreneurial activity in fostering economic development, it is mandatory to probe what drives it. There is a vast literature investigating on the main determinants influencing the choice of becoming an entrepreneur. Some highlight the importance of distinct exogenously given individual talents (Lucas, 1978); some point to the relevance of culturally-based beliefs and fatalism (Guiso et al., 2006; Harper, 1998, 2003; Ruiu, 2012;); others look at the impact of entrepreneurship-related knowledge (Lazear 2005; Cuhna and Heckman 2007;); and finally there is widespread consensus on the idea that institutional settlement is a key, if not the key, element influencing the decision to become an entrepreneur (Baumol, 1990).

In following sections, we are going to analyze: first, Lucas’ (1978) model focusing on the exogenous differences in individual talents; and second, the strand reconciling the influence of cultural values and fatalism with the level of entrepreneurship in a given country.

The other two schools of thought will be the subjects of discussion of the next two chapters, given their complexity.

2.4.1 - Entrepreneurship and Talent

Lucas’ (1978) model of occupational choice associates the choice to engage in entrepreneurial activities to the presence of innate entrepreneurial talents. According to him, ‘talent’ is to be defined as: “the ability to extract output from a given combination of inputs. Thus, more talented individuals are those who can obtain a higher total factor productivity (TFP) if they start a business. Since

individuals with more talent make more profits, they will choose to be entrepreneurs” (Guiso, 2011).

The major shortcoming present in Lucas’ model is that the distribution of entrepreneurial talents is considered to be exogenously given, therefore neglecting the plausibility of apprehending entrepreneurial skills.

2.4.2 - Entrepreneurship and Culture

Entrepreneurship is “at the heart of national advantage” (Porter, 1990, 125). But, is national culture related to levels of entrepreneurial activity? “It is reasonable to expect that entrepreneurs reflect the dominant values of his or her national culture and national culture has definite effect on entrepreneurship” (Thomas & Mueller, 2000). As a matter of fact, some societies show a greater propensity toward entrepreneurship. While investigating of the reasons behind this trend, some point to the role of culture. In this section, it is offered a review of past empirical research about the association between culture and entrepreneurship.

First of all, it is necessary to provide a sufficiently narrow definition of the vast concept of entrepreneurship in order to efficiently investigate the causal connection between cultural values and occupational choice. “Culture is the collective programming of the human mind that distinguishes the members of one human group from those of another. Culture in this sense is a system of collectively held values” (Hofstede, 1981). Hence, “we define culture as those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation” (Guiso et al., 2006).

Thereupon, it is possible to discern eight cultural channels influencing the level of entrepreneurship in a given society, namely: 1) gender prejudices; 2) religious beliefs; 3) media power; 4) social weight of independence; 5) risk attitudes; 6) approach toward innovation; 7) individualism; and 8) fatalism.

According to Thébaud (2010) cultural beliefs about gender are inescapable constraints on women, responsible for determining their participation into entrepreneurial activities across nations. Indeed, gender prejudices and stereotypes designate distinct expectations about qualifications for men and women, and may also generate gender-biased assessments, hampering and discouraging female engagement in entrepreneurship. Thereupon, these preconceptions, resulting from cultural barriers, may explain why men have been shown to be more likely to start a business than women (Blanchflower, 2000; Kim, Aldrich and Kester, 2006, Guiso and Rustichini, 2011b).

Likewise, religion might be defined as another determinant influencing entrepreneurial attitudes. In support of this view, we find Max Weber's (1930) attribution of differences in entrepreneurial activity among different societies to cultural and religious influences, in particular those related to the Protestant ethic. According to him, the Puritan influence in the Calvinist moral code led to wealth accumulation, by indoctrinating an extremely positive attitude toward hard work. In other words, the puritan association of economic welfare with religious accomplishment was responsible for the development of positive attitudes toward economic activities, and the negative conceptions of inactivity and luxury. On the same line, McClelland (1961), building on Weber, suggested that societies exhibiting cultural inclinations toward accomplishment would generate entrepreneurial propensity and thus, would show higher levels of entrepreneurial activity, compared to those who did not. Hence, it might be as a result of the ideas of Weber and McClelland that, as today, the main characteristics deemed necessary for one to be the ideal entrepreneur still reflect the Protestant ethic. An emblematic example, reflecting these values, is to be found in the United States: "The U.S culture of individualism and achievement has dominated the world view of entrepreneurship" (Peterson, 1998).

Moving on, Reynolds et al (1999) shifted the focus on the role of the media in portraying entrepreneurial success and providing positive insights on new businesses, as an indicator of cultural values influencing entrepreneurship. In accordance with them, the GEM 2015/2016 Report devotes a whole section to the impact of societal values on entrepreneurship. What stands out is: how different attitudes about entrepreneurship affect entrepreneurial ambitions and the overall level of support toward entrepreneurship in general. Indeed, according to the GEM Report, the positive representation of entrepreneurs in the media, together with the perception of entrepreneurship as a good career choice, and the recognition of the high status of entrepreneurs are the main societal attitudes significantly correlated with the index of entrepreneurial activity.

Moreover, several studies stressed out the tendency of entrepreneurs to attach great importance to their independence (Reynolds, 1999; Blanchflower and Oswald, 1998; Blanchflower, 2000; Blanchflower, Oswald and Stutzer, 2001). Using GEM master data (2015/2016), it is possible to discern the percentage of Total Entrepreneurial Activity (TEA) across nations and the ratio of these percentages representing three different entrepreneurial drivers. As Figure 6 shows, in the columns of necessity-entrepreneurship, opportunity-driven and innovation-driven entrepreneurship, resides the share of the population sustaining to have been pushed toward entrepreneurship either because of independence desires, or foreseen preservation, increase, or generation of income. Generally, what

stands out from the statistical evidence is that: in more developed countries, the choice to undertake entrepreneurial activities is driven by the desire for independence; while, in less developed countries, entrepreneurship is the result of income motives.

Figure 6. Entrepreneurship and Entrepreneurial Motivations by Region, GEM 2015

Region	Economy	Early-stage Entrepreneurial Activity (% of TEA)		Necessity-driven (% of TEA)		Opportunity-driven (% of TEA)		Improvement-driven Opportunity (% of TEA)		Motivational Index*		
		Rank/60	Value	Rank/60	Value	Rank/60	Value	Rank/60	Value	Rank/60	Value	
Africa	Botswana	3	33.2	8	35.6	53	61.9	31	50.1	46T	1.4	
	Burkina Faso	5	29.8	20T	27.5	35	72.0	49	37.3	46T	1.4	
	Cameroon	7	25.4	15T	29.8	51	64.1	47T	37.5	48	1.3	
	Egypt	43	7.4	5	42.4	56	57.3	55	33.5	59	0.8	
	Morocco	58	4.4	18	28.4	40	69.2	38	43.2	42T	1.5	
	Senegal	1	38.6	25	27.1	36	71.8	25	51.9	28T	1.9	
	South Africa	38T	9.2	12	33.2	48	65.7	47T	37.5	50T	1.1	
	Tunisia	33	10.1	43	18.0	20	79.3	9	64.1	16	3.6	
		Total		19.8		30.2		67.7		44.4		1.6
	Asia & Oceania	Australia	24T	12.8	55	12.7	4T	85.1	5	66.0	5	5.2
China		24T	12.8	9	34.7	50	64.3	45	38.9	50T	1.1	
India		30T	10.8	39T	18.9	22	78.7	54	34.3	31T	1.8	
Indonesia		13T	17.7	38	19.0	16	80.3	50	36.5	28T	1.9	
Iran		23	12.9	17	28.8	44	67.5	32	48.5	33T	1.7	
Israel		28	11.8	56	12.4	19	79.4	41T	40.9	17	3.3	
Kazakhstan		29	11.0	20T	27.5	41	68.9	60	24.0	55T	0.9	
Korea		37	9.3	32	24.4	26	74.6	11	62.1	21	2.6	
Lebanon		4	30.1	24	27.4	34	72.3	14	57.3	25T	2.1	
Malaysia		60	2.9	52T	13.7	1	86.3	3	67.0	6	4.9	
Philippines		16	17.2	26	25.6	29T	73.7	39	41.6	38T	1.6	
Taiwan		44T	7.3	49	14.9	4T	85.1	16T	56.5	13	3.8	
Thailand		20T	13.7	44	17.2	10	81.2	1	75.9	9	4.4	
Vietnam		20T	13.7	7	37.4	52	62.6	13	57.9	42T	1.5	
	Total		13.1		22.5		75.7		50.5		2.6	
Latin America & Caribbean	Argentina	13T	17.7	15T	29.8	45T	67.4	29	50.7	33T	1.7	
	Barbados	10T	21.0	47	15.2	12	80.8	16T	56.5	14T	3.7	
	Brazil	10T	21.0	4	42.9	57	56.5	33	47.8	50T	1.1	
	Chile	6	25.9	27	25.3	45T	67.4	12	61.2	22	2.4	
	Colombia	8	22.7	11	33.3	49	65.6	16T	56.5	33T	1.7	
	Ecuador	2	33.6	14	30.6	42	68.8	52	34.6	50T	1.1	
	Guatemala	13T	17.7	2	45.8	58	53.5	43	40.8	55T	0.9	
	Mexico	10T	21.0	39T	18.9	21	78.9	20	55.5	20	2.9	
	Panama	24T	12.8	3	45.3	59	52.0	44	39.1	55T	0.9	
	Peru	9	22.2	28	25.2	33	72.9	22	53.6	25T	2.1	
	Puerto Rico	40	8.5	29	25.1	29T	73.7	40	41.4	38T	1.6	
	Uruguay	18	14.3	42	18.2	13	80.6	21	53.7	18T	3.0	
	Total		19.9		29.6		68.2		49.3		1.9	

Region	Economy	Early-stage Entrepreneurial Activity (% of TEA)		Necessity-driven (% of TEA)		Opportunity-driven (% of TEA)		Improvement-driven Opportunity (% of TEA)		Motivational Index*	
		Rank/60	Value	Rank/60	Value	Rank/60	Value	Rank/60	Value	Rank/60	Value
Europe	Belgium	51	6.2	20T	27.5	54	60.2	37	44.3	38T	1.6
	Bulgaria	59	3.5	10	33.4	47	66.6	58	29.0	55T	0.9
	Croatia	42	7.7	6	40.1	55	59.2	41T	40.9	54	1.0
	Estonia	22	13.1	52T	13.7	6	84.8	15	57.0	10T	4.2
	Finland	50	6.6	48	15.0	15	80.4	10	63.0	10T	4.2
	Germany	57	4.7	45T	17.1	17	80.2	8	64.2	14T	3.7
	Greece	49	6.7	36	22.3	24	75.4	53	34.4	42T	1.5
	Hungary	41	7.9	35	23.2	18	71.6	30	50.5	23	2.2
	Ireland	37	9.3	37	19.3	37	79.8	46	38.5	27	2.0
	Italy	56	4.9	41	18.7	25	74.7	57	30.0	38T	1.6
	Latvia	19	14.1	45T	17.1	14	80.5	26	51.4	18T	3.0
	Luxembourg	32	10.2	59	9.3	2	86.2	24	52.2	4	5.6
	Macedonia	52	6.1	1	52.1	60	42.1	59	26.7	60	0.5
	Netherlands	46T	7.2	50	14.7	8	81.8	7	65.3	8	4.5
	Norway	54T	5.7	57	10.6	9	81.5	4	66.4	2	6.3
	Poland	38T	9.2	19	28.1	38T	69.3	34	46.4	33T	1.7
	Portugal	35	9.5	31	24.5	28	73.8	51	35.9	42T	1.5
	Romania	30T	10.8	20T	27.5	38T	69.3	56	33.2	49	1.2
	Slovakia	34	9.6	13	31.1	43	68.4	27	51.3	33T	1.7
	Slovenia	53	5.9	34	23.7	32	73.0	35	44.9	28T	1.9
Spain	54T	5.7	30	24.8	31	73.5	36	44.5	31T	1.8	
Sweden	46T	7.2	60	9.2	23	76.7	23	52.6	3	5.7	
Switzerland	44T	7.3	58	10.1	3	85.4	6	65.8	1	6.5	
United Kingdom	48	6.9	33	23.9	27	74.3	28	51.2	25T	2.1	
	Total		7.8		22.4		73.7		47.5		2.8
North America	Canada	17	14.7	54	13.5	11	81.1	19	55.9	12	4.1
	USA	27	11.9	51	14.3	7	82.2	2	69.0	7	4.8
	Total		13.3		13.9		81.7		62.5		4.5

However, these descriptive statistics require careful interpretation of the causal relationship between cultural values and economic outcome. In fact, on one hand, it may be true that developed countries offer better job opportunities and therefore, the main driver of the decision to become an entrepreneur is given by the impact of the cultural value attached to independence. On the other hand, it might be reasonable to argue that economic development is the main agent responsible for shifting the core values of a society from survival values to self-affirmation values (Inglehart, 1997).

Culture may also determine different risk-related attitudes. Guiso and Paiella (2008) findings show the existence of inter-generational regional variations in propensity toward risk and cultural inclinations. On the same line, also Dohmen et al. (2006) portray to a significant extent the presence of an intergenerational correlation in risk attitudes. More specifically, they document how the process of cultural transmission of risk preference is replicated in different contexts, as financial

issues, healthcare decision, occupational choices and leisure activities. Yet, due to the scarcity of empirical evidence investigating this link, we shall consider the studies analyzed as promising indicators of a not-fully explored connection.

Another factor liable to the influence of culture is the attitude toward innovativeness. As we have already seen, the latter is at the core of the Schumpeterian theory of entrepreneurship (Schumpeter, 1934). Notwithstanding that Schumpeter's focus was not toward cultural values, it still may be reasonable to expect a correlation between national culture and innovativeness. Indeed, several studies in social psychology investigated the extent to which some cultural may encourage the development of innovativeness. For instance, Mueller and Thomas (2000) showed a positive correlation of the level of innovativeness with the degree of individualism in a given country, and a negative one with the degree of uncertainty avoidance. Therefore, it is reasonable to conclude that both factors account for the level of entrepreneurial activity.

Previously, it has been pointed out how individualism is an important cultural dimension in the framework of the ideal American entrepreneur. Nevertheless, it is also necessary to acknowledge that while some entrepreneurial traits are universal, others systematically diverge across cultures. For instance, "unlike the idealized American entrepreneur, characterized by rugged individualism, there is growing evidence that Asian entrepreneurs rely on familial ties in developing their business" (Redding, 1980). Following this line of analysis, Hofstede (1980) explored both the impact of individualism and uncertainty avoidance, to be conceived as risk attitude. His studies show how different societies attach different emphasis either on individual or on group accomplishment. According to his findings, as cultural distance from the U.S increases, individual perceptions of being in control of one's destiny diminish. This implies that the locus of control, one of the distinctive traits of entrepreneurs, might be a culture-related quality connected to individualism.

Finally, when we talk about fatalism, we refer to one's propensity to believe that future is ruled by fate, rather than by one's will. It is possible to find different conjectures on how fatalism influences entrepreneurial choice. For instance, Tabellini (2010) identified the perceived degree of control over one's life as a driver of economic development. Later on, Ruiu's empirical model (2012) showed how high fatalistic tendencies, by undermining the perceived correlation between efforts and resulting outcomes, reduce the probability of becoming an entrepreneur. This model confirms Ferrante, D'Orlando and Ruiu (2010) findings, showing a positive correlation between "fatalistic individuals" and the demand for more job security. Nevertheless, it is important to highlight that fatalistic tendencies do not influence necessity entrepreneurship, as, in that case, the choice to

become an entrepreneur is the result of the absence of alternatives and the decision-maker may agree to leave everything to luck, committing to an occupation with a high degree of uncertainty. Thereupon, the main prediction which could be advanced, in light of the models taken into consideration, is that “fatalism reduces the likelihood that high-ability individuals (those for whom the entrepreneurial choice is mainly driven by the value of the discovered opportunity rather than necessity) opt for entrepreneurship. At the same time, fatalism may play a minor role for low-ability entrepreneurs whose choice is mainly driven by the paucity of job alternatives” (Ferrante and Ruiu, 2014).

3. Institutions, Entrepreneurship and Development

“Commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice, in which the people do not feel themselves secure in the possession of their property, in which the faith of contracts is not supported by law, and in which the authority of the state is not supposed to be regularly employed in enforcing the payment of debts from all those who are able to pay. Commerce and manufactures, in short, can seldom flourish in any state in which there is not a certain degree of confidence in the justice of government.”

- Adam Smith - The Wealth of Nations

3.0 - A Brief Overview

So far, this dissertation has taken into consideration: firstly, the causal relation from institutions to development; and secondly, the one from entrepreneurship to growth. The purpose of this third chapter is to shed light on how the causal relationships between institutions, entrepreneurship, and development are to be reconciled. In order to achieve this objective, a review of the noteworthy empirical literature on the subject is provided.

The scrutiny is brought forward first by distinguishing between the proximate and fundamental causes of development. Indeed, it will be showed that a large body of economic research has stressed the role of institutions both as the fundamental cause of development and as the main driver of entrepreneurial activity. While entrepreneurship, as we will see, is to be considered as a proximate cause of economic growth. By examining the relevant literature, this chapter will illustrate the mechanisms behind the interplay of institutions, entrepreneurship and development.

3.1 – Institutions as the Fundamental Cause of Entrepreneurship and Development

“The market process theorists point out that entrepreneurship is omnipresent—it is a manifestation of economic growth present in every human society—and, therefore, something else must explain why some countries perform worse/better than others. In the market process view, productive entrepreneurship is a consequence and not the cause of development; it is the institutions that determine the incentives for entrepreneurship, and thus institutions cause development, not the reverse.”

(Boettke et al., 2003).

As we have already seen, a large body of academic studies has focused on investigating the main determinants of economic growth. In this context, two of the main elements taken into consideration have been entrepreneurship and institutions. Recently, a growing number of empirical researches convened on the assertion that institutions are the fundamental cause of development and that their influence on entrepreneurial processes renders entrepreneurship a proximate cause of economic growth.

Building on Acemoglu and Robinson (2008), institutions represent the most important fundamental cause of cross-country income differences. In fact, even if all the four causes which they take into consideration (luck, geography, institutions and culture) are deemed to be complementarily fundamental, institutions are of utmost importance because of their role in shaping the incentives to which people will respond when organizing society and the economic activity.

Thereupon, in the entrepreneurial perspective, it would be reasonable to argue that institutions are responsible for influencing the formation of recognizable business opportunities as well as their related attached value. Notably, business opportunities are influenced by formal and informal institutions. The present chapter seeks to investigate about the mechanisms through which different institutional arrangements shape the entrepreneurial process. Departing from the existing literature, the following sections will provide an overview about which are the ‘good institutions’ and how they influence opportunity-driven and necessity driven entrepreneurship.

3.1.1 – Baumol. Entrepreneurship: Productive, Unproductive and Destructive

One of the most significant contributions in entrepreneurship economics is Baumol’s paper on the of institutions in shaping entrepreneurship as productive, unproductive or destructive. Departing from historic examples of economic stagnation and growth, Baumol (1990) argues that the omnipresent role of the entrepreneur is able to influence positively or negatively economic productivity, and thus growth. However, the economic outcome of entrepreneurial ascendancy, in terms of productivity, is the result of the overall quality of institutional arrangements. The related theoretical approach is brought forward providing empirical evidence concerning the main economic eras: from ancient Rome, though medieval China, Dark Age Europe to the later Middle Ages.

The central hypothesis of Baumol’s entrepreneurial theory refers to the fact that entrepreneurship, depending on the payoff structure of the economy or ‘the rules of the game’, can be either

productive, unproductive or even destructive. In the former chapters, it has already been clarified that, according to North's (1990) definition, the rules of the game are to be understood as institutions. Therefore, it would not be wrong to argue that, according to Baumol (1990), entrepreneurial decisions and outcomes are shaped by the related rates of return, which in turn are influenced by institutional arrangements. More specifically, the choice of an entrepreneur to either exploit profitable opportunities in the private sector or secure redistribution of wealth, politically and legally, depends on the reward/incentive institutional structure.

As a matter of fact, on the basis of Baumol's argument there are three propositions: "*Proposition 1.* The rules of the game that determine the relative payoffs to different entrepreneurial activities *do* change dramatically from one time and place to another.

Proposition 2. Entrepreneurial behavior changes direction from one economy to another in a manner that corresponds to the variations in the rules of the game.

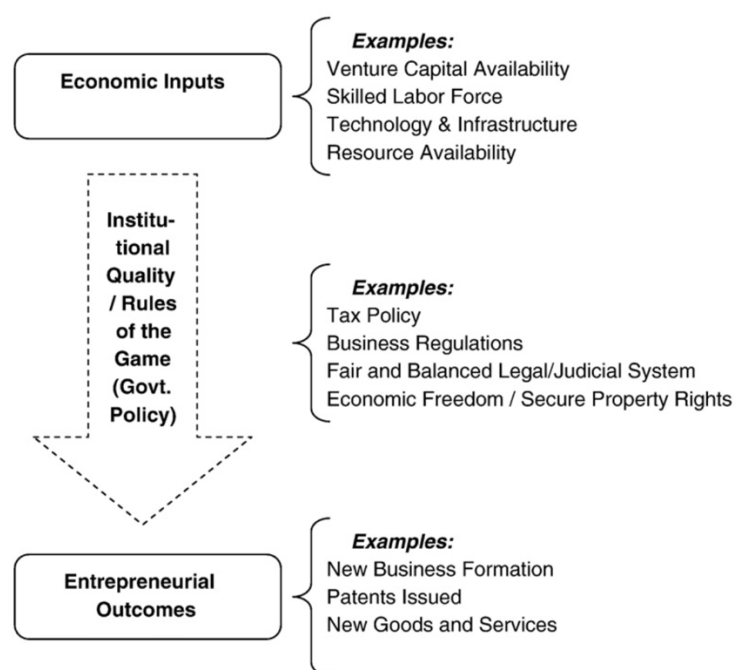
Proposition 3. The allocation of entrepreneurship between productive and unproductive activities, though by no means the only pertinent influence, can have a profound effect on the innovativeness of the economy and the degree of dissemination of its technological discoveries" (Baumol, 1990).

The resulting conclusion to be drawn from these propositions is that: "in areas with institutions providing secure property rights, a fair and balanced judicial system, contract enforcement, and effective limits on the government's ability to transfer wealth through taxation and regulation, creative individuals are more likely to engage in productive market entrepreneurship—activities that create wealth (e.g., product innovation). In areas without strong institutions, these same individuals are instead more likely to engage in attempts to manipulate the political or legal process to capture transfers of existing wealth through unproductive political and legal entrepreneurship— activities that destroy wealth (e.g., lobbying and lawsuits). This reallocation of effort occurs because the institutional structure largely determines the relative personal and financial rewards to investing entrepreneurial energies into productive market activities versus investing those same energies instead into unproductive political and legal activities" (Sobel, 2008). In other words, entrepreneurial efforts are contingent on the quality of the dominant political, economic, and legal institutional structures. Depending on the latter's nature, they are channeled either toward productive market activities or unproductive ones, thus leading to economic growth or stagnation.

Nevertheless, from Baumol's three propositions stem some clear policy implications: "rather than focusing on expanding government programs like subsidized loans, workforce education, or

programs aimed at increasing ‘entrepreneurial inputs’ as a way to foster productive entrepreneurship, the better path is through institutional reform that constrains or minimizes the government's role, lowering the return to unproductive types of entrepreneurship. Government programs too often encourage entrepreneurial individuals to devote effort toward figuring out how to obtain transfers or subsidies, rather than devoting those efforts toward satisfying consumers and creating wealth” (Sobel, 2008). That is to say: since there is a direct correlation between institutions and entrepreneurial productivity, and given the feasibility of changing the rules of the game, the latter should be modified in order to provide incentives for the development of productive entrepreneurial outcomes and to discourage unproductive types of entrepreneurship, by lowering their rate of returns.

Figure 7. *Baumol’s Entrepreneurial Process*



Source: Sobel 2008

3.1.2 – Which Institutions Matter? Some Theoretical and Empirical Evidence

“Simply put, economic growth, driven by entrepreneurship, cannot be explained without reference to institutions” (Boettke, 2003). It has already been pointed out how the institutional incentive structure shapes the actions of economic agents. Therefore, now it is appropriate to focus on which institutional factors determine the cross-country differences in entrepreneurship, wealth and overall economic activity.

It is a well-established conviction that the two most important institutions are: secure property rights and the rule of law. In fact, it is not by chance that countries enforcing efficiently these two institutions experience strong economic growth. Furthermore, it should be considered that a large number of other relevant institutions is directly or indirectly related to these two institutions.

De facto, numerous empirical and theoretical studies emphasize the importance of well-defined property rights and the rule of law. Some examples are: Acemoglu and Robinson (2008); Boettke & Coyne (2003); Rodrik et al. (2002); North (1981); De Soto (2001); Sobel (2008).

Consequently, it is extremely easy to foretell that the protection of property rights is crucial to stimulate investment and thus, economic growth. In support of this view, Rodrik (2002) shows that when investors are confident about the protection of their property rights, the average level of investment increases and the economy experiences growth.

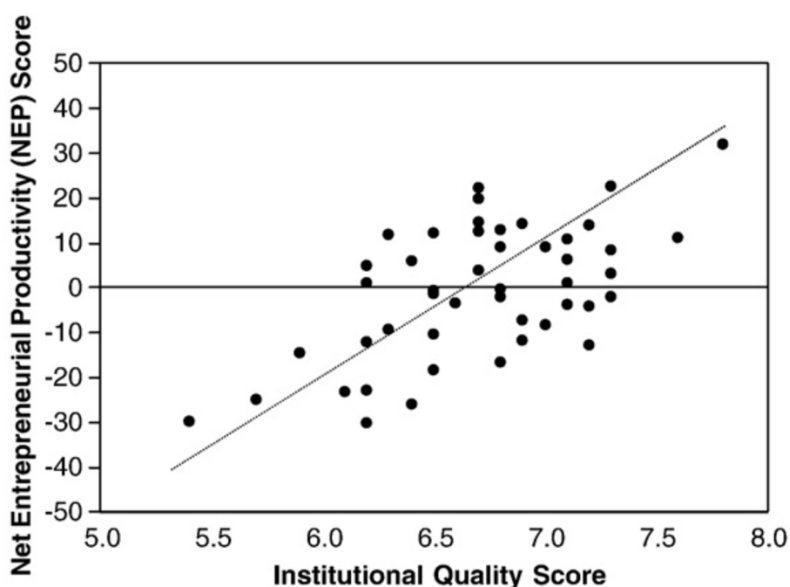
Analogously, Boettke and Coyne (2003), through the analysis of several studies (Enste & Schneider, 2000; Johnson, Kaufmann & Shleifer, 1997; Johnson, Kaufmann & Zoido-Lobaton, 1998) aimed at measuring the level of unofficial economy and its cause, pointed out to the correlation of high levels of underground economy with poor enforcement, or absence, of property rights and the rule of law. Some of the aforementioned studies also identified other institutional factors encouraging unofficial economic activities. “Examples of institutions that stunt economic growth include government, police and/or court corruption, excessive taxation and/or regulation, unstable and/or inconsistent monetary and fiscal policy (Frye & Shleifer, 1997; Gwartney, Holcombe & Lawson, 1998, 1999; Johnson, Kaufmann & Zoido-Lobaton, 1998; Johnson, McMillan & Woodruff, 1999, 2000; Shleifer, 1997; Shleifer & Vishney, 1993, 1994; de Soto, 1989, 2000)” (Boettke and Coyne, 2003).

In this context, another indicator highlighting the influence of institutions on entrepreneurship is capital flight. As a matter of fact, the latter is directly related to the backbone of institutions – property rights and the rule of law. Indeed, it is undeniable that an entrepreneur does not have any incentive to invest in absence of protection for property rights. Moreover, even if an entrepreneur’s own capital is not involved, it still would be reasonable to believe that someone else’s capital will be needed to start the entrepreneurial process, and in absence of secure property rights this third party as well would not have any incentive to invest. Thereupon, it is clear that property rights represent an indispensable prerequisite for investment of capital.

On the same strand, De Soto (2001) recognizes in the lack of a secure and efficient system responsible of registering, protecting and trading property rights the main impediment for potentially productive assets leading to growth. In De Soto words: “the principal problem is not the lack of entrepreneurship (...). What the poor lack is easy access to property mechanisms that could legally fix the economic potential of their assets so they could be used to produce, secure or guarantee greater value in the expanded market” (De Soto 2001).

To conclude, we are going to take into account an extremely comprehensive and representative index of institutional quality, which is the one developed by Karabegovic and McMahon. Their index of institutional quality “reflects the extent to which states have secure private property rights, a fair and balanced judicial system, contract enforcement, small government sectors, and effective limits on government's ability to transfer wealth through taxation and regulation. These are precisely the institutional structures that lower the relative reward to unproductive entrepreneurship” (Sobel, 2008). Thereof, the relevance of this model lays in the fact that the elements of the index are genuinely consistent with Baumol’s approach. Indeed, as we can see from figure 8, the presence of the economic freedoms embedded in the index lowers the likelihood of unproductive and destructive entrepreneurship, stimulating productive entrepreneurial activity and economic growth. That is to say, there is a positive relation between institutional quality and entrepreneurial productivity; meaning that the higher institutional quality, the higher entrepreneurial productivity and vice versa.

Figure 8. Institutional quality and the productivity of entrepreneurship



Source: Sobel 2008

3.2 – Institutional impact on Opportunity-Driven and Necessity-Driven Entrepreneurship

Following the premises of the previous section, we are now interested in establishing whether ‘good institutions’ impact homogeneously the productivity, in Baumol’s sense, of necessity-driven and opportunity-driven entrepreneurship¹.

First of all, it is necessary to shed some light on how opportunity and necessity entrepreneurship individually influence development. According to Reynolds et al. (2003) empirical studies based on GEM data, the two types of entrepreneurial activity taken into consideration differ systematically on several grounds: expectations about the creation of employment; prospects for out-of-country export; intents for reproducing already-existing businesses instead of creating new ones; involvement in one out of four business sectors. On the same line, Acs and Varga (2005) point to the heterogeneous influence of necessity and opportunity entrepreneurship on growth and economic development, revealing that while opportunity entrepreneurial activity has a positive and substantial effect on development, the impact of necessity entrepreneurship is almost insignificant. In support of this view, also Wennekers et al. (2005) resolve that whereas opportunity entrepreneurship is positively correlated to national GDP per capita and innovative capacity, necessity entrepreneurship exhibits a negative relation with these variables. Therefore, it is legitimate to conclude that the level of opportunity entrepreneurship may be a suitable indicator of economic development.

It has been already shown how the enforcement of property rights is crucial in the entrepreneurial environment. In Rodrik’s words: “it stands to reason that an entrepreneur would not have the incentive to accumulate and innovate unless s/he has adequate control over the return to the assets that are thereby produced or improved” (Rodrik, 2000:6). Therefore, it is rational to argue that weak property rights increase the riskiness of engaging in entrepreneurial activities. Thereupon, both opportunity and necessity entrepreneurship will benefit from an institutional setting protecting efficiently property rights.

Nevertheless, exploring more in depth the impact of property rights on different types of entrepreneurial activity, it is possible to conclude that only opportunity entrepreneurship is significantly correlated with property rights. Indeed, since opportunity entrepreneurs retain more growth and employment ambitions (Reynolds et al., 2003; Hessels et al., 2008), other than risking more capital (Levie and Autio, 2011; Estrin et al. 2013), the losses of a hypothetical opportunity entrepreneur are significantly higher compared the ones of a necessity entrepreneur, who just pursues

¹ We will consider innovation-driven entrepreneurship as included in the notion of the opportunity-driven one.

survival (Levie and Autio, 2011). Moreover, well-established property rights will encourage innovative and risk-taking behaviors (Bjornskove and Foss, 2013), attitudes characteristic of opportunity entrepreneurs (Hessels et al., 2008). Therefore, it is clear that opportunity entrepreneurship has a higher rate of return from the protection of property rights in comparison with necessity entrepreneurship.

“The relationship between transaction costs and entrepreneurial action was slightly more complex, owing to the fact that scholars are still uncertain of the relative importance of various dimensions of economic freedom in predicting entrepreneurial activity. (...) For instance, limits on economic freedom attributable to fiscal freedom (freedom from high tax rates and heavy government expenditures), monetary freedom (freedom from inflation and governmental intervention), and labor freedom (freedom from wage and price controls), each exhibited a positive relationship with necessity-motivated entrepreneurship” (Mc Mullen, 2008).

According to Mc Mullen (2008), this is not surprising because each of these factors directly influences the choice to engage in entrepreneurial activities. For example, high tax rates represent a disincentive for entrepreneurship, as a result of their consequent reallocation of returns produced by the entrepreneur to other parties who did not bear any related risks (Baumol, 2002). Accordingly, the government’s inability to curb inflation and simplify market pricing might render the information needed in the decision-making process of production-related inputs and outputs unstable and unreliable (DiLorenzo, 2004). The resulting outcome would involve extremely difficult forecasts of the costs and benefits of new businesses as well as the introduction of substantial opportunity costs to entrepreneurs and the society as a whole, as a result of increased monitoring efforts. Lastly, government intervention on labor freedom would be responsible again for subtracting decision-making capacity to entrepreneurs and reallocating them to governmental authorities. The final outcome would involve an entrepreneurial class devoid of the power necessary to ensure the success of its enterprises, as a result of government interference in prices and wages.

However, since the motives of necessity entrepreneurship might encourage individuals to pursue sub-optimal goals, such as imitative enterprises with narrower margins of profit, the impact of government intervention in entrepreneurs’ fiscal, monetary or labor freedom would be massive on necessity-motivated entrepreneurial ventures. On the other hand, since opportunity-driven entrepreneurship tends to be larger, more innovative and thus more profitable, it will show less

sensitivity to variations in tax rates, inflationary pressures or other forms of governmental intrusion, compared to their counterparts.

Moving on, it is widely acknowledged that financial restrictions represent an important barrier for founding a business. As a matter of fact, entrepreneurs usually retain insufficient personal wealth, and thus need financing to start up their activity (Blanchflower and Oswald, 1998). In this context, it is important to stress that easy access to credit is usually linked to a great extent of financial freedom in general, thus comprising several other measures like ease of access to loans and financial services as well as solvency of banks or stakeholders' protection (World Economic Forum, 2013).

Thereupon, since easy access to credit is positively correlated with the development financial markets, it would be reasonable to say that it also responsible for boosting entrepreneurial activities of any kind.

Nonetheless, potential financial restrictions would influence more entrepreneurial activities which need larger amounts of capital to initiate a business, because of their increased likelihood to demand for financing. Moreover, as Bowen and De Clercq (2008) show, firms developing high-growth projects are usually riskier and associated with new technologies, and consequently are the ones who need more capital. Therefore, it is clear that opportunity-driven entrepreneurs will be the ones affected the most by financial restrictions (Reynolds et al., 2003; Hessels et al., 2008).

The last dimension taken into consideration is entrepreneurial knowledge. Entrepreneurial and business skills are influenced by the educational capital, another institution clearly influent on the national level of business activity (Glaeser et al., 2004). Reynolds et al. (1999) link investments in higher education with the overall level of entrepreneurship, in a given country. Since education leads people to appreciate independence and grants the skills necessary to identify business opportunities (Bowen and De Clercq, 2008; Jiménez et al., 2015; Verheul et al., 2002), its impact will be significantly higher on opportunity-driven entrepreneurial activities.

Several scholars pinpointed to the necessity of distinguishing between general and specific education (Bowen and De Clercq; Jiménez et al., 2015). Indeed, only the latter focuses specifically on fostering skills necessary to start a business. Therefore, an educational system including entrepreneurial training will produce more high-skilled individuals capable of designing and undertaking growth strategies for their ventures (Levie and Autio; 2008). Of course, this type of educational capital will create and benefit the most opportunity-driven entrepreneurs (Reynolds et al., 2003).

4. The Role of Entrepreneurial Knowledge

“While the key concepts of entrepreneurship can be taught at any time in a person’s life, the attitudes and values associated with becoming a successful entrepreneur are more likely to develop if they are explored and nurtured at a young age. Teaching children about entrepreneurship offers a career path, but more importantly, students learn of the economic and social benefits that entrepreneurs provide to their families, to their communities and to their country.”

– Rob Chernow

4.0 – A Brief Overview

In the last section of the previous chapter, we briefly looked at the influence of human capital and entrepreneurial knowledge on the level of entrepreneurial activity. In this chapter, the investigation will be brought forward by exploring more in depth the decisive role of Entrepreneurial Knowledge (EK) in the recognition and exploitation of business opportunities as well as its influence on the relative process of development.

First of all, we are going to distinguish between two types of entrepreneurial knowledge: Tacit Knowledge (TK) and Codified Knowledge (CK). Secondly, relevant literature will be taken into consideration in order to examine the effect of the composition of entrepreneurial knowledge on different paths of development. Finally, some empirical insights will be provided in order to display the results of actual implementations of programs fostering entrepreneurial knowledge.

4.1 – Two Forms of Entrepreneurial Knowledge: Tacit and Codified.

It has already been established that the identification, pursuit and development of opportunities lie at the core of the entrepreneur’s task (Ardichvili et al. 2003; Shane and Venkataraman 2000; Venkataraman, 1997). Therefore, it should not come as a surprise that a large body of studies has been keen on investigating the connection between human capital, entrepreneurial knowledge and their respective role in the process of opportunity identification and exploitation.

Actually, when analyzing the intricate notion of entrepreneurial knowledge, it emerges that there are diverse dimensions embedded. These correspond to the underlying areas of expertise necessary for the process of opportunity recognition and development. Thereupon, as some Neo-Austrian economists like Kirzner (1997) advise, it is reasonable to suppose that there is a correlation between the perception of business opportunities and differences in entrepreneurs’ knowledge and experience.

However, once that the multidimensionality of entrepreneurial knowledge is recognized, the first thing to do is to properly distinguish between tacit and codified knowledge. The former is a context-dependent idiosyncratic type of knowledge, mostly related to job experiences or training, other than to the contact with social networks and the familiar background. Codified knowledge, on the other hand, is to be identified with general training and overall educational background.

At this point of the discussion, it is important to also highlight the fact that the entrepreneurial value attached to TK and CK varies according to the context and to their method of employment. Thereof, some further distinctions can be advanced. On the one hand, codified knowledge is generally methodical and formal, and therefore suitable to description and transformation into a standardized process; it is not predominantly personal or related to firm-specific knowledge. Conversely, as showed by Polanyi (1962), tacit knowledge is to be conceived as a personal asset built on individual experiences as well as on individual interactions, and, as such, it is responsible for mirroring the potential and capabilities of the entrepreneur in specific areas of application.

Shifting to a narrower perspective, education in the form of CK may enhance the development of entrepreneurial activities in many ways. First of all, it provides the means necessary to achieve a proper understanding of the rules governing the society at individual, national and global level. Secondly, any sort of technical and professional education or training unquestionably improves one's capacity to gain and exploit codified information both in working and non-working contexts. Finally, the main impact of education in the form of codified knowledge is to be found in its ability to reduce individual uncertainty toward one's entrepreneurial talent and in its power to enhance managerial abilities, as the ones of planning and coordination, being the skills mostly needed to efficiently exploit market opportunities.

Moving on, since we have previously established that tacit knowledge is entrenched in people's environment, we are now going to analyze more specifically the three distinctive sources from which it originates. Notably, there is a significant volume of literature in the field of psychology and neurosciences asserting that the acquisition of a large number of cognitive and non-cognitive abilities occurs from a child's early years until his twenties, in the period when the brain's prefrontal cortex is malleable. Hence, it is self-evident that the first source of tacit knowledge is the family.

Yet, the spectrum of human skills does not depend only on genes but also to a great extent on one's education and experiences lived in the familiar environment (Cunha and Heckman 2007). As a result, it is clear that individuals genetically related to entrepreneurs are likely to be more

accustomed to the entrepreneurial decision-making process and its associated riskiness, contingently on the family's ability to enhance the development of the cognitive and non-cognitive abilities required to identify and exploit entrepreneurial opportunities. Or, in other words, since individuals growing in a family of entrepreneurs are likely to be often involved in the selection and processing of information necessary to take decisions, they are therefore prone to acquire strong confidence toward the outcomes of their actions and decisions.

Nevertheless, some related empirical evidence, such as the one provided by Andersson and Hammarstedt (2008), shows that even if the impact of family background on occupational choices may increase the likelihood of individuals whose parents are entrepreneurs to become themselves entrepreneurs, it is not responsible for enhancing the relative entrepreneurial performance. What seems to be the major determinant influencing actual business performance is actually prior work experience (Fairlie and Robb 2006). Thus, what increases the probability of success of a business is not entrepreneurial kinship, but the actual participation and work experience in the family business.

The key element making the difference, in this context, is therefore the actual acquisition of entrepreneurial skills through experience or learning by doing. This last reasoning brings us straightforwardly to the second source of TK: personal experience.

Undeniably, an essential component of entrepreneurial human capital is prior practical experience in the business sector as well as in any work environment as employee. Contact with daily complications, together with the need to discover rapid and effective solutions, prompts the development of problem-solving skills of both potential and actual entrepreneurs. Moreover, the need to deal with administrative issues in any working context is responsible for affecting the acquisition of organizational abilities, for instance through decisions concerning the degree of decentralization or delegation in a firm, depending on the size of the latter. Therefore, we can conclude that managerial and organizational abilities, deriving from personal experience, to handle efficiently the organizational setting of a firm, or of any working environment, are to be understood as the most important outcome stemming from the second source of tacit knowledge (Garicano 2000).

To conclude, the third source of tacit knowledge is to be found in social networks. Indeed, as a matter of fact, access to social capital benefits both potential and actual entrepreneurs in at least two ways: firstly, by significantly reducing transaction costs through the enhancement of trust and secondly, by easing the information-sharing process.

Unfortunately, at this point, it is still not possible to reach a general conclusion about the influence of education on entrepreneurship, for several reasons. The first is that EK is strongly context-dependent and as such the level of schooling necessary to successfully recognize and develop entrepreneurial opportunities varies according to the technological characteristics of the economic background. Furthermore, the return to education in any occupation is altered by the influence of the institutional settlement on the market, and is therefore inconstant from country to country.

4.2 – Entrepreneurial Knowledge and the Process of Opportunity Recognition and Development

As we have just mentioned, the concrete relationship between education and entrepreneurial choices is extremely complex. In fact, the impact of entrepreneurial knowledge is undeniably constantly influenced by technological and institutional dynamics.

As we have repeatedly pointed out, institutions are responsible for shaping the incentives for the acquisition and allocation of education among occupations, but these incentives are in turn affected by the way in which firms outline their demand for skills. Besides this, the final and decisive element modeling the interplay between EK and entrepreneurial choices is to be found in the institutional power to determine the returns to education for different economic activities. Hence, as Kanbur (1978) points out, it is the institutional framework which is responsible for affecting the allocation of risks and uncertainties among different occupations, and together with the risks associated with the returns to education among different businesses.

Nevertheless, when talking about the environment influencing the presence of entrepreneurial traits in the society, expressed by the overall level of entrepreneurship or through the composition of EK, we refer both to the institutional and cultural settlements. The impact of these two factors is already been partially investigated when considering the drivers of entrepreneurship, nonetheless, it is important to stress again their role in affecting both the composition and exploitation of entrepreneurial knowledge. Indeed, as a matter of fact, every specific set of norms, values, beliefs and customs is responsible for shaping entrepreneurs' choices, attitudes and behaviors, other than defining the feasibility of actions and their relative expected returns.

Only recently, the economists who started to deal with the double-causality link between culture and institutions have highlighted precisely how this causal relation does not go only from culture to institutions, but also from institutions to culture. Therefore, in our analysis we shall take into

consideration how both, culture and institutions, shape the traits and impact significantly the expected value of entrepreneurial choices. The most relevant cultural traits in this context are: trust in others, fatalistic tendencies and trust in institutions (Guiso et al. 2006; Tabellini, 2008; D'Orlando et al. 2010). Hence, it may be reasonable to conclude that there are some institutional and cultural environments, as the ones taken into consideration in section 2.4.2 and in the third chapter, discouraging the recognition and exploitation of opportunities, and thus the overall level of development.

On these premises, it would also be wise to assume that even the endowment of entrepreneurial knowledge necessary to identify business opportunities and develop a feasible entrepreneurial strategy is contingent on technological and institutional factors (Federici et al. 2008).

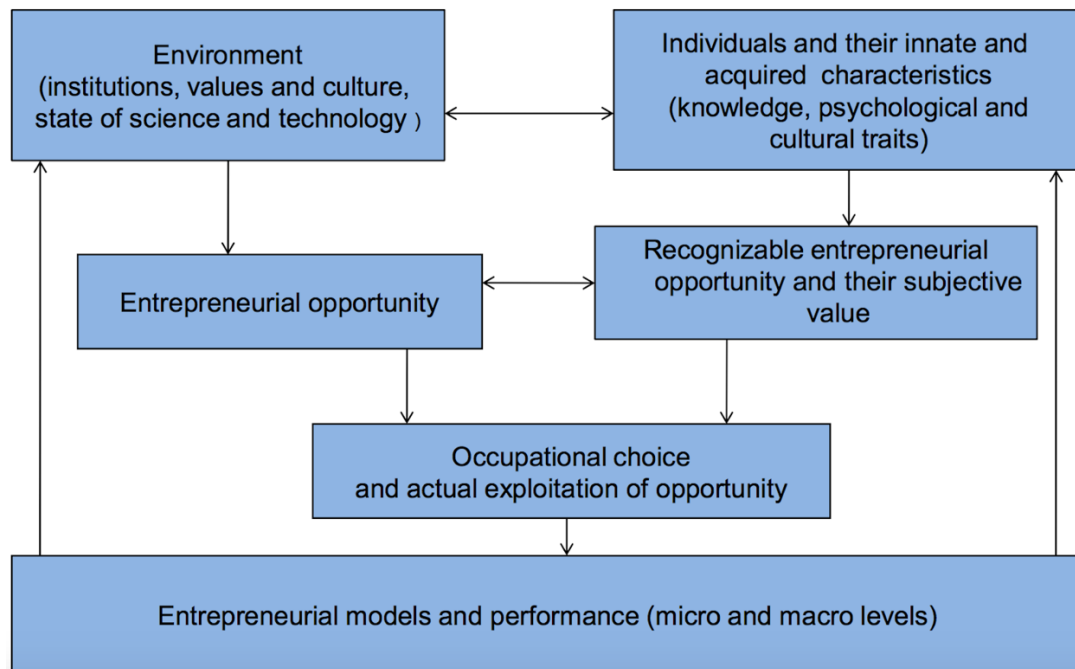
Therefore, by accepting the notion of a knowledge-based process of recognition of opportunities, it follows that localized and idiosyncratic knowledge brings about heterogeneous paths of opportunity identification and development.

Assume, for instance, the presence of two otherwise identical individuals, coming from diverse social and cultural environments and retaining analogous levels of education, who meet with the same biotechnologist to find out if there are opportunities to set up a new business. Most likely, when evaluating the presence of an entrepreneurial opportunity they will process the information offered by the biotechnologist in divergent ways. In fact, for the same opportunity, as a patent for instance, they will conceive different entrepreneurial projects to profit from the patent. That is to say, the two entrepreneurs will employ their codified knowledge – symbolized by the patent – differently. The reason behind the diverse application of knowledge of the two individuals lies on the fact that even if their knowledge in terms of education might seem alike, in reality they will possess distinct endowments of entrepreneurial knowledge, exemplified by variations in their CK and TK (de Bruin and Ferrante, 2011).

Accepting this characterization, it is clear that the key element in any localized path of opportunity identification and development is the actual matching between environmental and idiosyncratic factors. A schematic portrait of this solution space is offered in figure 9, where the interplay between subjective innate or acquired characteristics of individuals/firms, including knowledge as well as psychological and cultural traits, is displayed, together with the objective features of the environment influencing people's occupation choices; which in turn influence the presence of entrepreneurial opportunities, whose recognition and attached value is determined by the aforementioned subjective

traits. Finally, the resulting outcome is expressed in terms of entrepreneurial performance both at micro and macro level, ultimately influencing the evolution of the environment and the localized accumulation of knowledge.

Figure 9. The Path-Dependent Process of Opportunity Recognition and Development



Source: de Bruin and Ferrante, 2011

4.3 – Transferability of Entrepreneurial Knowledge

Once we established the role of EK in the process of identification and exploitation of opportunities, it is important to shed light on the mechanisms concerning transferability of knowledge as a result of the relative critical strategic implications both at micro and macro level. Indeed, enhancing the transferability of EK can loose opportunity constraints or enlarge the aggregate range of opportunities. In order to reach a clear understanding of the dynamics of this phenomenon, we will distinguish between two forms of transferability: spatial transferability and transferability in technological and business fields.

The concept of spatial transferability refers to the degree to which TK and CK maintain their expected value, measured in terms of recognition and development of opportunities, across heterogeneous business environments. Indeed, imperfect transferability of EK in general might

compromise the chance of recognizing and exploiting opportunities in markets *distant* in cultural, institutional or business terms, either at national or international level. Therefore, it follows that transferability of EK is incredibly important for firms acting upon internationalization strategies. As a matter of fact, in this context, we should expect a positive correlation between EK transferability and a firm's foreign involvement, if we set aside variables such as financial strength and firm size. Consequently, in this case improved transferability would be responsible for providing to the firm access to diverse forms of foreign connections, such as joint ventures and foreign direct investment (FDI). Furthermore, in a dynamic viewpoint, enhanced transferability may also foster firms' chances to benefit from informative and technological spillovers from foreign markets. Finally, if one's focuses on the specific composition of entrepreneurial knowledge, it is clear that the degree spatial transferability will increase in line with the content of CK rather than TK, due to the fact that the latter is by nature very context-specific.

Moreover, transferability throughout business sectors is a typical feature of EK in creative activities. The notion of *creative economy* is directly related to the concept of creativity in a world increasingly interconnected and globalized, which results in critical alterations in both the fields of consumption and production plus, and perhaps more importantly, in the way of doing business. Even though there is no commonly shared definition of creative economy or creative entrepreneurship, we can say that generally creative entrepreneurship entails the necessity to grasp the intricate line of interactions of the economic, social, technological and cultural traits shaping the dynamic of people's life. In other words, the success of creative entrepreneurship is contingent on the capacity to acknowledge and secure the far-reaching value of creative ideas by transmitting them throughout creative and non-creative sectors.

Lastly, shifting our focus on the characteristics of firms endowed predominantly with tacit knowledge, we might reasonably foresee business strategies built on incremental processes of innovation and external R&D, rather than far-reaching innovative products or intra-firm R&D. In addition to this, it would be also reasonable to expect that such firms might be less inclined toward the adoption of organizational backgrounds found on team production. Returning to the employment of internationalization strategies, it is likely that this type of firms will favor arrangements like exports, international contractual and sub-contracting strategies rather than leaning toward FDI. Thereupon, in terms of performance they are going to report less returns on investment, but at the same time they will bare less risks concerning variability in terms of revenue and profits.

4.4 - Some Empirical Evidence on the Impact of Entrepreneurial Education

In this last section, we will try to assess the main benefits provided by the enhancement of entrepreneurial education by taking into consideration the 2012 Report of the European Commission about the effects and impact of entrepreneurship programs in higher education.

The executive summary of the Report starts by stating that “entrepreneurship education has a positive impact on the entrepreneurial mindset of young people, their intentions towards entrepreneurship, their employability and finally on their role in society and the economy”.

The EU 2020 strategy emphasizes the necessity to include creativity, innovation and entrepreneurial notions into education in order to achieve the following objectives:

- Improve young people’s mindset of entrepreneurship, enabling them to be more creative and confident in any activity undertaken, and increase their attractiveness for employers;
- Encourage start-up of innovative businesses;
- Enhance entrepreneurs’ role in the society and in the economy.

The aforementioned 2012 Report of the European Commission displays precisely the positive effects of programs fostering entrepreneurial education and training in terms of improved abilities, increases in proactive attitudes toward the start of a business, higher levels of employability (independently from the type of occupation), and enhanced propensity toward innovation and self-employment.

Among the key abilities acquired, it is thus possible to identify three distinct groups of competencies:

1. attitudes as enhanced enterprising spirit, risk-propensity and self-efficacy; 2. skills such as creativity, analytic skills, relational, adaptability; 3. knowledge in the form of improved comprehension of the role of the entrepreneur and notions necessary to conduct entrepreneurial tasks/activities.

On these premises and as we already said, it is clear that entrepreneurship education is not only aimed at increasing the number of entrepreneurs, but it also intended to spread the whole entrepreneurial culture in heterogeneous working environments distinct from self-employment.

Indeed, the entrepreneurial mindset, understood as the ability to recognize and exploit opportunities as well as the capacity to solve problems, is an asset required also in private and public organizations.

Therefore, analyzing the programs fostering entrepreneurial education currently implemented, it is possible to distinguish them on a twofold basis:

- 1) according to the scholastic level of application (ISCED 1-6); or
- 2) according to the presence of affiliation to strategic national plans.

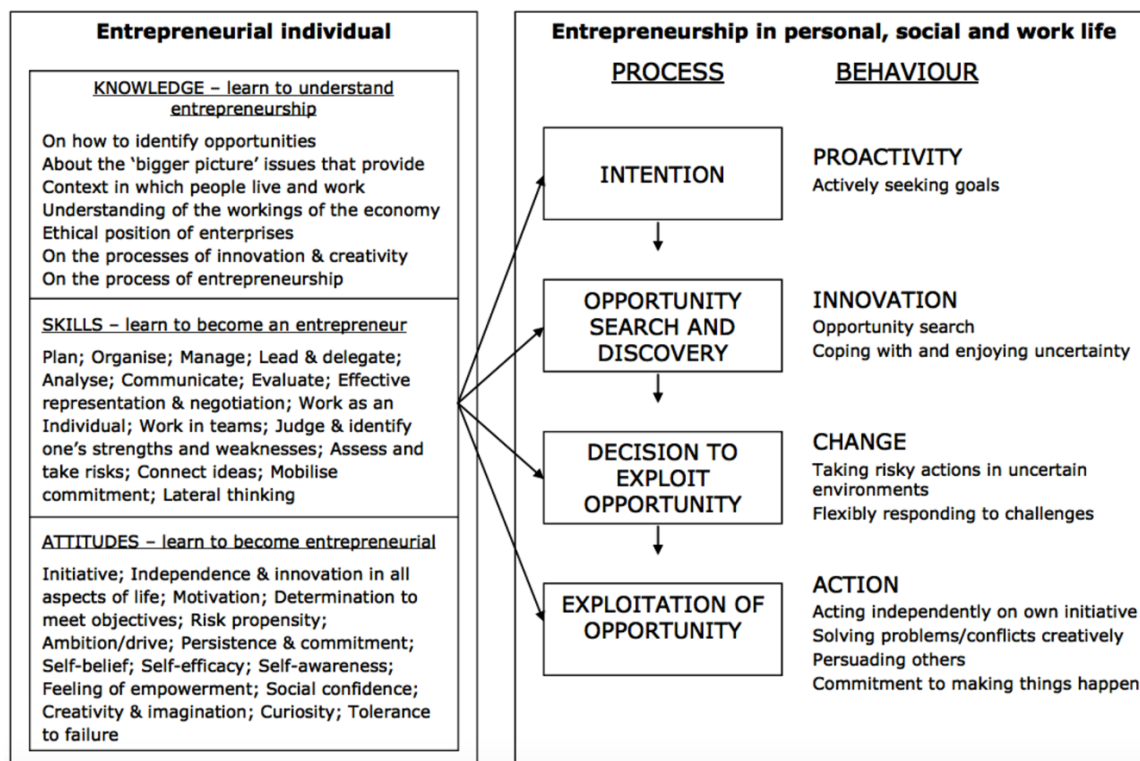
Likewise, the latter can be further classified in:

- a) strategic national plans aimed at including entrepreneurial education in scholastic curricula;
- b) general measures promoting entrepreneurship, and thus entrepreneurial education;
- c) individual or multiple ventures specifically focused on entrepreneurial education.

Nevertheless, it is possible to identify a common methodology embedded in both entrepreneurial education and training programs, at all levels, including measures such as didactic practices promoting interaction, proactive acquisition of information, learning by doing and constant reference to concrete cases. Yet, supplementary learning practices should also envisage the actual training of educators as well as mentorship programs involving managers, entrepreneurs, and favored observers of the entrepreneurial world.

A schematic summary the elements embedded in the strategies of entrepreneurial education and training is offered by Figure 10, together with the representation of the process of acquisition of the entrepreneurial traits.

Figure 10. The Core Elements of Entrepreneurial Education



Source: 2012 Report of the European Commission

In this context, another noteworthy program aimed at favoring innovation-driven entrepreneurship is the one brought forward in the United States by the National Science Foundation (NSF): the NSF Innovation Corps. The latter involves in a set of activities allowing to scientists and engineers, whom discoveries seem to be promising for a broader commercial applicability, to acquire the skills necessary to transform their innovations into start-ups retaining high potential of growth and occupation. This combination of scientific innovation with the experience and guidance of established entrepreneurs has proven to be a pioneering and profitable public-private partnership, fostering the identification and exploitation of valuable product opportunities stemming from academic research.

The methodology applied by the NSF Innovation Corps is the one of Lean Startup, being a new approach to the management of new businesses which appears to be particularly promising in the case of innovation-driven entrepreneurship, as a result of its foundation on the systematic reduction of technologically-related and market uncertainty. Indeed, the ultimate purpose of the NSF Innovation Corps is to enhance the real value of research funds invested through the creation of new start-ups able to attract private capital and to undertake partnerships with consolidated firms.

Conclusion

The purpose of this dissertation was to shed light on the main determinants of cross-country income differences. The analysis is brought forward by taking into consideration the respective impact of institutions and entrepreneurship on the overall level of development. Through the exploration of the relevant literature on the subject, we have concluded that the fundamental cause of differences in prosperity across countries is to be found in institutions.

First of all, we saw which institutions are responsible for enhancing economic growth or stagnation and how different institutional features shape the incentives responsible for prompting or discouraging entrepreneurship. Secondly, our focus was shifted on the assessment of the role of entrepreneurial activities on the level of growth. By providing a comprehensive overview on the main definitions, measurements, and forms of entrepreneurship, we established that the entrepreneurial phenomenon is a fundamental driver of growth. It encourages innovation, stimulates the creation of employment, improves productivity and increases competitiveness. Subsequently, once acknowledged the role of entrepreneurship, we analyzed its main drivers thus taking into consideration the relevance of innate talent, the importance of culture and again the fundamental impact of institutions.

The final outcome of this analytical work is the provision of an extremely comprehensive view, reconciling and clarifying the interplay between institutions, entrepreneurship and development. Indeed, departing from the fact that institutions are the fundamental cause of cross-country income differences, we established that they are also the main factor determining the type and level of entrepreneurial activity. Successively, we also examined more in depth how, according to Baumol, productive, unproductive or destructive types of entrepreneurship are the leading engines or deterrents of economic growth.

Finally, we focused specifically on the function of human capital and entrepreneurial knowledge in this context. We highlighted their relevance in the process of recognition and development of opportunities, therefore stressing how the latter in a favorable institutional environment are responsible for boosting the presence of entrepreneurs and hence encouraging growth and development.

Finally, we took into consideration some two distinct programs aimed at fostering entrepreneurship and development in general through the enhancement of entrepreneurial knowledge, in an attempt to deliver tangible proofs of the effectiveness of the implementation of the empirical and theoretical

evidence provided.

The enrichment of the educational level of entrepreneurs and the enhancement of entrepreneurial education and training for any kind of worker is something which may prove to be an extremely useful tool to foster development in general as well as the expansion of entrepreneurship with high-growth potential. In fact, an upgrade of human capital would not be intended only to increase the level of entrepreneurial activities, but in particular to improve the likelihood of their success. Indeed, we have highlighted as entrepreneurial knowledge prompts the development of skills and attitudes opening up increased occupational opportunities, other than delivering the capacity to act according to the entrepreneurial spirit, with a more proactive, innovative and creative approach both to entrepreneurs and intrapreneurs.

Nevertheless, as we continuously stressed out in this dissertation, it is not sufficient to operate only on entrepreneurship or on human capital. It is necessary to prioritize targeted intervention on the institutional and cultural barriers preventing the development of entrepreneurial activities and growth in general, therefore addressing these obstacles with innovative institutional settlements, cultural management of beliefs influencing the perception of economic choices, increased financial resources for entrepreneurship and programs enhancing the acquisition of entrepreneurial knowledge and training.

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Istituzioni e Imprenditoria come Driver della Crescita: il Ruolo dell'Educazione Imprenditoriale

Alla luce dei più recenti contributi empirici e teorici che esaminano le cause della crescente disegualianza economica tra le nazioni più ricche e più povere del mondo, il divario tra i livelli medi di reddito appare incredibilmente grande. Cosa spiega questa enorme differenza? Perché alcuni paesi crescono mentre altri ristagnano?

Anche se c'è ancora scarso consenso sulle risposte a queste domande, ci sono due linee di pensiero che emergono come degne di nota. La prima pone la sua attenzione sul ruolo delle istituzioni, in particolar modo sull'impatto dei diritti di proprietà e dello stato di diritto ed è generalmente associata a Douglass North (1990) e ad Acemoglu, Johnson e Robinson (2001). Ulteriori punti di vista che meritano di essere presi in considerazione in questo ambito sono quelli di Rodrik (2002), Knack e Keefer (1995), e Mauro (1995). Questi ultimi si concentrano rispettivamente sull'influenza della qualità istituzionale sullo sviluppo economico, misurata in termini di diritti di proprietà, esecuzione di contratti e corruzione. La seconda linea di pensiero enfatizza il ruolo dell'imprenditorialità come motore della crescita. Contributi significativi in quest'ambito sono rappresentati dalle opere di Audretsch (1995), Klepper (1996), Jovanovic (2001), Acs (2006), van Praag e Versloot (2007).

Il punto di partenza di questa dissertazione è la valutazione critica di entrambi gli approcci separatamente, finalizzata ad apprezzarne la validità reciproca. Prima di tutto, forniremo una panoramica delle diverse definizioni attribuite al concetto di istituzioni, insieme a un'indagine approfondita del rapporto tra i diversi assetti istituzionali e lo sviluppo economico.

La definizione del concetto di istituzioni è alquanto controversa e si presta a diverse interpretazioni, a seconda dei differenti approcci teorici e delle diverse scuole di pensiero. Come punto di partenza è utile prendere in considerazione la definizione fornita da Douglass North (1990), ampia ma allo stesso tempo molto efficace. Secondo quest'ultima, le istituzioni sono dei vincoli concepiti dagli uomini che ne modellano l'interazione. Esse strutturano gli incentivi e indirizzano i comportamenti in ambito politico, sociale o economico. Perciò, dal momento che la struttura istituzionale fornisce gli incentivi propri di una specifica configurazione economica, a seconda dell'evoluzione di quest'ultima, lo sviluppo economico si modella verso la crescita, la stagnazione o il declino.

In termini generali, i tratti istituzionali più influenti nel determinare gli incentivi e, attraverso questi, l'efficienza nell'allocazione delle risorse, sono: 1) la protezione dei diritti di proprietà; 2) l'efficienza del sistema legale; 3) il tasso di corruzione; 4) la forma di governo (democrazia o dittatura); ed infine 5) la natura dei vincoli imposti all'élite politica.

Tuttavia, la natura delle istituzioni non è univoca ed omogenea in tutti i sistemi economici. Acemoglu (2008), oltre a sostenere che le differenze tra paesi, in termini di reddito pro capite, sono causate dalla disuguaglianza delle strutture istituzionali, evidenzia che queste ultime sono il risultato di scelte collettive, che dipendono a loro volta da radicati assetti politici e sociali. Pertanto, ne consegue che diverse configurazioni istituzionali non sono altro che il riflesso delle diversità nell'ambiente politico, sociale, culturale e di eterogenee distribuzioni del potere. Inoltre, l'idea che esistano assetti istituzionali ottimali non è appropriata. Infatti, istituzioni analoghe poste in due paesi diversi porteranno a risultati differenti in termini di performance economica se le condizioni di fondo sono diverse.

Questo implica che, anche se esistono alcune istituzioni essenziali per stimolare lo sviluppo economico, la mera esportazione di queste ultime non è sufficiente per la crescita di un'economia. È perciò necessario intraprendere cambiamenti complementari nel contesto politico, economico e culturale al fine di garantire l'efficacia della struttura istituzionale.

Una volta stabilito che le istituzioni determinano gli incentivi, la profittabilità dell'attività economica e, di conseguenza, la risultante performance economica di un paese, non si può non constatare che ciò avviene anche e soprattutto attraverso gli incentivi a fare impresa.

Il fenomeno imprenditoriale ha stimolato un livello crescente di interesse all'interno della comunità economica. Tuttavia, pur avendo riconosciuto il ruolo centrale dell'attività imprenditoriale come *driver* della crescita, il concetto di imprenditoria rimane a tutt'oggi ambiguo, dal momento che non c'è ancora consenso sul suo esatto significato.

In questa dissertazione, diverse definizioni sono prese in considerazione. Queste devono essere considerate come complementari tra loro, piuttosto che distinte e antagoniste. In termini generali, il ruolo dell'imprenditore è comunemente concepito come finalizzato a generare valore. Tuttavia, sulle orme di Cantillon (1755), Knight (1921), Schumpeter (1934) e Kirzner (1973), è anche necessario evidenziare la presenza di un atteggiamento volto all'assunzione di rischi, all'innovazione e

all'arbitraggio. Di conseguenza, si potrebbe suggerire che qualsiasi indicatore volto a catturare il fenomeno imprenditoriale dovrebbe fare riferimento al valore generato dalle attività imprenditoriali, sia attraverso la creazione, la modifica o l'espansione di un'azienda che attraverso l'individuazione di nuovi prodotti o mercati da cui trarre profitto.

In seguito alla recente identificazione della centralità del contributo imprenditoriale all'interno dell'economia, diversi economisti hanno avviato progetti e iniziative finalizzati a catturare le dinamiche che governano questo fenomeno. Il progetto GEM (*Global Entrepreneurship Monitor*) rappresenta lo studio più esaustivo e completo dell'imprenditoria globale. L'indagine GEM monitora i tassi di imprenditorialità e valuta le principali caratteristiche, motivazioni e ambizioni della classe imprenditoriale, tenendo conto, inoltre, delle diverse attitudini delle società nei confronti dell'imprenditoria.

All'interno del modello GEM, è presente l'indicatore TEA, definito come il tasso totale di attività imprenditoriale; quest'ultimo coglie nel modo più completo il fenomeno imprenditoriale. Più precisamente, esso prende in considerazione l'incidenza, in termini di percentuale, della popolazione adulta in procinto di avviare delle startup – definite come attività rilevate da meno di 3 mesi e perciò identificabili con l'imprenditorialità nascente – e di creare delle nuove imprese – definite come attività economiche rilevate da meno di 42 mesi e perciò identificabili con l'imprenditorialità già affermata ma non ancora stabile.

Il progetto GEM si distingue dagli altri studi grazie alla sua capacità di fornire dati coerenti e comparabili tra paesi diversi. Infatti, non solo è in grado di tracciare le attività imprenditoriali informali che le altre statistiche ufficiali non rilevano, ma uno dei suoi maggiori punti di forza è precisamente l'applicazione uniforme di definizioni legate al fenomeno imprenditoriale e la raccolta di dati in molteplici paesi, che insieme consentono confronti internazionali semplici e dettagliati.

In generale, a prescindere dalla specificità dei contributi individuali, gli economisti riconoscono l'importanza dell'imprenditoria per lo sviluppo economico individuando quattro diversi canali attraverso cui essa genera benefici economici, vale a dire: la creazione di posti di lavoro (Blanchflower, 2000; Salgado-Banda, 2004; Acs et al, 2005; Parker, 2009), il progresso in materia di innovazione e in ambito tecnologico (Schumpeter 1934, ACS e Audretsch, 1988; Mairesse & Mohnen, 2001), l'aumento della produttività (Aghion e Howitt, 1998; Iversen & Nieuwenhuisen, 1999; van Praag, 2007) e della competitività (Eliasson, 1996; Kirzner, 1973).

A questo punto, dopo aver svelato la centralità dell'imprenditoria nel promuovere lo sviluppo economico, è necessario sondare ciò che la guida. C'è una vasta letteratura che esplora i principali fattori che influenzano la scelta di diventare un imprenditore. Alcuni sottolineano l'importanza del talento innato e individuale (Lucas, 1978); altri la rilevanza delle credenze culturali (Guiso et al, 2006; Harper, 1998; Ruiu, 2012); altri ancora prendono in considerazione l'impatto dell'educazione e della conoscenza imprenditoriale (Lazear, 2005; Cunha e Heckman, 2007); infine, vi è ampio consenso sull'idea che la struttura istituzionale sia l'elemento chiave che influenza la decisione di diventare un imprenditore (Baumol, 1990).

Uno dei contributi più significativi in questo ambito è rappresentato dall'articolo di Baumol (1990) incentrato sul ruolo delle istituzioni nel definire le attività imprenditoriali come produttive, improduttive o distruttive. Partendo da esempi storici di stagnazione e crescita economica, Baumol (1990) sostiene che l'onnipotente figura dell'imprenditore è in grado di influenzare positivamente o negativamente l'efficienza economica, e quindi la crescita. Inoltre, egli evidenzia che il potenziale successo economico risultante dall'ascendente imprenditoriale, in termini di produttività, è il risultato della qualità complessiva della struttura istituzionale. Infatti, secondo Baumol (1990), le decisioni e gli esiti imprenditoriali sono modellati dai relativi tassi di rendimento, che a loro volta sono influenzati dalla struttura istituzionale. Più specificamente, la struttura istituzionale, determinando gli incentivi e la profittabilità dell'attività imprenditoriale, influenza le strategie della classe imprenditoriale.

La conclusione che ne discende è dunque che nei paesi in cui le istituzioni forniscono la protezione dei diritti di proprietà, un sistema giudiziario equo ed equilibrato, un'efficiente *enforcement* dei diritti contrattuali e l'imposizione di limiti sulla capacità del governo di trasferire risorse finanziarie attraverso la tassazione e la regolamentazione, individui creativi si impegneranno in attività di mercato imprenditoriali produttive che creeranno ricchezza. Al contrario, nei paesi privi di queste istituzioni, questi stessi individui saranno più propensi ad impegnarsi nel tentativo di manipolare il processo politico e/o giuridico per appropriarsi delle risorse economiche attraverso attività di *rent seeking*. In altre parole, la canalizzazione degli sforzi imprenditoriali è condizionata dalla qualità delle dominanti strutture istituzionali di carattere politico, economico e giuridico. A seconda della natura di queste ultime, l'imprenditoria viene canalizzata in attività di mercato produttive o improduttive, determinando quindi la crescita o la stagnazione dell'economia.

Tuttavia, procedendo con un'analisi più dettagliata, emerge che le diverse strutture istituzionali non influenzano in modo omogeneo la produttività dell'imprenditorialità guidata dalla necessità (o *necessity-driven*) e quella pilotata dal riconoscimento di opportunità redditizie (o *opportunity-driven*).

Di fatto, esplorando più approfonditamente l'impatto dei diritti di proprietà, il ruolo di potenziali restrizioni finanziarie e l'influenza di interventi governativi nell'ambito delle libertà fiscali, monetarie o lavorative, è possibile concludere che l'effetto di questi fattori dipende dalle particolari caratteristiche dei diversi tipi di imprenditoria. Infatti, dal momento che le attività imprenditoriali *opportunity-driven* sviluppano maggiori ambizioni di crescita e occupazione, necessitano e investono ingenti quantità di capitale, sono più grandi, più innovative e quindi più redditizie rispetto a quelle *necessity-driven*, ne consegue che l'imprenditoria guidata dal riconoscimento di un'opportunità mostrerà una minore sensibilità verso le varie forme di interventi governativi, sarà più colpita da restrizioni finanziarie mentre la protezione dei diritti di proprietà rivestirà per essa una maggiore importanza.

Avendo dunque stabilito che la struttura istituzionale è la causa primaria dei diversi livelli e forme di imprenditoria e che l'attività imprenditoriale è il principale motore della crescita economica, è evidente che altri elementi centrali, in questo contesto, sono il capitale umano e l'educazione imprenditoriale. La rilevanza di questi fattori risulta particolarmente evidente nel processo di identificazione e sfruttamento delle opportunità, dal momento che, se posti in un contesto istituzionale favorevole, questi elementi favoriscono lo sviluppo di attività imprenditoriali, stimolando così anche la crescita economica.

Nella parte finale della dissertazione, dopo aver appropriatamente distinto la conoscenza imprenditoriale tra tacita e codificata, specificando inoltre le caratteristiche della loro relativa trasferibilità, abbiamo infine preso in considerazione due distinti programmi volti a promuovere l'imprenditorialità e lo sviluppo in generale, nel tentativo di fornire prove tangibili riguardo all'efficacia del materiale empirico e teorico fornito.

L'arricchimento dei livelli di istruzione degli imprenditori e il potenziamento dell'educazione e della formazione imprenditoriale per ogni tipo di lavoratore sono infatti qualcosa che si è rivelato estremamente utile nel favorire lo sviluppo economico, così come l'espansione dell'imprenditorialità ad alto potenziale di crescita. Ciò nonostante, è importante chiarire che l'arricchimento del capitale

umano non è volto solamente ad aumentare il livello di attività imprenditoriale, ma in particolare a migliorarne la relativa probabilità di successo. La conoscenza imprenditoriale, infatti, promuove lo sviluppo di competenze e atteggiamenti che aprono maggiori opportunità occupazionali, oltre a fornire la capacità di agire secondo lo spirito imprenditoriale con un approccio proattivo, innovativo e creativo sia da parte di imprenditori che di lavoratori dipendenti (*intrapreneurs*).

In conclusione, emerge che non è sufficiente intervenire esclusivamente sul quadro imprenditoriale o sulla qualità e i contenuti del capitale umano per stimolare lo sviluppo economico. È infatti necessario dare priorità all'intervento sulle barriere istituzionali e culturali che impediscono lo sviluppo di attività imprenditoriali produttive e la crescita dell'economia in generale. Per affrontare questi ostacoli è dunque indispensabile implementare strutture istituzionali favorevoli ed innovative, intervenire sulle convinzioni culturali che influenzano la percezione e la propensione verso l'imprenditoria, fornire maggiori risorse finanziarie alla classe imprenditoriale, ed infine promuovere programmi volti a sviluppare la conoscenza e la formazione imprenditoriale, tutto in modo appropriato e specifico per ogni contesto.