The Spatial Nature of Entrepreneurship

David Emanuel Andersson

Kirzner's theory of entrepreneurship has far-reaching consequences. It explains the coordination of markets and of knowledge. It explains how individual entrepreneurs generate the process of economic development. And it combines Mises's view of the market as an entrepreneurial process with Hayek's view of the market as a means of transmitting and coordinating knowledge (Kirzner 2000; Harper 2003).

Like other theories concerned with entrepreneurship and economic development processes, Kirzner's theory is non-spatial. While this may simplify and therefore illuminate the analysis of key mechanisms of the entrepreneurial process, it also obscures some of its inherently spatial outcomes. The purpose of this paper is to extend Kirzner's theory by explicitly introducing the role of space in entrepreneurial alertness and the coordination of markets.

A spatial extension of the theory of entrepreneurship helps explain several of the most common phenomena associated with economic development, such as urbanization, migration, and changes to the profit opportunities that entrepreneurs may or may not notice. To be more specific, I am concerned here with four related spatial implications of the theory. First, there is an unavoidable "spatial positioning" of entrepreneurs that may in itself be the result of entrepreneurial alertness to profit opportunities. As such, it could amount to a discovery of superior locations for "switching on" alertness *and* discoverable profit opportunities. Second, the entrepreneurial process is a necessary component for constructing a realistic urban and regional economics, which would incorporate (equilibrium) results such as von Thünen's rent-distance gradient into a more dynamic setting where entrepreneurs create and exploit agglomeration economies. Third, a spatial approach which at the same time draws on Kirzner's theory and Frank Fetter's theory of rent should illuminate urbanization and migration processes by relating how profits, rents, and capital values change over time due to changing land use patterns. Fourth, a spatial theory can link location and profits with (spatially delimited) institutions, where missing or underdeveloped market institutions in some

David Emanuel Andersson is professor of economics in the Department of Local Development and Management at Leader University, Tainan, Taiwan.

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locations explain why there are no or few equilibrating tendencies in certain "markets."

Kirzner's Theory of Entrepreneurship

Entrepreneurial action is an attempt to profit from perceived discrepancies between buying and selling prices. Comparing entrepreneurs with "Robbinsian economizers," who exploit given means to achieve given ends, Kirzner writes that

> [t]he pure entrepreneur, on the other hand, proceeds by his alertness to discover and exploit situations in which he is able to sell for high prices that which he can buy for low prices. Pure entrepreneurial profit is the difference between the two sets of prices. It is not yielded by exchanging something the entrepreneur values less for something he values more highly. It comes from discovering sellers and buyers of something for which the latter will pay more than the former demand. The discovery of a profit opportunity *means the discovery of something obtainable for nothing at all.* (Kirzner 1973, p. 48; italics in original)

Entrepreneurs discover and exploit such profit opportunities in many different ways, ranging from virtually instantaneous arbitrage to complex activities that may involve the creation of new firms or product innovation (Kirzner 1984). Pure entrepreneurial profits have the desirable property of coordinating market participants, by signaling where price discrepancies exist. Indeed, Kirzner sees entrepreneurship not as linking participants in a single market, but as linking (and integrating) participants in different markets. Entrepreneurs must therefore participate in more than one market in order to earn pure profits (Kirzner 1973, p. 124). Rivalry among producers gradually eliminates these profits, leading to more accurate prices.

The reason that entrepreneurship tends to coordinate and equilibrate markets, rather than the reverse, is that market participants are guided by price signals. Kirzner (1997) notes that the existence of ignorance means that entrepreneurs may make two types of mistakes: they may fail to notice profit opportunities or they may think they have discovered a profit opportunity where none exists. A failure to notice a profit opportunity is neither equilibrating nor disequilibrating, since no action results. The exploitation of a non-existent profit opportunity, on the other hand, is a disequilibrating action that reduces the coordination of markets. But the existence of profit and loss signals imply that entrepreneurs with over-optimistic plans will have to change their plans, whereas entrepreneurs who exploit existing profit opportunities are sustained by the profits that they gain. Consequently, the actions of entrepreneurs will have an overall coordinating impact on markets.

Another important aspect of Kirzner's theory is that entrepreneurial alertness is not a production factor in the sense of being a special type of "human capital." Entrepreneurship does not equal the possession of a special stock of

valuable knowledge, but is instead "the abstract . . . knowledge which we must ultimately credit with discovering and exploiting the opportunities . . . by those whom he has been wise enough to hire, directly and indirectly" (Kirzner, 1973, p. 69). Therefore, there exists no market for entrepreneurial services, as there is for labor with specialized knowledge.

Another way of looking at the relationship between entrepreneurial alertness and knowledge is to view it as an *initiating knowledge* that must always precede the resulting economic decision and action. If an individual possesses valuable specialized knowledge that can be used as a production factor but which also generates superior alertness, that knowledge is still not the source of pure profits. The superior knowledge of the entrepreneur is instead a sunk cost at the moment of entrepreneurial discovery. Even if an individual were to draw explicitly on her specialized knowledge in the course of entrepreneurial discovery and exploitation, that knowledge should be understood as a production factor that the individual as pure entrepreneur pays an implicit price for to herself, in her role as producer (Kirzner 1973, pp. 47-48).

Entrepreneurship, Knowledge, and Location

While knowledge is not reducible to entrepreneurial alertness, it is a decisive factor for explaining the array of *discoverable* profit opportunities that entrepreneurs face. In addition, profit opportunities are not equally discoverable in all locations, which points to the importance of the spatial location of entrepreneurs.

In his discussion of capabilities, Loasby (1999) makes a useful distinction between "knowing that," which refers to knowledge of facts and theories, and "knowing how," which refers to "the ability to perform the appropriate actions in order to achieve a desired result, and includes skill both in performance and in recognizing when and where this skillful performance is appropriate" (p. 51). In addition, he makes a distinction between direct and indirect knowledge, where direct knowledge refers to personal knowledge and indirect knowledge implies knowing where to find something or how to get it done (ibid.). Capabilities, which include many tacit forms of knowledge, encompass both direct and indirect "knowing how."

For entrepreneurs, it is indirect capabilities (indirect "knowing how") as well as learning of direct capabilities that will be of most interest in their spatial positioning. Each location is associated with a unique agglomeration (or stock) of knowledge, which determines the array of profit opportunities that entrepreneurs may discover. This spatial differentiation of knowledge and profit opportunities brings to mind Hayek's (1945) paper on how markets coordinate knowledge that is specific to time and place.

This time-and-place-specific knowledge may be construed to include knowledge in all its forms and categorizations; "knowing that" and "knowing how," direct and indirect, articulated and tacit. Although space-bridging of knowledge that can be articulated ("knowing that") is less costly than in

earlier times, owing to advances in communications technology, the transmission of "knowing-how" still requires spatial proximity. This is especially true of tacit know-how, whether direct or indirect, which depends for its interpersonal transmission on face-to-face contacts. Both time and geographical location therefore continue to affect the knowledge of individuals.

Moreover, the spatiotemporal setting influences both the knowledge stocks that individuals embody and the flows that they receive. In other words, individual skills, cognitive capacities, and knowledge of specific external stimuli (e.g., facts, people, prices) depend on the spatiotemporal location, even if we accept that some skills and capacities are innate.

Desrochers (1998, 2001) has pointed out the importance of geographical location for the transmission of tacit knowledge and innovations. The agglomeration economies associated with specialized clusters such as Silicon Valley and diversified urban centers such as New York City both derive from location-specific concentrations of tacit knowledge. Desrochers (1998) explains how face-to-face interactions between competitors, suppliers, and customers transmit tacit knowledge and innovative capacity. Applying Kirzner's terminology, the transmission of tacit knowledge associated with repeated face-to-face interactions may improve the alertness of the knowledge recipient, since his newfound ability to perform (mental or physical) actions and apply rules may improve his responsiveness to certain external stimuli. In addition, if an individual is located in a spatial agglomeration of economic activities, he should be able to notice more profit opportunities. The latter conclusion applies to the extent that individuals discover profit opportunities in the course of interacting with people rather than in the course of solitary contemplation and observation of disembodied information.

Holcombe (1998) has stressed the importance of time in accounting for real-life entrepreneurship. Many successful business ventures owe their very existence to an accumulation of *past* entrepreneurship. Holcombe writes that "entrepreneurial insights lay the foundation for additional entrepreneurial insights, which drive the growth process" (p. 46). In other words, the existence of an accumulation of entrepreneurship creates an environment where present profit opportunities exist because of past entrepreneurial actions. Certain opportunities would not exist and could therefore not be discovered, were it not for the prior actions of other entrepreneurs. Holcombe notes that even though knowledge does not create entrepreneurial discoveries, it creates discoverable opportunities (p. 50).

Kirzner's theory of entrepreneurship does not contain an explicit treatment of time and place. My contention is that while it is possible to abstract from time, an analogous disregard of space makes the theory incomplete. The reason for this is that while the entrepreneur may choose her spatial location, there is no way in which she would be able to choose her location in time. The choice of place may in itself be an entrepreneurial action, while there is no corresponding choice of time.

We may conceive of the discovery of a location as constituting a "spatial positioning" of the entrepreneur, which amounts to being alert to the profit-generating attributes of a place in which to be alert to a future stream of profit opportunities. In some ways, the present dichotomy between spatial positioning and subsequent discoveries of profit opportunities is analogous to the dichotomy between establishing and running a firm. For firms, we may distinguish between the fixed transaction costs associated with the firm's creation and the variable ("Coasean") transaction costs associated with its operation. Spatial positioning is also a type of fixed start-up activity. The entrepreneur acts with partial knowledge of past circumstances associated with profit opportunities in a certain location. However, the appearance of the location as an object of choice is in itself an instance of unplanned discovery, which is the result of (correctly or erroneously perceived) profit opportunities that the entrepreneur has discovered.

The importance of the entrepreneur's choice of location arises from spatial accessibility differences regarding future profit opportunities. Locations with good access to tacit knowledge as well as local articulated knowledge that is too new or too detailed to have been distributed in coded form (to other locations) make such locations superior "generators" of profit opportunities. But the location does not only determine the access to discoveries of potential profit opportunities. Human cultures and institutions also have a spatial dimension, which means that the entrepreneur's location may in part decide his alertness. For example, spatially delimited institutions that include stigmatization of speculative activities or confiscatory taxation may reduce individual alertness.

Entrepreneurship therefore involves two types of discovery and choice. An entrepreneur may discover a location where he expects the future stream of profits to be favorable. In this case, he notices a (potential) discrepancy between the stream of output revenues and input costs, where costs include all factor costs including land and space-bridging costs. At this location, he may then discover specific profit opportunities in line with Kirzner's theory.

An objection to this conceptualization of the entrepreneurial process may be that many entrepreneurs do not make a conscious spatial choice, but instead treat the location as fixed. This would amount to an absence of creative discovery. But the same argument could be used for an individual entrepreneurial action. Many people do not notice any profit opportunities,[1] and thus do not engage in entrepreneurship.

Entrepreneurship and Spatial Economics

In the classical and neoclassical theories of land rent, the price of land is a function of the cost of transporting various products to buyers. Von Thünen

[1]I do not include "psychic profits" as instances of entrepreneurship. Entrepreneurial profit in the present context refers to the difference between observable revenues and costs rather than to the unobservable utilities of consumers.

(1966) constructed a model of an isolated rural community, where land prices were a direct consequence of the costs of transporting agricultural produce to a central marketplace. In a neoclassical reformulation of this model, Alonso (1964) showed how supposedly well-known transportation costs would lead to a spatial separation of land uses. According to Alonso's model, the economic activity with the highest costs of transporting outputs (per unit of land area) would outbid producers with lower costs in the most accessible location. Likewise, residential location patterns would reflect commuting costs, with simple trade-offs between increasing marginal land prices and decreasing marginal transportation costs (Muth 1969). The equilibrium results of these models, which assumed perfect information regarding transportation costs, was that perfect markets would translate into perfect separation. Many mainstream urban economists have therefore concluded that real-world markets exhibit market failures to the extent that mixed-use areas persist in unregulated land markets.

One problem with the classical and neoclassical models of land rent is that they explicitly assume perfect knowledge of transportation requirements as well as transportation costs associated with each location. Implicitly, they rest on equilibrium assumptions that make the knowledge requirements even more far-fetched. Webster and Lai (2003) conclude that "the perfect market-clearing mechanisms in all of these models and their underlying assumptions of perfect knowledge render them . . . lacking as useful representations of reality" (Webster and Lai 2003, p. 79).

Apart from the implicit perfect knowledge (or perfect probabilistic knowledge) assumption in mainstream urban (and other spatial) economic models, there is the additional problem of space-bridging costs that do not derive from predicted input or output flows. Agglomeration benefits not only include regular transportation cost savings but also an increased likelihood of entrepreneurial discoveries and unplanned learning of tacit knowledge (Desrochers 2001). While managers may be able to estimate approximate regular distribution costs and workers may estimate daily commuting costs in a particular location (at least in the short term), the problem of estimating future space-bridging costs for making a specific unplanned discovery that leads to a specific revenue-cost combination is even in principle insoluble.

How, then, does the price of land reflect accessibility? It may be more helpful to conceive of land price formation as part of the process of entrepreneurial discovery (Kirzner 1985). An entrepreneur must first choose a location. The choice in itself is an exploitation of a perceived profit opportunity. The entrepreneur may have some qualitative knowledge of where the state-of-the-art of his line of business is located and he may have supplementary location-specific knowledge through a number of personal relationships in various locations. He may also search for information about profit histories, property prices and various infrastructural characteristics in the contemplated locations. It is on the basis of such partial direct and indirect knowledge (i.e., an already acquired resource with a sunk cost) that his alertness is

switched on so as to notice what he perceives to be profitable spatial options. An important part of this choice may be the realization that the full tacit knowledge and discovery benefits associated with a particular location require a site choice that makes daily participation possible. Locations outside a "daily interaction zone" would cause prohibitive space-bridging costs.

The Market for Land

Fetter's (1905) theory of rent is useful for understanding how entrepreneurs change prices in the land market (as they also change prices in all other markets). Fetter's use of the term rent in a general sense rather than an arbitrarily circumscribed sense makes his theory much more transparent than alternative approaches. Rothbard has provided a succinct summary of the theory:

> We are using "rent" to *mean the unit price of the services of any good*. It is important to banish any preconceptions that apply the concept of rent to land only. . . . It therefore applies as well to prices of labor services (called "wages") as it does to land or any other factor. The rent concept applies to all goods, whether durable or nondurable. . . . The price of the "whole good," also known as *the capital value of the good*, is equal to the sum of the expected future rents discounted by . . . the *rate of interest*. (Rothbard 1970, pp. 417–18, quoted in Lewin and Phelan 2002, pp. 223–24)

The implication of Fetter's theory is that the value of all production goods can be measured in two ways: as rent or as capital value, where the rent of a good corresponds to the value of temporary use and its capital value corresponds to the value of permanent ownership. An implication of the theory is that anyone who buys a resource must refer (explicitly or implicitly) to the discounted stream of value added by the resource. The unavoidable condition of imperfect knowledge and its consequence—structural uncertainty—does however imply that different individuals will have different expectations of future income streams, and will therefore assess rents (and therefore also capital values) differently (Lewin and Phelan 2002).

Choosing a location implies that the entrepreneur must buy or rent real estate. The market price of the land associated with the chosen location must reflect the hitherto known opportunity costs (i.e., the expected value) of the land, whether in the form of time-limited rent or in the form of permanent capital value. Past rivalry among sellers and buyers of land means that past profits have gradually been captured as land rents corresponding to the marginal value product of land. Fetter described this process of change in the land market:

> Social changes are constantly causing agents to shift from lower to higher uses. As population grows and groups about new industries, farm land is used for residence lots, and in turn for business purposes. Rents therefore rise, and this rise is reflected in the higher selling value of the land. If a new demand arises for the product of any machine, its rent rises, although

> it may continue to turn out the same product as measured by number or quantity. (Fetter 1905, pp. 95-96)

In the case where land owners retain land value increments,[2] owners will have an incentive to discover discrepancies between profits reaped from the use of the land and current land rents. There are thus two forces that lead to the gradual elimination of (final product) profits: the imitative activities of competing suppliers of final products and the attempts of factor suppliers to convert profits into factor rents. Since future profits are unknown and the buyers and sellers operate under conditions of imperfect knowledge, a land owner will face a negotiated exchange in the interval between the highest revealed bid among the group of buyers and her judgment of the value to the buyer in terms of future profits. This latter judgment may be based on a combination of the land owner's imagination and bits of historical information. Over time, the process of repeated land exchanges reveals historical information, not only about regular transportation cost savings but also about (created and retained) productive agglomerations of tacit knowledge.

Such agglomerations of tacit knowledge become especially productive when there are few cultural or institutional barriers to the transmission of knowledge among actors (Saxenian 1994). Thus, land prices reflect the full array of perceived opportunity costs, which include the stable but slowly changing accessibility advantages that apply to various locations. To the extent that future developments reflect historical conditions (which will be the normal case for infrastructural, slowly changing, variables such as institutions and transportation systems), land prices inform buyers about future potentialities, albeit in a partial and imperfect way. The successful entrepreneur, in effect, perceives that her action will improve upon the historical data and future potentialities which the price of land conveys. It is this previously unnoticed potential that allows her to earn a (temporary) pure profit.

Profits, Rents, and Migration

Following the convention of Schumpeter (1934),[3] we turn now to labor, the other original factor of production. Even though labor, unlike land, is a mobile

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[2] An implication of such land price discoveries is that a tax on land value increments may lead to undiscovered land price increments and an attendant loss of valuable information about opportunity costs.

[3] Thus, if we ascend in the hierarchy of goods, we finally come to the ultimate elements in production for our purposes. That these ultimate elements are labor and gifts of nature or "land," the services of labor and land, requires no further argument. All other goods "consist" of at least one and mostly of both of these. We can resolve all goods into "labor and land" in the sense that we can conceive all goods as bundles of the services of labor and land. (Schumpeter 1934, p. 17)

production factor, an analysis that makes use of Kirzner's theory of entrepreneurship and Fetter's theory of rent shows that it is the same entrepreneurial process that coordinates the two spatially distinct markets.

As a first example we may consider the bridging of markets that occurs when an entrepreneur buys labor in one market and sells the resulting product in a second market. In "Silicon Valley's New Immigrant Entrepreneurs," Annalee Saxenian (1999) offers a detailed case study of how such processes work in globalizing high technology markets. The typical example in her study is a Taiwanese or Indian immigrant who links labor markets in Hsinchu or Bangalore with a predominantly North American and Western European product market. In this case, we have an immigrant in Silicon Valley who notices price discrepancies between the cost of labor inputs and the revenues that derive from the contribution of that labor.

Here again we can see how an entrepreneur will attract imitators that will increase the rent (the perceived opportunity cost) that accrues to workers (in Hsinchu or Bangalore) while reducing revenues in product markets until the pure profits of the original entrepreneur have been wiped out. The original entrepreneurial discovery has therefore initiated a simultaneous reduction of ignorance and integration of markets that at its logical conclusion would lead to revenues, costs, and (labor) rents all being equal.

The same process is also at work when a migrant decides to move between labor markets, which is the action ultimately responsible for both urbanization and inter-regional migration processes. Keeping in mind Kirzner's observation that a pure entrepreneur who "own[s] assets must . . . be viewed as 'purchasing' the services of these assets from himself" (Kirzner 1973, pp. 47–48), it becomes obvious that what the migrant is doing is an act of entrepreneurship: she has noticed that the revenues from selling her labor in one market exceed the (implicit) cost of buying labor services (from herself) in a second market. The migrant therefore performs the same coordinating, market-bridging action as the land speculator or product innovator. Likewise, it will give rise to a process of imitation (to the extent that her labor services have close substitutes) that will eventually lower costs in the higher-priced labor market and raise costs in the lower-priced one, even though the process may permanently affect the supplied quantities in the two markets (which explains why this type of entrepreneurship often triggers urbanization processes).

Institutions and Entrepreneurship

While urbanization has resulted in much land and many workers being put to higher-valued uses, it is by no means the only outcome that has been observed. Reporting from a trip to poor neighborhoods and villages in the Philippines, the journalist Mark Hemingway observes:

> There's a huge difference between the urban poor and the rural poor. For the most part, it's much better to be poor in the rural areas—it's a lot less

> likely that you'll be living in a slum, with all of its accompanying crime, sanitation and public health problems. . . . Two Filipinos may both be making less than a dollar a day, but if one is living in the slums in Manila and the other is living out by himself on a remote mountainside outside Baguio, it wouldn't take long to determine where you'd rather live. . . . For one thing [the one near Baguio] had more space. . . . In the urban slums, where space is at a premium, land intensive and agricultural enterprises that are traditionally the domain of the very poor are rarely possible. (Hemingway 2003)

Real-life observations such as this have made many commentators and policy makers skeptical about the spontaneous ability of market processes to coordinate production and markets. The existence of large agglomerations of unemployed or underemployed people in the urban centers of the developing world would seem to refute the existence of the entrepreneurial process of spontaneous coordination in land, labor, and product markets. Instead, the existence of obvious misallocations of resources would seem to point to the necessity of regulating the growth of cities and the conceptually similar phenomenon of cross-border migration.

In spite of the apparent empirical evidence to the contrary, it is erroneous to infer that entrepreneurs are unable to coordinate labor markets. Although Kirzner was referring to the absence of equilibration in marriage and other "Becker-type" markets, his comments are fully applicable to underdeveloped labor markets in the Third World when he writes that

> [t]he spontaneous learning required in order for misallocations (represented by unexploited exchange opportunities) to be corrected, is inspired by the circumstance that this sheer ignorance translates itself (*within the institutional setting of individual rights to property and thus to market arrangements*) into pure profit opportunities. Were this translation not to occur, we would be unable to rely upon any economic forces for the generation of those discoveries which had hitherto not been made. (Kirzner 1999, p. 7; italics added)

The point that Kirzner is making, and which is directly applicable to the labor markets of most poor people in the Third World, is that prices only function in a setting of well-defined property rights that are protected by universal institutions. Hayek (1960) has defined universal institutions as adhering to the principles of certainty, generality, and equality. Its opposite, dysfunctional institutions (Schuck 1992; Kasper and Streit 1998), exhibit the characteristics of density, technicality, differentiation, and uncertainty. As de Soto (2000) has demonstrated in his study of several markets in the Third World, including the Philippines, the typical situation is one of vague and contested property rights that are protected by dysfunctional institutions, where *de facto* bureaucratic arbitrariness and corruption aggravate the dysfunctional characteristics of *de jure* institutions. Referring specifically to labor markets, Webster and Lai note that

> without a formal wage contract it is difficult for a rural worker to compare the value of one job with another and difficult for employers to compare one worker with another. A wage is a signal of the value placed on a worker's labor and without such a signal the cost . . . becomes excessive. (Webster and Lai 2003, p. 91)

Imperfect property rights do however not necessarily amount to non-existent property rights. As long as some markets exist for exchanging property rights, we can observe—albeit in diluted form—those wealth-creating entrepreneurial processes which urbanization accelerates and enhances. At the most basic level, this is reflected in increasing chances of human survival. The probability of dying prematurely from infectious diseases has everywhere been most drastically reduced in industrializing and growing cities, whether in nineteenth century Europe or twentieth century East and Southeast Asia (Andersson 2003).

But increasing the life expectancy of a person picked at random is only one aspect of urban wealth creation. What lies behind the superiority of cities as generators of new knowledge and new wealth are the greater opportunities for entrepreneurial discoveries that cities present to more or less alert individuals. And the grasping of these opportunities benefits poor and rich alike. Statistical indicators of population growth, income growth, and the incidence of absolute poverty illustrate the effects of the entrepreneurial process in unambiguous terms.[4]

A general conclusion that we can draw from institutional considerations is that the closer a real-world market approximates the ideal of encompassing well-defined, exclusive, and freely transferable property rights that are protected by universal institutions, the stronger will be the coordinating and equilibrating tendencies of the entrepreneurially driven market process. And the policy implication is therefore not growth controls and regulations against migration, but rather institutional reforms that support unambiguous price signals.

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[4]An example that contradicts Hemingway's conclusion is that between 1990 and 1997, the Philippines' urban population grew at an annual rate of approximately 4 percent, while the rural population was almost stagnant with an annual growth rate of only 0.2 percent. In spite of this, the proportion of people living below the purchasing-power-adjusted official poverty line—which means that the urban poverty threshold corresponds to a greater household income when measured in pesos—fell from 34.3 percent to 21.5 percent in urban areas, while the proportion in rural areas decreased less than two percentage points, from 52.3 percent to 50.7 percent. The 1997 estimate of poverty in the largest metropolitan region (Metro Manila) is the lowest in the country, at 8.5 percent (National Statistical Coordination Board 1997). The relationship between spatial agglomeration and economic coordination can probably only be entirely halted if a government manages to suppress all (formal or informal) property rights, as during China's Cultural Revolution.

Concluding Remarks

In the introduction, I argued that the unavoidable spatial consequences of all entrepreneurial actions imply that a spatial extension of the theory enhances our understanding of the entrepreneurial market process. While we can make use of Kirzner's theory of entrepreneurship as a foundation for theorizing about both spatial and non-spatial phenomena[5] that are not explicitly part of the theory, a spatial economics which does not incorporate a theory of entrepreneurship cannot be the foundation for an understanding of urbanization or regional development.

Conventional spatial economics in essence consists of unexplained snapshots. These snapshots may be of that imaginary and utopian equilibrium which is the mainstay of orthodox spatial theory. Or they may be snapshots of the spatiotemporally unique deviations from equilibrium which constitute the subject matter of a great deal of empirical urban and regional economics. But snapshot economics can neither serve as a foundation for understanding the market process nor for analyzing its spatial implications.

This is not to say that there are no building blocks other than Kirzner's theory for a comprehensive spatial theory of economic development. There are many insightful treatments of urban and regional development,[6] which—although different in their approaches—tend to stress the role and spatial clustering of innovation.

Although a focus on innovation brings us closer to the gist of development processes, there tends to be a general vagueness about the difference between entrepreneurial knowledge and other types of knowledge. The non-deployable character of entrepreneurial "foreknowledge" is sometimes confused with deployable technological knowledge[7] (i.e., "human capital"). My contention is that the remedy for this vagueness is a spatial theory of development that puts entrepreneurial alertness to profit opportunities at its core.

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[5]Harper (2003) has for example used the theory of entrepreneurship as a tool for analyzing institutions and cultural values.

[6]Contributions include Jacobs's insightful although intuitive discussions of the relationship between urban design, agglomeration economies, and innovation (Jacobs 1961; 1969); economic geographers and management theorists concerned with spatial agglomerations of tacit knowledge and innovation (e.g., von Hippel 1988; Kenney 2001; Desrochers 1998, 2001); Schumpeterian analyses of urban development (Giersch 1979); and approaches that focus on the role of property rights, institutions, and spatial or non-spatial transaction costs in regional development (Kasper 1994; Andersson 2000; Webster and Lai 2003).

[7]As an illustration of the difference between entrepreneurial and technological knowledge, we may consider Moscow's role in the Soviet Union. As long as emigration was restricted, Moscow hosted substantial agglomerations of people with advanced technological knowledge or human capital, for example in mathematics, the natural sciences, the performing arts, and in competitive sports. But the Soviet Union lacked that system of property rights which makes prices carriers of information and entrepreneurial knowledge possible.

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