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# Local and Systemic Entrepreneurship: Solving the Puzzle of Entrepreneurship and Economic Development

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**Most economists agree that entrepreneurship has a positive effect on growth in developed countries. However, no evidence of this has been found in the case of developing countries. Rather, in many low-income countries, one can observe productive entrepreneurship but little corresponding development. This is the puzzle of entrepreneurship and development. To solve this puzzle, we propose to look at the notions of local and systemic entrepreneurship. Using recent research on the mechanisms of social cooperation, as well as network and firm theories, we offer an explanation of why entrepreneurship has a limited impact on growth in developing countries.**

## Introduction

Even in the harshest environments, people find opportunities to improve their lot. This is true even in situations such as the Soviet Union, where the government was supposed to centrally plan the entire economy. Indeed, Soviet Russia witnessed the development of many informal and illicit markets in which people exchanged goods and services (Boettke, 1993; Kornai, 1992; Nove, 1993). If informal markets were present in the Soviet Union, this also surely meant that entrepreneurs were active, discovering opportunities to seize gains from trade in order to improve their daily lives and fill the gaps created by the failed official economic system.

Many poor developing countries experience similar situations. In spite of their often malfunctioning *de jure* institutions, these countries offer countless examples of entrepreneurial behavior (Boudreaux, 2005; Guest, 2004). Casual observation, however, shows that individuals are very limited in their enterprises. The entrepreneurial process takes place within a limited context of already familiar situations. It is as if opportunities were local and never extended beyond the limits of the community or the small town. In many such cases, entrepreneurship is socially productive, but it does not generate a level of wealth that would eliminate mass poverty. How can productive entrepreneurship be omnipresent and yet have such little effect? This is the puzzle of entrepreneurship and economic development.

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One traditional explanation of this puzzle maintains that being an entrepreneur is, in one way or another, illegal or too expensive for the poor. As De Soto (2002, p. xviii) states: “the principal enemy of [poor Peruvian] entrepreneurs is the existing legal system, which excludes them.” Underground development follows, but with limited positive effects in the long run. Others note that solving that puzzle is more complex than previously thought, and that we may not understand the main factors at work. As Acs, Desai, and Hessels (2008) explain: “complex interdependencies may exist between individual level factors, such as opportunity perception and start-up motivations on the one hand, and between national environmental or institutional conditions on the other hand” (p. 232).

Multiple factors may cause this state of affairs; first among them are institutional deficiencies. Government regulations, ill-defined and -enforced property rights, and regime uncertainty come to mind. We focus, however, only indirectly on institutional explanations, as this paper attempts to show that while institutions in developing countries may favor local productive entrepreneurship, other factors (indirectly related to institutions) may overall limit productive entrepreneurial activity.

Building on Baumol’s theory of productive and unproductive entrepreneurship, this paper offers the following conjecture. In order to solve the puzzle of entrepreneurship and development, what matters is not only that unproductive entrepreneurship is present, but also that existing productive entrepreneurial activity is limited in its scope. This limitation is explained by exploring the distinction between the notions of local and systemic entrepreneurship and the mechanisms that preclude the second type of entrepreneurship from emerging.

The paper is organized as follows. The second section presents the puzzle of entrepreneurship and economic development. In the third section, we explore the distinction between the notions of local and systemic entrepreneurship and why it matters to the problem at hand. Before concluding, the last section offers a theory attempting to solve the puzzle of economic development.

## **The Puzzle of Entrepreneurship and Economic Development**

Whether entrepreneurship is important to development and economic growth has been a subject of interest for a long time. As early as the eighteenth century, with Cantillon, and the nineteenth century, with Say, economists have offered detailed theories of the role of entrepreneurship in development. But while classical economists saw the role of the entrepreneur as vital, it is well known that twentieth-century economics did away with this function. Commenting on post-World War II economics, Leff explains that: “Revisionist economic history has displaced the entrepreneur from his central role as determinant of a country’s economic performance and placed greater emphasis on structural macroeconomic conditions” (Leff, 1979, p. 51).

With the exception of Schumpeter (1934), and a few other economists, such as Kirzner (1985), and Baumol (1990), in the major part of the twentieth century, no theorists really saw a critical role for the entrepreneur in economic expansion. Most authors, “whether explicitly or simply by virtue of omission, consider entrepreneurial supply to have played a passive part in the drama whose major themes were invention, changing factor prices, and new market opportunities” (Kilby, 1971, p. 3). In a rare paper on entrepreneurship and development, however, Leibenstein (1968) argues that gains in productivity are necessary for per capita income growth to occur, and these gains are only possible if shifts from less productive to more productive techniques take place through the creation of new commodities, new material, new organizational forms, and new

knowledge. Leibenstein sees the entrepreneur as a gap filler and input completer, and the prime mover of the growth process. “We now know,” Leibenstein explains, “that development is not simply a process of physical and human capital accumulation in the usual sense. If that were all that were involved, then development would simply be a function of the willingness to save. Experience has shown that this is not the case” (p. 77). While Leibenstein remains within a framework of cost–benefit analysis with all its limitations (Kirzner, 1979), the relationship he surmises between his X-inefficiencies theory and the role of entrepreneurship in development and growth points in the right direction.

Kirzner (1985) argues further that once one takes into account the role of entrepreneurship, the emphasis shifts from the traditional optimization problem of resource allocation, to the discovery of new means and ends frameworks. This process enables changes in the set of inputs, as well as in the relations between inputs and outputs. To understand economic growth, one must see the allocation problem primarily as a discovery process.<sup>1</sup>

In more recent times, especially in the last decade with the Global Entrepreneurship Monitor (GEM), a new interest in research on the topic of entrepreneurship and development has emerged. Economists strive to understand the causal effect of start-up formation on growth, and more generally, the effect of individuals’ capacity to discover new business opportunities. As Carree and Thurik (2003) argue, for instance, it is now accepted that entrepreneurship is a necessary condition for sound long-term economic growth. Entrepreneurship is regarded as an important factor in economic growth through its effect on innovation and employment (Acs & Audretsch, 1988; Baumol, 2002; Carree & Thurik; Wennekers & Thurik, 1999; Wong, Ho, & Autio, 2005).

## GEM Data

In this paper, we are mostly concerned with the idea of entrepreneurship as the discovery of hitherto unknown gains from trade. These gains may be exploitable by a single trader or in the context of a firm with its internal division of labor and organization of production. Sanandaji (2010) states that most self-employment measures do not measure entrepreneurship. While this view may be correct, we prefer to remain agnostic on the matter, for reasons linked to the difficulty of measuring entrepreneurship. Indeed, if one considers entrepreneurship in the Schumpeterian sense of “new combinations” (as Sanandaji does), then one may not find much entrepreneurship in self-employment. Other definitions of entrepreneurship, however, may deliver different empirical results.<sup>2</sup>

While a positive link has been identified between economic growth and entrepreneurship in developed economies, the same relationship has not been established for developing economies (Giarmatino, 1991; Koster & Kumar Rai, 2008). A major reason for this state of affairs was identified using GEM data. GEM defines a business start-up as a process starting at the nascent stage. The notion of “nascent entrepreneurship” describes the stage in which individuals have taken some steps towards creating, in the past year, a new business that they

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1. Note that some historians and other social scientists paid more attention to the role of the entrepreneur than did economists. See for instance Mokyr’s discussion in *The Lever of Riches* (1992) of the role of the classic inventor-entrepreneur during the Industrial Revolution. Another example is Hughes’s *The Vital Few* (1986).

2. A Kirznerian definition of entrepreneurship would lead to the measure of the pure profit component in the returns accruing to production factors. This is extremely difficult to isolate empirically, but there is no theoretical reason why self-employment could not display (at least in some cases) an entrepreneurial component.

will own or co-own.<sup>3</sup> Early-stage entrepreneurial activity (i.e., involving nascent entrepreneurs) is more prevalent in low-income countries than in high-income ones.<sup>4</sup> The 2008 GEM Report shows that in low-income countries, as compared with middle- or high-income countries, higher percentages of adult populations are involved in early-stage business creation activities. One way to explain this finding is to examine low-income countries' discontinuation rates. According to the GEM (2008, p. 20) report, the business discontinuation rate is higher in "factor-driven economies" (low-income countries) and "efficiency-driven economies" (middle-income countries) than in "innovation-driven economies" (high-income countries). For one reason or another, businesses do not grow beyond the early stage, and firms experience a high death rate.

GEM reports also look at the motivation for being an entrepreneur. The two categories of motivation are: "opportunity entrepreneurship" (whereby entrepreneurs have discovered an opportunity and want to exploit it) and "necessity entrepreneurship" (whereby entrepreneurs have no other alternative to make a living). Necessity entrepreneurship is more prevalent in low-income countries according to GEM (2008, pp. 23–24) data. As a country progresses in economic development, its rate of necessity entrepreneurship decreases. One may infer from these data that necessity entrepreneurship has a low impact on development and growth. The Schumpeterian view that entrepreneurship is a major engine of economic growth has not been shown empirically for developing countries. As Koster and Kumar Rai (2008, pp. 117–118) state, "it is still very much an open question whether entrepreneurship has the same positive role in developing countries as it has in the developed world." Empirically, the effect of entrepreneurship on development remains to be established.

## Baumol's Theory

In seeking to understand why entrepreneurial activity does not seem to provide an empirical explanation for the mechanisms of development, a starting point is Baumol's well-known theory of socially productive entrepreneurship. Baumol (1990) argues that while the total supply of entrepreneurs may vary over time and space, the productive contributions of these entrepreneurs may vary even more. Entrepreneurship may be allocated to productive or unproductive activities, depending on the relative payoffs societies offer. The fundamental idea is that the way entrepreneurs may act at a given time will be influenced by the rules of the game, which determine the reward structure in the economy. The rules of the game determine the allocation of entrepreneurial activity. This means that entrepreneurship is not inherently productive or unproductive. Rather, the available rewards make entrepreneurship socially productive or unproductive.

As Baumol explains, generally, there is a strong link between the degrees to which an economy rewards socially productive entrepreneurial activity and the prosperity of that economy. In the Rome and Hellenistic Egypt example, Baumol explains that while these

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3. See GEM (2008, p. 13). Nascent businesses have not paid wages or salaries to the owners for more than 3 months. Once the new business has started paying salaries, it becomes a "new business." "The prevalence rate of nascent entrepreneurs and new business owners taken together may be viewed as an indicator of early-stage entrepreneurial activity in a country" (p. 11).

4. Countries with the highest levels of GDP per capita in the GEM database also experience high levels of early-stage entrepreneurship, but not to the same extent as poor countries. Moreover, rich countries have many more large and established businesses than poor countries. See early-stage entrepreneurial activity rates and GDP per capita in Figure 1 (GEM, 2006, p. 11) and Figure 8 (GEM, 2008, p. 22). GEM reports have consistently showed a U-shaped association between a country's level of economic development and its level and type of entrepreneurial activity.

people had important technological knowledge (such as the steam engine and the water mill), this knowledge did not translate into continuously growing living standards for the majority of the population. He concludes that at least some part of the explanation is to be found in the rules of the game, which discouraged productive entrepreneurship.

Baumol's theory of the allocation of entrepreneurial activity helps explain the state of development of various economies. Economies in former communist countries, for example, have had various degrees of success with their transition path. Another case where Baumol's theory matters is with low-income and developing countries. In Baumol's typology, a poor and stagnant economy primarily means that the rewards to unproductive entrepreneurship are high enough to discourage a great portion of productive activities. In other words, entrepreneurship is allocated to a great extent toward unproductive activities. Baumol's claims have been tested empirically successfully (Sobel, 2008), and historical analysis and experience (Bauer, 1972) seem to give them validity.

### **The Puzzle of Entrepreneurship and Economic Development**

While Baumol is correct in his analysis, another observation can be made. Indeed, it appears that low-income countries often experience plenty of productive entrepreneurship, but with little corresponding economic growth. Even in the harshest environments, there always are people who find opportunities to improve their lot and seize gains from trade. In many developing countries of Sub-Saharan Africa in the last few decades, many informal and illicit markets arose. The presence of informal markets in the developing world means that entrepreneurs are active, discovering opportunities to seize gains from trade in order to improve their daily lives and fill the gaps created by the failed *de jure* economic system.

These poor countries experience situations where productive entrepreneurship is omnipresent but with no corresponding development. This situation seems paradoxical and hard to explain. It is the puzzle of entrepreneurship and economic development. While Schumpeter has identified a well-known relationship between entrepreneurship and growth, some have argued that it applies mainly to developed countries (Koster & Kumar Rai, 2008, p. 120), or at least that its application is limited in the case of the developing world. In the remainder of the paper, we attempt to shed light on this puzzle.

### **Local and Systemic Entrepreneurship**

As we saw above, the current state of theory does not offer an adequate explanation for the effect of entrepreneurship on development in low-income countries. There is a puzzle. The death rate of firms is higher in developing countries, whose businesses do not seem to grow much beyond the nascent stage. Necessity entrepreneurship does not seem to create the knowledge that leads to growth. In their study of eleven countries, Acs and Varga (2005) found that through the knowledge spillover effects it generates, entrepreneurship has a positive significant impact on economic development, but the same result was not empirically found for necessity-based entrepreneurship—which generally does not lead to technological change. One could think that in the conditions of the developing world, one obtains a lower supply of entrepreneurship. But according to Baumol, this is not necessarily the case. The lack of supply of entrepreneurs is not the main factor explaining the lack of growth. Rather, it is the incentives affecting entrepreneurs that lead to unproductive entrepreneurship.

Looking at the issue in terms of necessity-based vs. opportunity-based entrepreneurship—or, in terms of productive vs. unproductive entrepreneurship—does not seem to provide the answer to the puzzle. As far back as 1971, Kilby (p. 27) identified a similar problem in the literature:

All the theory builders, despite many sensitive insights and distinctions with regard to specific problems, end up by positing that the creative (or achievement-oriented, or rational, or innovative) entrepreneur with his special facility is either present or absent, and that business performance is uniformly lackluster and tradition-bound or it is innovative and expansive in all aspects. The writer's own experience in West Africa and a perusal of the empirical literature on this subject for other underdeveloped countries suggest that this binary conception of the entrepreneurship problem is neither fruitful nor in accord with what we observe.

Another way to look at the issue of entrepreneurship and development is to consider entrepreneurship in local vs. systemic terms. The well-known U-shaped curve of entrepreneurship that has been found in GEM data seems to show that as development occurs, one moves away from necessity-based entrepreneurship and toward opportunity-based entrepreneurship. This change not only depicts a move away from a context in which individuals engage mostly in entrepreneurship out of economic necessity, it also depicts a change in the scope of the entrepreneurial opportunities that present themselves to individual entrepreneurs, which shift from local opportunities to systemic ones.

## Local Entrepreneurship

The term “local entrepreneurship” describes what can be casually observed in many developing countries. A real example can help us identify its meaning. Consider Carino, who lives in the slums of Manila (Daley & Sautet, 2005, p. 7). In the mid-1990s Carino opened a sari-sari store from her home. For years, her business was confined to her home and was very local. In the early 2000s, she joined a microfinance program and was able to use an injection of money to buy soft drinks and beer in greater quantities. This enabled her to expand her business. Over time, she established herself as a distributor to other sari-sari stores in her neighborhood. Even though she bought more inputs from distributors for her business, she still sold to people she knew in her community. In spite of the injection of capital through her microfinance loan, Carino's business remained local and mostly based on informal relations.

Drawing on the Carino example, we see that local entrepreneurship is socially productive entrepreneurial activity that:

- is limited to a small number of market transactions (i.e., the exploitation of local gains from trade);
- does not entail a complex division of labor;
- does not involve a deep accumulation of capital; and
- primarily rests on personal and informal relations.

Local entrepreneurship does not lead to economies of scale and scope found in growing firms, as the practice rests on the exploitation of local opportunities and on simple organizational structures that rely on limited (or no) accounting procedures. In other words, local entrepreneurship is the type of entrepreneurial activity that leads to stagnant—or slowly growing—economies, the variety of which can be found in many low-income developing countries.

Local entrepreneurship is different from the GEM category of “necessity entrepreneurship” in the sense that in the former, it is the scope of the entrepreneurial opportunity in the market that limits the growth of the business, not the motivation of the individual. One could imagine “opportunity entrepreneurs” being stuck in local entrepreneurship, for instance. If the scope of opportunities available in the market were different, these opportunity entrepreneurs could grow their businesses. It is likely, however, that local and necessity entrepreneurship overlap to some extent.

## **Systemic Entrepreneurship**

The term “systemic entrepreneurship” refers to socially productive entrepreneurial activities that go beyond the local level. Systemic entrepreneurship takes place through the establishment of organizational structures that enable the exploitation of opportunities beyond the initial local level through the capture of economies of scale and scope. Systemic entrepreneurship involves complex impersonal networks through multiple linkages among firms. It is not about the size of entrepreneurial opportunities per se, but rather about the scope of the opportunities exploited.

Here again, a real example can help us identify the meaning of systemic entrepreneurship. Consider Gustavus Swift’s innovation of the refrigerated meatpacking industry in late nineteenth-century United States (Chandler, 1977). Swift was the first to discover the need for a distribution network to prepare, store, and deliver meat to retailers in cities. Before Swift, most of the “meat” arriving in urban centers was alive and thus had to be killed and disassembled in slaughterhouses within cities. Swift realized that slaughtering the meat in the west and transporting the dressed meat to northeast markets would be more economical than transporting livestock. Scale economies could be realized in the slaughtering of the meat by concentrating butchering in one place (Chicago) and setting up a network of branches that would deliver the meat to local retailers.

Its market was geographically extensive, and Swift & Company sold meat to many different urban areas scattered throughout the eastern United States. Many factors of production entered the supply chain, from cattle and the cattle ranches to railroad cars and refrigeration technology. Swift & Company had an integrated system of suppliers for the ongoing operations of its business. The company trained experts in the buying of cattle and bought huge volumes from many different ranches. Innovation occurred not only in refrigeration, but also in the structure of the business, especially in meatpacking plants (with disassembling lines) and in the distribution network.

Swift & Company provides an example in which can be identified the fundamental attributes pertaining to systemic entrepreneurship. Systemic entrepreneurship is socially productive entrepreneurial activity that:

- Is based on large volumes of market transactions exploiting large gains from trade and innovation.
- Entails a complex organizational structure that enables economies of scale and scope to be captured.
- Involves a deep accumulation of capital.
- Rests on impersonal and formal relations.
- Generates entrepreneurial momentum.

Systemic entrepreneurship involves the capture of opportunities that are wide enough to exist over an extended space, one that goes beyond the immediate community in which the entrepreneur does business. It involves the establishment of an organization (i.e., a firm) to help exploit economies of scale and seize opportunities that involve complex

coordination of multiple inputs, often resulting in the production of many products with a complex chain in-between. Seizing this type of profit opportunity requires “systemic connections,” that is, commercial transactions between individuals who do not know each other, separated over a large geographical space and across many business networks.

Systemic entrepreneurship differs from the GEM category of “opportunity entrepreneurship” in the sense that the former refers to the scope of the opportunity available in the market, whereas the latter refers to the individual’s motivation. That being said, systemic entrepreneurship generally results from the activities of opportunity entrepreneurs.

## Distinguishing Local From Systemic

The point in distinguishing local from systemic entrepreneurship is not to say that local entrepreneurship must always come before systemic entrepreneurship. Some local entrepreneurship endeavors will become systemic, but most would not. Not every taxi driver who owns his own car grows his business to become a large taxi company. It depends on the scope of the opportunities available in the market. The important point here is to realize that in some places in the world, the *possibility* for local entrepreneurship to become systemic or for systemic opportunities to be discovered does not exist or is reduced. Moreover, as the Swift & Company example shows, some systemic entrepreneurial discoveries are systemic from the start.

The Carino example shows something different. She grew her business to sell more of the same products to a limited number of people in her slum. She captured some economies of scale through buying bigger quantities of the same products and by moving into the wholesale business. However, Carino’s business remains limited because of the circumstances within which she operates, independent of her ability to grow her business. In other words, under different circumstances, her business could perhaps grow beyond its current size and become more systemic. For reasons explored in the next section, the scope of the opportunities available to her remains within certain limits.

Of course, the distinction between local and systemic is not clear-cut. These categories are ideal types that may be difficult to identify in reality. It may be preferable to think of entrepreneurship as taking place along a continuum rather being a binary distinction. Moreover, even poor economies may experience some systemic productive entrepreneurship, but to a much lesser extent than developed economies. The contention here is that a developing country with a growing economy, such as China or India currently, will experience an increasing amount of systemic entrepreneurship. In this sense, the distinction between local and systemic opportunities sheds an important light on the issue surrounding the debate on development.

Some may see the distinction between local and systemic entrepreneurship as similar to the one between the innovation-oriented entrepreneurship described in Schumpeter’s (1934) work and the more opportunity-oriented entrepreneurial activity that one can find in Kirzner’s research.<sup>5</sup> It would be misleading, however, to view systemic entrepreneurship as based on innovation while the other type is not. Both types of entrepreneurship include opportunity discovery and exploitation, and both may display some form of

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5. Kirzner (1999) sees the main difference between his theory of entrepreneurship and that of Schumpeter as one pertaining to the equilibration process. In Kirzner’s view, both theories involve the discovery of opportunities for profit. In some ways, Kirzner’s approach can be seen as more encompassing than that of Schumpeter since the former includes not only innovation, but also situations of discoordination due to sheer ignorance, which can be remedied without recourse to innovation, per se.

innovation.<sup>6</sup> The fundamental point is that the distinction between local and systemic entrepreneurship refers more to the scope of the opportunities available in the market than to their nature.

It took persistence for Swift to overcome the difficulties along his way, including the resistance of competitors. However, within a few years, Swift was able to capture economies of scale in the production of dressed meat that no one had captured before. How was this feat possible in the United States in the 1880s while it is still not possible in many developing countries today?

## **Payoffs Structure, Signal Extraction, Networks, and the Theory of the Firm**

Institutions, social networks, and personal characteristics are often seen as the main determinants of entrepreneurship.<sup>7</sup> Baumol's theory is fundamentally institutional. Many economists have followed this line. Similarly, the dominance of local entrepreneurship in developing countries could be explained mostly in terms of institutional causes, with the usual suspects being: attenuated property rights, predatory government regulation, and regime uncertainty. Baumol is correct in pointing out the overwhelming importance of the nature of the rules of the game and their enforcement. The problem with this approach is that it does not explicate well the puzzle of entrepreneurship and development. Baumol may have underestimated that there is productive entrepreneurship in many poor countries of the world; the problem is that it does not generate much development.

Not only do we need an institutional explanation for the lack of productive entrepreneurship in general, we also need to consider the mechanisms that preclude entrepreneurship from being systemic. To that effect, one should consider the recent theories on social cooperation among strangers, as well as network theory and the theory of the firm and its insights into organizational growth. This will provide a richer understanding of how the institutional environment limits the scope for entrepreneurial development. But first, let us turn to the structure of payoffs and its role.

### **A Complex Structure of Payoffs**

In poor countries, one may surmise that the structure of payoffs is complex and goes beyond the productive vs. unproductive divide. Payoffs may vary depending on the kind and the size of the opportunity. It may be the case, for instance, that it is more difficult to exploit opportunities that are highly visible to the authorities than those that are low profile (Boettke, 1993). This is because of the risk of *ex-post* expropriation of the proceeds through corruption, taxation, or even direct confiscation of assets. As De Soto (2002) shows, it is often safer for entrepreneurs to remain under the radar and at the local level. In these conditions, the payoff structure enables productive entrepreneurship as long as the payoffs are small and invisible to the authorities. Entrepreneurship remains confined to productive activities of limited scope. Local and productive entrepreneurship is rewarded, rather than systemic entrepreneurship.

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6. In the case of local entrepreneurship, the level of technological, organizational, or marketing innovation may be low, but it is not necessarily non-existent.

7. While we hold the first two to be highly important, we disregard personal characteristics in the present context, as they do not seem to differ between developing countries and developed countries (Muhanna, 2007).

A complex payoffs structure is a reason why the informal sector may thrive in many poor countries. From this perspective, informality can be the result of repressed systemic entrepreneurship. In such a world, productive entrepreneurship can never become systemic, and so it will tend to remain informal. In situations where the structure of payoffs varies according to the size and scope of the opportunity, entrepreneurship is limited by the extent of markets and little division of labor and knowledge takes place. The informal character of markets limits the scope of entrepreneurship to the local level. Entrepreneurship never goes beyond the limits of the community or the village.

### **Signal Extraction and Cooperation Among Strangers**

Economists have looked at various mechanisms individuals use to make cooperation among strangers possible (Benson, 1989; Greif, 1993; Seabright, 2010). Greif provides a detailed account of how multilateral punishment and reputation can act as mechanisms disciplining individuals in relatively large homogeneous groups, such as the Maghribi traders. In order to secure the gains from trade and innovation that society offers, however, one needs to go beyond the group of homogeneous individuals. Cooperation among strangers is what brings the biggest rewards. In such a case, *ex-post* discipline mechanisms, such as multilateral punishment, do not work. One way of solving this problem is through the use of *ex-ante* mechanisms (Leeson, 2005; Williamson, 1983) by which individuals invest in costly signals that show their interest in cooperating. Over time, the signals reduce the social distance between those who wish to interact. Leeson documents many instances in which *ex-ante* signaling creates degrees of homogeneity.

This is an important issue because it relates to the development of formal institutions. A dominant approach is to view heterogeneity—for instance, multiethnicity—as the source of bad institutions (Alesina, Devleeschauwer, Easterly, Kurlat, & Wacziarg, 2003). If only individuals in many developing countries of Africa were more socially homogeneous, then better institutions could develop. Leeson (2005) argues the opposite: it is because of bad institutions that heterogeneity, or fractionalization, remains. In other words, because of deleterious government policy, people have no incentive to invest in signals that will bridge the social distance that separates them.

European colonial governments in Africa often destroyed ancestral social norms that made societies function. By reducing the incentives to eliminate social distance, colonial institutions weakened traditional institutions and limited their evolutionary potential. For instance, laws that would formally prohibit religious societies made it more difficult for traders to extract the correct signal from potential trading partners. A trader could not know if the potential partner refused to invest in signaling, or if the potential partner were simply abiding by the colonial law. Traders would thus be “unsure how much of the credibility signaled (or not signaled) by approaching agents [was] genuine and how much [was] artificial . . . In this way, institutional interference creates noise in the signaling mechanism that reduces its information efficiency. As a result of this noise, which prevents individuals from being able to determine the credibility of outside potential exchange partners, many transactions that would have taken place do not” (Leeson, 2005, p. 87).

A result of this state of affairs is that it is difficult for strangers to extract signals that would show the willingness of the other party to cooperate. In such a situation, one is better off dealing with known parties at the local level than engaging in trade with strangers. This may explain why entrepreneurship has remained local in many parts of Africa for a long time. As Takyi-Asiedu puts it: “The entrepreneurial spirit has been present in sub-Saharan Africa for centuries. The peoples of the ancient empires of Ghana, Mali, and Songhay were entrepreneurs in farming and trading who traveled from tropical

Africa to North Africa to trade in gold dust, salt, cowry shells, beads and copper, among others . . . Since the end of the colonial period, the sub-region has experienced sluggish growth in entrepreneurial activities” (Takyi-Asiedu, 1993, p. 91). Systemic entrepreneurial opportunities do not seem to be discovered, let alone exploited. A related example of this problem can be found in Daley’s fieldwork research (Daley & Sautet, 2005). As mentioned above, Carino explained that she would not deal with formal banks because she had no way of trusting them, whereas the moneylenders (the *Mumbais*) in her neighborhood were familiar to her and thus trustworthy. Carino failed to identify the signals that may have made a banker more trustworthy than her local moneylender.

## Entrepreneurship and Networks

A lack of cooperative signals negatively impacts entrepreneurship because it restricts the development of an entrepreneur’s extended networks. There is evidence that networking is a means of raising entrepreneurship’s required resources, and thus plays an important role in the growth process. Networks can be understood as efficient solutions to coordination problems (Casson, 2010, p. 115), and “there is ample evidence that entrepreneurship is, in fact, socially embedded in network structures” (Casson & Della Giusta, 2010, p. 150). But the development of systemic entrepreneurship requires specific kinds of networking. Local entrepreneurship rests on personal networks mostly made of strong ties to family and friends, who may provide hard resources, such as capital and technology (Ramachandran & Ramnarayan, 1993), but whose limited influence is insufficient to enable the emergence of systemic entrepreneurship. Systemic entrepreneurship, on the other hand, can only develop with extended networks made of weak ties. As Dubini and Aldrich (1991) state, “indirect ties enable entrepreneurs and firms to substantially increase their access to information and resources, multiplying by many times over what is available through their direct ties” (p. 309).<sup>8</sup>

Networks can also be seen as made of stocks and flows (Casson, 2010). Each individual in the network possesses a stock connection, such as reputation. Flows are the ways individuals communicate within the network. “A stock connection,” explains Casson, “facilitates a flow. It is difficult, for example, to communicate with someone who does not speak the same language or share the same beliefs, or who simply cannot be trusted. Thus a flow connection benefits from an underlying stock connection based on membership of the same linguistic and cultural group” (p. 121). In the context of low-income countries, deficient *ex-ante* signaling creates a lack of stock connections, which reduces flows and hampers the development of extended networks. This lack of stock connections keeps entrepreneurship at the local level. Moreover, different social networks can coexist without being linked to each other (Casson, p. 133) because of social and occupational stratifications. These stratifications are often pronounced in developing countries where social exclusion can be strong. As Kilby (1971, p. 37) remarked four decades ago, the extent of the division of labor in poor countries can often be very limited, and this may be explained by the poor’s limited access to extended networks that would facilitate the acquisition of capital and the transfer of knowledge. Such stratified networks

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8. Seeing systemic entrepreneurship as resting on extended networks also relates to the idea of Jacobs externalities. Jacobs surmised that diverse economic regions are more conducive to the production of ideas than specialized ones (Glaeser, Kallal, Scheinkman, & Shleifer, 1992; Jacobs, 1969; Lucas, 1988). Complex extended networks form the substrate of a region or an economy. When entrepreneurial activity remains local, economic activity remains undiversified to a large extent; thus, entrepreneurs cannot benefit from the type of externality Jacobs observed.

in poor countries are most likely “inward-looking” in the sense that members only recognize obligations to fellow members of the group.

The lack of extended impersonal networks also reflects low social capital levels, and, thus, the inability to capitalize on high-trust social networks (Casson & Della Giusta, 2010, p. 152). In a nutshell, poor countries fail to sustain networks that are large in size and have the capacity to facilitate knowledge transfers, impersonal ties, and complex division of labor. Because of the small scale of communities, individuals have limited access to new technical knowledge and limited internal information-processing capacity. They cannot absorb “innovations involving interdependencies extending beyond the communal boundaries of trust” (Kilby, 1971, p. 39).

### **Dynamic Capabilities, Complementarities, and Firms**

It is through the development of a network of direct but also, and especially, indirect ties that firms can develop organizational competences. Extended networks enable firms to build up organizational competences, and, eventually, dynamic capabilities. Dynamic capabilities reflect the firm’s internal competences to organize its activities through the coordination of resources available in the market and within the firm (Teece, 2007). More importantly, dynamic capabilities reflect a firm’s entrepreneurial capacity to expand and benefit from economies of scale and scope, and to create and shape markets that capture new gains from trade. These capabilities are dynamic because they require the constant adjustment of the firm and its assets to the ever-changing market. Without organizational competences and dynamic capabilities, it is virtually impossible for a firm to accumulate the co-specialized assets necessary to systemic entrepreneurship. In other words, the accumulation of capabilities and complementary assets, which is path dependent, can be constrained at the local level. Capabilities never become dynamic, and entrepreneurship remains local.

The firm theory concepts of complementarities and co-specialization provide powerful insights into the limits of firm growth. A firm’s production function traditionally uses homogenous factors of production, such as labor and capital. Capital is infinitely divisible, which removes any difficulty a firm may have in adjusting its complementary assets to find the most efficacious production processes. In reality, capital goods are lumpy and are both substitute and complementary to each other to various degrees. A firm’s entrepreneurial and dynamic capabilities enable it to constantly adjust the mix of internal assets and to discover and apply new, external assets.

Complementarities are also found at the intra-firm level. Productive entrepreneurship may be limited in a first-stage economy because of the lack of complementary goods. For instance, setting up a supermarket means that customers can come by car to buy bigger loads of supply. However, in an economy where people walk or use bikes, they cannot come from afar and buy bigger loads. The economies of scale achieved via supermarket development are thus not available in such an economy and retailing remains local. From the point of view of the individual entrepreneur, the limited extent of the market is a hard constraint forcing him to remain local.

Co-specialized assets must be employed in conjunction with each other. Complex production processes involve (physical and human) co-specialized assets that can only be accumulated if the firm’s foundations (i.e., organizational competences) are solid. The lack of organizational competences derives from the nature of the networks that exist in developing countries, which put serious limitations on systemic entrepreneurship. In an old but relevant 1965 study conducted in Nigeria on 269 leading firms, Harris and Rowe found serious deficiencies in the firms’ co-specialized human capital: “when the business

expands beyond the point that the owner can control everything himself, serious problems are encountered. The ability to delegate responsibility and authority, while still keeping control, is generally lacking. Admittedly, it is difficult to find capable subordinates and managers in Nigeria, but little has been done by these entrepreneurs to train and develop such personnel. Several cases were encountered of successful small firms foundering badly after major expansion. Experience of the entrepreneurs with hired expatriate managers has been largely unhappy.<sup>9</sup> Because of this critical lack of co-specialized assets, the division of labor within firms and in-between firms remains limited. For instance, routinized market mechanisms that channel input supply and output sales are not available.

Systemic entrepreneurship involves the build-up over time of the dynamic capabilities necessary to support complex production processes. This build-up cannot occur if the basic building block of signal extraction does not exist. This corresponds to what Acs et al. (2008, p. 220) found in their discussion of entrepreneurship in the three stages of economic development: “Countries in the factor-driven stage compete through low cost efficiencies in the production of commodities or low value-added products.” Whereas, to “compete in [the] second stage, countries must have efficient productive practices on large markets, which allow companies to exploit economies of scale” (p. 220). These efficient productive practices are unavailable to entrepreneurs in poor countries because, ultimately, the capacity for large-scale social interaction determines whether or not systemic entrepreneurship can exist. This greatly limits systemic entrepreneurship, and it keeps socially beneficial entrepreneurship at the local level.

## Conclusion

Crucial to our understanding of development is Baumol’s theory that the structure of payoffs drives the allocation of entrepreneurial activity between productive and unproductive entrepreneurship. Rather than blaming the market process itself, as traditional public economics tends to do, Baumol’s contribution emphasizes the influence of the institutional structure as the source of market misallocations. However, this view cannot adequately explain the fact that in most low-income countries, we observe a great deal of productive entrepreneurship, but with little corresponding social benefit. This is the puzzle of entrepreneurship and development. So far, empirical studies have not been able to explain this puzzle well.

We offer a possible avenue to solving the puzzle. Distinguishing local from systemic entrepreneurship, we bring to the foreground insights from social cooperation theory and the theory of the firm. These insights can be used to explain why developing countries seem to benefit from *local* productive entrepreneurship but not from *systemic* entrepreneurship. A major role of entrepreneurship, which is especially visible when technological innovation is involved, is to turn constraints into variables. While this may be a fundamental role of entrepreneurial activity, some constraints cannot be transformed. In many developing countries, the scope of opportunities—or the extent of the market—is a constraint that lies outside the purview of entrepreneurial activity. For reasons explored above, the extent of the market remains exogenous, rather than subject to, entrepreneurial discovery, and thereby creates a hard constraint on development. The occurrence of development depends on the conditions for systemic entrepreneurship, or, for entrepreneurship that is *unlimited in its scope*.

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9. Quoted in Kilby (1971, p. 32).

Institutional factors, such as government regulations, ill-defined and enforced property rights, and regime uncertainty, are major causes limiting systemic entrepreneurship. Many authors have pointed out in the last decade or so that underdevelopment is fundamentally an institutional problem (Acemoglu, Johnson, & Robinson, 2005; Henrekson & Sanandaji, 2011). In this paper, we focus, however, only indirectly on institutional explanations, as the goal is to show that while some institutions may favor local productive entrepreneurship, other factors (indirectly related to institutions) may limit systemic productive entrepreneurial activity. The lack of infrastructure and other public goods may also be a determinant. In any case, poverty and the lack of development is the result of a conjunction of factors, which, taken together, strongly limit the economy's potential by hampering systemic entrepreneurship. Institutional entrepreneurs wanting to implement social change may face a very difficult task because of the multiplicity of factors and the complex interdependencies operating simultaneously.

The paper presents a mainly theoretical explanation, which rests on the recent work done regarding the mechanisms of social cooperation and exchange. More empirical research needs to be done.

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