D21, L51, O31

The information externality in entrepreneurship theory argues that the social benefits arising from entrepreneurial actions are greater than the private gains. Entrepreneurs who discover profit opportunities signal to other entrepreneurs efficient path of investments, and the latter can imitate the former acting upon this information. Market failure to internalize this information externality creates a useful role for the state, which can provide adequate incentives by subsidizing investment in new projects. We criticize this theory by pointing out that it is both irrelevant and inconsistent. An inadequate view of entrepreneurship is responsible for most of these weaknesses.

[1] Bogdan Glăvan is Assistant Professor of economics at the Romanian-American University in Bucharest. The author wishes to thank Dragoș Aligică and two anonymous referees for comments on an earlier draft of this paper. All remaining errors are my own.

A number of development economists have advanced the idea that the key obstacle to economic growth in less developed regions is the insufficient level of entrepreneurship. This problem arises because markets do not generate adequate incentives to reward entrepreneurship. Thus, entrepreneurship is seen as having some public good characteristics. In particular, Hausmann and Rodrik (2003; 2005), Iyigun and Rodrik (2004) and Rodrik (2004) have focused on a new type of entrepreneurship-related externality that prevents the market from working efficiently – "information externality".

As the information externality argument goes, exploiting new business opportunities has considerable positive externalities for other entrepreneurs, who can learn about the profitability of certain ventures and can act accordingly. This means that entrepreneurship will be under-supplied and that government should correct market failure, providing proper incentives in order to reach the optimal level of entrepreneurship.

This paper attempts to refute this argument and implicitly outline an alternative view of the relationship between entrepreneurship and development. It uses Hausmann and Rodrik's thesis as an example of this approach and criticizes the claim that entrepreneurship presents positive externalities which prevent the optimal allocation of resources. Its goal is to demonstrate that despite the supposed discovery of new market failures, the case for government intervention is no better at the present than it was decades ago. In particular, the objective is to show that Austrian economists have addressed issues regarding the relation between entrepreneurship and development, and successfully answered the argument that government policy can improve market outcomes.

The paper is organized as follows. The next section presents the case for government intervention advanced by Hausmann and Rodrik. Section two explains the role of entrepreneurs in the economy. In section three, Hausmann and Rodrik's model of market failure is shown to be irrelevant because of the nonrealistic treatment of uncertainty in social life. Section four demonstrates that the information externality

theory of entrepreneurship is inconsistent on its own terms. Section four concludes the paper.

Rodrik and Hausmann are considered two of the best economists in the field of development economics at the present. Their recent contribution lies in rebuilding the case for development policy after this seemed to be definitively compromised during the last decades of successive failures of different "models of development". More precisely, Rodrick and Hausmann have discovered a new problem in the functioning of the market economy, which the government is able to alleviate in order to generate an optimal rate of growth.

From the very beginning, Hausmann and Rodrick prefer to assume, as early development economists, that the free market is inherently flawed.[2] Then they attempt to build a strategy for government intervention to correct market weaknesses and foster development.

For Rodrick, at the root of economic growth is innovation that enables productivity to grow (Rodrick 2004, p. 4). Innovation, in turn, is the product of entrepreneurial activity, the task of which is to "discover" the set of goods that need to be produced. This undertaking is, obviously, a tricky job. For entrepreneurs, economic theory, management abilities and technological knowledge are of no help. The main problem is the uncertainty about the outcome of entrepreneurial actions.[3] If making the right investment decision is so difficult, one could expect the reward for successful undertakings to be accordingly high. Yet this is not so. As Hausmann and Rodrik (2003, p. 4) argue, "the initial entrepreneur who makes the 'discovery' can capture only a small part of the social value that this knowledge generates".

The situation is, in Hausmann and Rodrik's opinion, similar to the problem of gen-

[2] "I start also from generic market failures, but then I take it as a given that the location and magnitude of these market failures is highly uncertain" Rodrik (2004, p. 3).

[3] "Most fundamentally, market prices cannot reveal the profitability of resource allocations that do not yet exist. (In general equilibrium theory, this is finessed by assuming that markets are "complete" and there is a price for everything.) The returns from investing in non-traditional activities are therefore hazy at best" Rodrik (2004, p. 7).

uine innovation (in developed countries). As the argument goes, private economic agents allocate less than the optimal amount of resources in R&D activities, because they cannot capture all the benefits resulting from innovation; a part of them simply accrue to society.[4] Therefore, here is a typical externality problem. In developed countries the government can solve this particular market failure by subsidizing research and innovation or by granting patents to the producers of brand new goods. The issue is slightly different in developing countries. Here, the task of entrepreneurs is not to come up with an original product, but to 'discover' that a certain good, already established in world markets, can be produced at home at lower cost" (Rodrik 2004, p. 9). Like genuine innovation, discovering what good deserves to be produced is an activity that has socially positive effects. If the entrepreneur succeeds in his undertaking, he will soon be challenged by other individuals who will imitate him and start identical production processes. However, the entrepreneur who fails to identify the right product bears the whole cost of his venture. Thus, each entrepreneur has strong incentives not to go first in discovering the profitability of a new venture, but instead wait for others to undertake the project, and then imitate them. The outcome is that there will be a less than adequate level of investment in new projects. Unfortunately, there is no policy to address the market failure arising from the imitative nature of human beings. The logical consequence, in the authors' opinion, is that "free entry makes the non-appropriability problem worse, and undercuts the incentive to invest in discovering what a country is good at producing. Laissez-faire cannot be the optimal solution under these circumstances, just as it is not in the case of R&D in new products" (Hausmann and Rodrik 2003, p. 6).

In order to alleviate the problem, the authors argue for an upgraded industrial policy, which should include trade protection, temporary monopolies, fiscal incentives and subsidized credit for the entrepreneurs engaging in new production processes. The state should manage carefully the provision of rents to avoid being captured by the various interest groups:

> We recommend generically a carrot-and-stick strategy. Since self-discovery requires rents to be provided to entrepreneurs, one side of the policy has to take

[4] A succinct presentation and critique of public subsidization of research can be found in Wallsten (2000).

> the form of a carrot. This can be a subsidy of some kind, trade protection, or the provision of venture capital. Note that the logic of the problem requires that the rents be provided only to the initial investor, not to copycats. To ensure that mistakes are not perpetuated and bad projects are phased out, these rents must in turn be subject either to performance requirements (for example, a requirement to export), or to close monitoring of the uses to which they are put. In other words, there has to be a stick to discipline opportunistic action by the recipient of the subsidy. (Rodrik 2004, p. 11)[5]

A number of considerations prompt us to claim that Hausmann and Rodrik's model of market failure in development does not enrich the understanding of how entrepreneurship contributes to development, is unrealistic, and internally inconsistent. In what follows, we will analyze some of its weaknesses closely.

Although Hausmann and Rodrik do not provide a definition of what they understand by entrepreneurship, after reading their argument one cannot avoid a simple conclusion. In the authors' perspective, entrepreneurs represent a class of individuals (businessmen) who are inhibited from pursuing their actions because of the inadequate rewards provided by the market mechanism.

This account of entrepreneurship is unrealistic. Entrepreneurship can be defined as an immanent function of human behavior (Mises 1949, pp. 252-253; Kirzner 1973; 1992). All human decisions concerning the allocation of resources are taken in uncertainty. Individuals intend to improve their future wellbeing, and consequently, they are required to anticipate the development of economic conditions.

Since entrepreneurship is an inherent aspect of human action, it is pointless to analyze the market process in terms of density of entrepreneurial activity. We cannot properly speak of an inadequate level of entrepreneurship, because all existing

[5] In Rodrik's opinion, there is nothing wrong in principle with such a policy. The failure of industrial policy in Latin America and other parts of the world is not explained by the intrinsic contradictions of government policy, but by the inability of certain governments to put in place a correct policy. See Rodrik (2004, p. 11). Curiously, Rodrik's favorite example of "smart" interventionism is South Korea, and this despite the fact that the "Asian model" of development has been compromised in most people's eyes by the economic crisis of 1997.

economic activity is entrepreneurial in the sense that it is always speculative, coping with uncertainty, and attempting to discover new and more profitable investment opportunities. Consequently, we cannot conclude that the market fails because it does not reach a higher density of entrepreneurship, and that this prevents the optimal allocation of resources and economic development.

In Hausmann and Rodrik's model (2003, p. 6), there are two main production possibilities: entrepreneurs may choose between production of "traditional" goods, "where there is no uncertainty", and production of new goods, which has "uncertain productivity". This is hardly a realistic description of reality. For the economists who accept the distinction between uncertain investments and safe production, the implications of Hausmann and Rodrik's model are more comprehendible. By definition, the impossibility of capturing all the benefits from investments in modern (uncertain) activities forces entrepreneurs to take refuge in traditional (safe) production activities. For Hausmann and Rodrik, the main task the government and businessmen have to accomplish is to find the set of new activities, with significant spillover effects, which can accelerate growth.[7] Then, through the fine tuning of subsidies and penalties, entrepreneurs can be induced to develop these activities, and the market failure is corrected.

The artificial assumption of the model obscures the truth that any activity is inherently uncertain. As Mises (1998, p. 805) noticed, the "owner of capital does not choose between more risky, less risky, and safe investments. He is forced by the very operation of the market economy, to invest his funds in such a way as to supply the most urgent needs of the consumers to the best possible extent". Therefore, entrepreneurs have no possibility to avoid the market pressure to change production according to consumers' wishes. They cannot refuse to adjust production because the uncertainty is too high. When entrepreneurs do not undertake an investment project, it is always because of the higher profit they expect to obtain elsewhere.

In fact, one could argue that government policy is a constant source of uncertainty. Through its constantly changing regulations and provision of rents – trade protection, legal monopolies, fiscal privileges etc. – the government enhances or dilutes the uncertainty associated with the operation of specific industries. Very often what is considered to be a lack of "entrepreneurial spirit" is caused by an institutional framework adverse to productive activity and economic growth (Coyne and Leeson

[7] Empirically, the authors illustrate their argument with the establishment of software research in India, the cut flower industry in Colombia, the salmon industry in Chile – where the state played an important role – and several notorious transfers of technology realized by private entrepreneurs.

2004, p. 236). Entrepreneurial behavior is dependent on the political institutions that govern the market process.

Any entrepreneurial initiative is new, in the sense that it has not been tried before. Rodrik's "imitators" who undertake additional investments in a certain line of production do not simply copy previous successful ventures. They are still entrepreneurs, and they have to discover whether it pays or not to invest additional resources and enlarge a certain production process. Because of the ever-changing economic conditions, entrepreneurs must continuously judge the opportunity of continuing investment in an established process of production. As Boettke and Coyne (2005, p. 202) explain: "Given the presence of uncertainty, entrepreneurs (and all economic agents) must always speculate to some degree on what the future will bring. As time passes and new data become available via entrepreneurial discovery, past uncertainty is removed and new uncertainty is introduced." Therefore, past empirical knowledge is a poor guide for future action.

Besides these considerations, why is new necessarily better? The degree of novelty of additional investments can be discovered only by entrepreneurial experimentation, and one cannot postulate *a priori* that new (that is, original, never attempted before) investments are more profitable than old (traditional) investments. Our authors fail to offer a satisfactory answer to this question, as to many others.

The externality in entrepreneurship argument is built around the idea that entrepreneurs who discover new business opportunities signal to others the opportunity to extend their own businesses. Boettke and Coyne (2003, p. 78, footnote 7) have noticed the same idea: "The entrepreneurial aspect of human action is, in a sense, self-sustaining since it creates an environment of further discovery".[8]

This process of knowledge spillover represents the basis for Hausmann and Rodrik's assertion that the state should mitigate the problem of informational externalities by supporting entrepreneurial initiative. The leakage of knowledge resulting

[8] For a critique of the view that entrepreneurship will be under-supplied because of this externality problem, see Boettke and Coyne (2005).

from the entrepreneurial discovery of profit opportunities is considered a variant of the externality problem associated with innovation. As the authors argue:

> The problem faced by potential entrepreneurs in developing countries is identical to the problem faced by innovators in the advanced industrial countries. However, the policy environments facing the 'innovators' in the two settings are quite different. Typically, the intellectual property regime protects discoverers of *new* goods through the issuance of temporary monopolies, i.e., patents. But the investor in the developing country who figures out that an *existing* good can be produced profitably at home does not normally get such protection, no matter how high the social return. Indeed, ease of entry by competitors (i.e., imitators or copycats) is normally judged to be an important indicator of how well markets function—the lower the barriers to entry, the better. Free entry makes the nonappropriability problem worse, and undercuts the incentive to invest in discovering what a country is good at producing. Laissez-faire cannot be the optimal solution under these circumstances, just as it is not in the case of R&D in new products. (Hausmann and Rodrik 2003, pp. 5-6)

However, both the assumption that the patent system is essential for protecting technological discovery and the implication that developing countries need an analogous system to protect entrepreneurial discovery are unwarranted. First, the merits of the actual patent system have been contested by an number of writers.[9] It is arguable that this system is consistent with the institution of private property rights or that it fosters innovation. Secondly, economic discovery of profit opportunities is different by nature from technological advance or scientific breakthrough, because it is intrinsically linked to any human action.

The fact that "knowledge acquired in the process of discovering one's costs spills over to other potential entrepreneurs" (Hausmann and Rodrik 2003, p. 5, footnote 5) has no economic meaning. Relevant knowledge is specific knowledge, depending on circumstances of time and space. In fact, nobody is interested in acquiring knowledge as such, but only information specific to his own actions. For example, what matters is not whether other individuals posses my knowledge of using a certain subway train

[9] For a review of the literature and a critique of intellectual property rights, see Kinsella (2001).

to arrive to a specified destination, but if they consider it useful or not for their own purposes. As Hülsmann (1999, p. 63-64) says:

> Entrepreneurial decisions are not taken in a time-and space-less vacuum, but under specific conditions, which permit the successful performance of some actions and preclude the success of other actions... Entrepreneurial judgments are "historical" judgments, that is, they have to grasp the unique combination of circumstances that actually prevails and to anticipate, in the light of ongoing events, the unique conditions that will prevail in the future.

Entrepreneurs have to discern always between relevant and irrelevant information, and their choice of accumulating additional information results not from passively incorporating signals spread by other entrepreneurs, but from their judgment of market conditions.

Rodrik's claim that if leave it to the market, innovation will be insufficient because the innovator "has to share the value of his discovery with other producers who *can follow* (my emphasis) his example and flock into the new activity" (Rodrik 2004, p. 9) is wrong. The basic issue concerning the attitude of other individuals is not whether they *can* expand their business following their fellows, but if they *should* adopt such a course of action. Imitation is a very simple action, or rather, reaction. It represents an option available not only for human (mentally healthy) adults, but also for other human beings and non-human beings. Entrepreneurs, however, must judge the opportunity of any activity, including imitative behavior, and act accordingly.[10]

Moreover, we should not overlook the fact that to imitate somebody's action supposes that the imitator has to incur some costs, just like any other acting person. Competitors appear only if they estimate costs are lower than the discounted marginal income to resulting from production (which means the existing supply is not right). One should not assume, as Rodrik does, that this situation is the only possible case.

[10] As Mises (1998, p. 582) explains: "What distinguishes the successful entrepreneur and promoter from other people is precisely the fact that he does not let himself be guided by what was and is, but arranges his affairs on the ground of his opinion about the future. He sees the past and present as other people do, but he judges the future in a different way [...] If the present structure of prices renders very profitable the business of those who are today selling the articles concerned, their production will expand only to the extent that entrepreneurs believe that the favorable market constellation will last long enough to make new investments pay. If entrepreneurs do not expect this, even very high profits of the enterprises already operating will not bring about an expansion."

Still another problem with the imitation argument is that it proves too much. If imitation is such an effective course of action, we shall expect people to behave like a herd. Moreover, one could wonder why one would act at all, given that imitation pays for itself and private returns to new actions are so low. Yet herd behavior is too easy a refuge for those lacking a reasonable explanation of human action.

It should not be forgotten that, in a larger sense, appropriability is never absolute or, to put it differently, imitation is always possible. One may see the "leakage" of information about investment opportunities as similar to the "theft" of any other economic good. But nobody has argued that theft – or, for that matter, imitation – should be prevented at all cost (Demsetz 1969, p. 10).

Further, there is another problem with the argument that the danger of imitation prevents entrepreneurs from discovering profit opportunities. Ease of entry is another name for high exclusion costs. The idea that ease of entry undermines entrepreneurial actions boils down to the thesis that exclusion costs make more difficult economic initiatives. But this is misleading. There is no such thing as cost-free action. Exclusion costs, like transportation costs or labor costs are economic costs which must be taken into account before deciding upon the allocation of resources. The fact that the height of exclusion costs discourages some action is no more relevant than the fact that high transportation costs prevent a doctor from selling his services to a distant customer. If we pursue the argument to its logical conclusion, we should maintain that this is a good reason for state subsidization of the doctor's long distance activity.[11] But this is hardly acceptable. Therefore, it is obvious that one cannot derive any sound conclusion by comparing real world situations with the (perfect competition-based) model of Hausmann and Rodrik, where free entry is costless.

Last, but not least, the imitation argument does not lead to where its advocates intend to arrive. Suppose individual X engages in discovering the cost of producing good Y. His action can have only two possible outcomes: either it ends with a profit or with a loss. Rodrik maintains that discovering a profitable opportunity has great social benefits, because it fosters the efficient allocation of resources. But what if X fails in his venture? Does not society owe something to him because he discovered

[11] For a similar observation with regard to the argument that the mere existence of costs prevents the optimal allocation of resources, see Demsetz (1969, p. 7).

(unintentionally) what business is not efficient to undertake and, therefore, has reduced the range of opportunities that have to be explored by entrepreneurs?[12] As can be easily observed, this will absurdly imply that government should provide subsidies to all entrepreneurs, because each of them helps – one way or the other – society to improve the allocation of resources and accelerate development.

Leaving aside the criticism outlined above, how could Rodrik's argument that entrepreneurship will be under-produced because of inadequate incentives be proven? What criteria should be used to find whether or not a certain type of entrepreneurship is under-supplied? Obviously, the question how many entrepreneurial opportunities exist and how many initiatives capture these opportunities is an empirical question (Hülsmann 1999, p. 64). But one cannot discover the number of entrepreneurial opportunities and compare it with the number of exploited opportunities, because all one can notice is the number of entrepreneurial initiatives undertaken at a certain moment.

Hausmann and Rodrik acknowledge implicitly the difficulty of finding an empirical proof for their argument when they maintain that:

> Looking for systematic evidence that successful investments are rapidly copied is a self-defeating strategy because there shouldn't be much evidence of this sort to the extent that our model does capture an important part of reality. Entrepreneurial initiatives of this kind should tend to remain episodic, almost random events – not systematic ones... Similarly, if we were to learn that many successful new firms from developing countries operate with technologies that

[12] A simple example will clarify the issue further. Imagine there are two roads leading to a certain destination, and a group of individuals undecided which way they should take. Each individual may choose not to be the first starter, but wait for others to go check which way is shorter and then follow the people who made the right choice. One could say this is a case for subsidizing the individual who discovers the shorter road, since his action benefits the entire group. But why not subsidize the individual who takes his chance and (unfortunately) discovers the longer road? Does not his action equally help the group in making the right decision?

> are hard to copy or have devised successful strategies of product differentiation (with protection against imitative entry), this apparently contradictory finding may in fact be quite consistent with our model. After all, a direct implication of our argument is that only investments that provide such protection will be undertaken in equilibrium. (Hausmann and Rodrik 2003, p. 18)

In other words, the impossibility of an empirical validation of their assertions does not discourage the authors to maintain their thesis. On the contrary, by a switch of argument, they assume that this observation supposedly defends their argument.

It is quite easier, rather, to use the overwhelming empirical evidence to criticize the information externality theory of entrepreneurship. As Boettke and Coyne (2005, p. 209) point out, "in fact, our historical experience with markets defies what narrow economic theory might dictate. Entrepreneurs capture profits by exercising the knowledge they have of 'time and place' and revealing the information they are in possession of through their actions in the marketplace".

Even if we overlook the difficulty of proving empirically the hypothesis that entrepreneurs fail to exploit all profit opportunities, the conclusion that government should support the entrepreneurial search for profitable investments is equally difficult to implement. In particular, Rodrik's provision that government should offer subsidies only to new activities is questionable. In the author's view, "the main purpose of industrial policy is to diversify the economy and generate new areas of comparative advantage... 'New' refers to both products that are new to the local economy and to new technologies for producing an existing product" (Rodrik 2004, p. 21). But this has no practical relevance at all, and it opens the Pandora's Box of government abuses, rent seeking, and waste. Is building inter-continental missiles or intelligence satellites new enough? Is growing bananas in Russia or cocoa trees in the United States not a new activity? Well, one cannot be sure if all such new activities are profitable, but at least governments are encouraged to pump in money and help businessmen find the answer. Moreover, state bureaucrats need not let the fear of wasting resources restrain them from channeling funds toward their preferred projects, because making mistakes is inevitable. "If governments make no mistakes, it only means that they are not trying hard enough" (Rodrik 2004, p. 25). It results logically that Rodrik sets no limit for government subsidization programs.

The case for subsidization can be helped if we confine it only to successful ventures and not to "new" activities in general. That is, government should rather distribute prizes to those who have demonstrated their superior ability in forecasting consumer needs. In this case, Hausmann and Rodrik have to acknowledge that the government needs to stop operating an industrial policy or (market failure-correcting policy) and start a simple redistributive policy.[13] But then, the importance of these writers' contribution to development economics and industrial policy evaporates, because there is no solid economic or ethical ground for redistribution.

An additional question, to which Hausmann and Rodrik offer no satisfactory answer, is how the new investments are to be financed. According to the information externality theory of entrepreneurship, the financial market does not provide a proper solution, given that the market is too blind to finance the "longer term and riskier" investments in development of new products.[14] As a consequence, the state should support investment through funding development banks and venture funds, and provide public guarantees for long-term investment projects that cannot fulfill the requirements of private bankers. There are several problems with this opinion.

First, in order to see if it is economically efficient to support entrepreneurship in new investments one has to compare the benefits derived from subsidization (a higher level of entrepreneurship and a more complete exploitation of profit opportunities) with the costs associated with government interventionism (a larger bureaucracy, a higher level of taxation and rent-seeking, and eventually a weaker incentive to work and produce goods demanded by the public). But there is no infallible method for this type of calculation.

First, public investment funding distorts the functioning of the capital market and falsifies the time preference of individuals. Because the state interferes with the market allocation of saving, a process of crowding out will put private (unprivileged) entrepreneurs in the position of being unable to undertake investments necessary to provide consumers with the goods they desire.[15]

[13] In fact, any government policy implies redistribution.

[14] This is a strange consideration, given that many critics of the free market share an opposite idea, and blame the market for gambling too many of society's resources in high-risk investments.

[15] Mises explains: "It is proposed that a railroad, the construction and operation of which does not promise profitability, is to be made possible by a government subsidy. It may be, it is said, that the

Secondly, subsidization represents an alternative method of financing business plans. Even if entrepreneurs use public funds to start a new investment, they could alternatively fund this project naturally, from private savings. If the government wants to "correct" a market failure (and not to displace the market altogether), then it should choose to finance those projects that are rejected by banks or any other private savings institution. But this consideration immediately raises an insurmountable problem. There are an immense number of investment projects private individuals would not fund: transportation to the moon, production of water using chemical reactions, replacement of today's car engines with solar energy propulsion etc. Does the market failure argument imply that government should support all these projects? If not, what criteria should be used to divide between worthy and unworthy investment ideas? All these questions can hardly be answered in an unambiguous way.

In this paper I have tried to address some of the more important problems associated with the information externality theory of entrepreneurship, as exposed by Hausmann and Rodrik. In particular, I have shown that these writers' argument that the market fails to provide sufficient entrepreneurial actions is based on a misunderstanding of the notion of entrepreneurship. Further, Hausmann and Rodrik's thesis cannot be defended empirically and is internally inconsistent, and, thus, it fails to advance the case for industrial policy. Overall, the attempt to theorize new market failures and build a solid framework for market-correcting policies has to be considered unsatisfactory.

railroad is not profitable in the usual sense of the word and that, therefore, it is not attractive to entrepreneurs and capitalists, but it would contribute to the development of the whole region. It would promote trade, commerce, and agriculture and thus it would make an important contribution to the progress of the economy [...] This reasoning is thoroughly mistaken [...] Certainly, these subsidies contribute to the economic development of a region where otherwise less would be produced. But the production increase in the part of the country thus favored by the government's railroad policy is to be contrasted with the burden placed on production and consumption in those parts of the country which have to pay the costs of the government policy."

[1] Block, Walter. 1983. "Public Goods and Externalities: The Case of Roads". *Journal of Libertarian Studies* 7(1): 1-34.

[2] Boettke, Peter J. and Coyne, Cristopher. J. 2005. "Concerting Entrepreneurship: An International Public Good". In Padoan. P. C. and Boyd. G. eds.. *Structural Partenering for a New Atlantic Economy: Complementary Entrepreneurship for Balanced Interdependence*. Edward Elgar.

[3] Boettke, Peter and Coyne, Cristopher. 2003. "Entrepreneurship and Development: Cause or Consequence". *Advances in Austrian Economics* 6: 67-87.

[4] Coyne, Cristopher J. and Leeson, Peter T. 2004. "The Plight of Underdeveloped Countries". *Cato Journal* 24(3): 235-249.

[5] Demsetz, Harold. 1969. "Information and Efficiency: Another Viewpoint". *Journal of Law and Economics* 12(1): 1-22.

[6] Hausmann, Ricardo and Rodrick, Dani. 2003. "Economic Development as Self-Discovery". *Journal of Development Economics* 72(2): 603-633.

[7] Hausmann, Ricardo and Rodrik, Dani. 2005. "It Is Not How Much But What You Export That Matters". *Working Paper*. November. Harvard University. http://ksghome.harvard.edu/~drodrik/papers.html

[8] Holcombe, Randall G. 1997. "A Theory of the Theory of Public Goods". *Review of Austrian Economics* 10(1): 1-22.

[9] Holcombe, Randall G. 1998. "Entrepreneurship and Economic Growth". *The Quarterly Journal of Austrian Economics* 1(2): 45-62.

[10] Holcombe, Randall G. 2003 a. "The Origins of Entrepreneurial Opportunities". *Review of Austrian Economics* 16(1): 25-43.

[11] Holcombe, Randall G. 2003 b. "Progress and Entrepreneurship". *The Quarterly Journal of Austrian Economics* 6(3): 3-26.

[12] Hoppe, Hans-Hermann. 1989. *A Theory of Socialism and Capitalism*. Boston. Kluwer.

[13] Hummel, Jeffrey R. 1990. "National Goods Versus Public Goods: Defense, Disarmament, and Free Riders". *Review of Austrian Economics* 4: 88-122.

[14] Hülsmann, Jörg Guido. 1999. "Entrepreneurship and Economic Growth: Comment on Holcombe". *The Quarterly Journal of Austrian Economic* 2(2): 63-65.

[15] Iyigun, Murat and Rodrik, Dani. 2004. "On the Efficacy of Reforms: Policy Tinkering, Institutional Change, and Entrepreneurship". NBER *Working Paper* 10455.

[16] Kinsella, Stephan N. 2001. "Against Intellectual Property". *Journal of Libertarian Studies* 15(2): 1-53.

[17] Kirzner, Israel. 1973. *Competition and Entrepreneurship*. Chicago. University of Chicago Press.

[18] Kirzner, Israel. 1992. *The Meaning of the Market Process*. London. Routledge.

[19] Mises, Ludwig von. 1998. *Interventionism. An Economic Analysis*. Irvington-on-Hudson. The Foundation for Economic Education.

[20] Mises, Ludwig von. 1998. *Human Action*. Scholar's edition. Auburn. Ala.: Ludwig von Mises Institute.

[21] Rodrik, Dani. 2004. "Industrial Policy for the Twenty-First Century". *Working Paper*. October. Harvard University.

[22] Wallsten, Scott. 2000. "The R&D Boondoggle: Why is Government Subsidizing Commercially Promising Business Projects?". *Regulation* 23(4): 12-16.