

ENTREPRENEURSHIP AND INSTITUTIONS

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I. INTRODUCTION

In the 1990s entrepreneurship moved to the fore of the economic policy agenda. Many governments, in particular in Europe, came to see the entrepreneur as the solution to weak economic performance and to deficient job creation.

The research community responded to the demand from policymakers with a virtual explosion of entrepreneurship research. Both the number of contributions and the diversity of approaches across the various social sciences have been extraordinary, as even a cursory look through the recent handbooks will demonstrate.¹ Entrepreneurship is studied in virtually all disciplines, ranging from social anthropology to organizational theory to mathematical economics. The areas of focus are equally diverse, including personality, opportunity, motivation, environment, organization, coordination, policy, finance, and more.

The fact that both policymakers and social scientists have become so interested in entrepreneurship in recent years should of course be applauded. The problem is that “entrepreneurship” and “entrepreneurs” have become overused buzzwords, in particular in the policy debate, but sometimes even in academia. The overuse of

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1. See, e.g., HANDBOOK OF ENTREPRENEURSHIP RESEARCH (Zoltan J. Acs & David B. Audretsch eds., 2003); 1&2 SCOTT SHANE, THE FOUNDATIONS OF ENTREPRENEURSHIP (2002); and the numerous volumes comprising the *International Library of Entrepreneurship Series*, produced by Edward Elgar Publishing, for a representative sample of recent handbooks.

the term and the unrealistic expectations have lead to the risk of a backlash, especially if the entrepreneurs fail to deliver all the great things that were promised by politicians and prophesied by scholars.

The development of entrepreneurship research within economics differs somewhat from other social sciences. For a long time there were rarely, if ever, any entrepreneurs in the models used by neoclassical economists.² There are, however, signs that this is changing. Leading mainstream economists are beginning to make strong claims, such as “the entrepreneur is the single most important player in a modern economy.”³

The reason for the disregard of entrepreneurship is not a denial of its significance among economic researchers. Since the days of Adam Smith, Joseph Schumpeter, and Friedrich Hayek, most economists have acknowledged the crucial importance of entrepreneurs for growth and for the organization of economic activity. The problem is instead methodological, and particular to the formal tools of economics. The entrepreneur and the entrepreneurial function elude analytical tractability. In recent years, several attempts have been made to include these concepts in mainstream economic modeling. But it seems from these attempts that entrepreneurship is *invariably* narrowly defined. While models can analyze some particular aspect of the problem (e.g., risk aversion), no single model has been able to capture the complexity and wide-ranging functions of entrepreneurship developed outside formal economics.⁴

The purpose of this paper is to discuss a number of methodological issues that are often either ignored or treated too light-heartedly in the entrepreneurship and small business economics literature.⁵

2. See, e.g., Dan Johansson, *Economics Without Entrepreneurship or Institutions: A Vocabulary Analysis of Graduate Textbooks*, 1 ECON. J. WATCH 515 (2004) who shows that the terms “entrepreneurship” and “entrepreneur” are virtually nonexistent in the leading textbooks in microeconomics and industrial organization used at the graduate level.

3. Edward P. Lazear, *Entrepreneurship*, 23 J. LAB. ECON. 649 (2005).

4. Milo Bianchi & Magnus Henrekson, *Is Neoclassical Economics Still Entrepreneurless?*, 58 KYKLOS 353 (2005).

5. I was originally invited to comment on the following four papers: Marc Cowling, *Small Firm CEOs and Outside Directorships: Tenure, Demonstration and Synergy Effects*, Paper presented at the conference on *Entrepreneurship: Law, Culture and the Labor Market*, Chicago, March 23, 2007, Raquel Fonseca et al., *Entrepreneurship, Wealth, Liquidity Constraints, and Start-up Costs*, 28 COMP. LAB. L. & POL'Y J. 637 (2007), Vesa Kanninen & Panu Poutvaara, *Imperfect Transmission of Tacit Knowledge and Other Barriers to Entrepreneurship*, 28 COMP. LAB. L. & POL'Y J. 675 (2007), and Simon C. Parker, *Law and the Economics of Entrepreneurship*, 28 COMP. LAB. L. & POL'Y J. 695 (2007). On some occasions I will refer directly to these papers when it can serve to illustrate a specific point. For the most part, however, the paper more generally evaluates some key aspects of the entrepreneurship literature.

A premise underlying many studies (usually implicitly) is that more entrepreneurship is always better. This is not necessarily true, according to most definitions of entrepreneurship. In the next section various definitions of entrepreneurship will be discussed. In Section III the analysis will be taken one step further, introducing the crucial role of the institutional setup in determining entrepreneurial behavior. The message from this section is that *entrepreneurship can only be meaningfully analyzed within a well-defined institutional context*. In Section IV, I critically discuss whether and to what extent self-employment is a reasonable proxy for productive entrepreneurship. In Section V it is suggested that entrepreneurship can be seen as a continual quest for economic rents, i.e., rates of return exceeding the risk-adjusted market return. Section VI explores several key institutions governing the behavior of entrepreneurs. Section VII concludes.

II. DEFINING ENTREPRENEURSHIP

Whenever any concept is analyzed in the social sciences the discussion benefits from a clear definition, and from agreement among scholars about the fashion in which it is used. Such agreement unfortunately is absent in the area of entrepreneurship research. Robert F. Hébert and Albert N. Link provide a summary of the vast literature, identifying at least twelve separate definitions (“identities”) that have been used by various scholars.⁶ Without delving too deeply into details it is obvious that several of these definitions do not capture the essence of entrepreneurship (manager, contractor) whereas other categories (owner of a firm, supplier of capital, industrial leader) may be, but are not necessarily entrepreneurial.

So how do I define entrepreneurship? First, it is about individuals and organizations—be they new, old, large, or small—that actively contribute to renewal and change in the economy. This can be either Schumpeterian entrepreneurship,⁷ which disturbs an existing equilibrium, or it can be Kirznerian entrepreneurship, which moves the economy toward equilibrium.⁸ It does not really matter whether the entrepreneur is the person who provokes change or merely adjusts to it. Entrepreneurial action can mean both creation of opportunity

6. Robert F. Hébert & Albert N. Link, *Historical Perspective on the Entrepreneur*, 2 FOUND. & TRENDS IN ENTREPRENEURSHIP 261 (2006).

7. JOSEPH A. SCHUMPETER, *THE THEORY OF ECONOMIC DEVELOPMENT* (1934).

8. ISRAEL M. KIRZNER, *COMPETITION AND ENTREPRENEURSHIP* (1973).

and response to existing circumstances, where entrepreneurs have the daring to embrace risks in the face of uncertainty.

Second, entrepreneurship is a function, one that is carried out by specific individuals—who can by their own volition decide whether to supply this function. Given that they choose to do so, the activities may be productive, unproductive, or even destructive from a societal perspective.⁹

Third, individuals carrying out the entrepreneurial function are self-serving agents, so that we can reasonably assume that entrepreneurs venture into the type of entrepreneurship that they expect will lead to the highest private return.

Last, following Sander Wennekers and A. Roy Thurik,¹⁰ a person can be said to engage in an entrepreneurial venture if she either on her own or in teams, and either inside or outside existing organizations:

- perceives and creates new economic opportunities (new products, new production methods, new organizational schemes and new product market combinations); and,
- introduces her or his idea in the market, in the face of uncertainty and other obstacles by making decisions on location, form, and the use of resources and institutions.¹¹

From this definition of entrepreneurship some noteworthy implications follow. To begin with, entrepreneurship is largely an open-ended process, an important reason why more focus should be given to incalculable uncertainty than to calculable risk.¹² Entrepreneurship almost always entails an ambition to grow. This is normally achieved by hiring other factors of production in the market, while the entrepreneur remains the main or sole residual claimant to the excess value created through the new combination of resources. The legal entity within which these activities are organized is of course normally the firm. However, the distinctions made above underline why self-employment cannot be equated to entrepreneurship, and why it is likely to be a poor proxy in empirical work. Conversely,

9. William J. Baumol, *Entrepreneurship: Productive, Unproductive, and Destructive*, 98 J. POL. ECON. 893 (1990); Kevin M. Murphy, Andrei Shleifer & Robert W. Vishny, *The Allocation of Talent: Implications for Growth*, 106 Q. J. ECON. 503 (1991).

10. Sander Wennekers & A. Roy Thurik, *Linking Entrepreneurship and Economic Growth*, 13 SM. BUS. ECON. 27 (1999).

11. This is closely related to Mark C. Casson's definition of the entrepreneur as someone "who specializes in taking judgmental decisions." MARK C. CASSON, *THE ENTREPRENEUR: AN ECONOMIC THEORY* (2d ed. 2003).

12. Israel M. Kirzner, *Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach*, 35 J. ECON. LIT. 60 (1997).

employees without an ownership role can also be entrepreneurial (intrapreneurship), although this may be difficult to achieve if it is hard to write compensation contracts that provide the right incentives.

III. THE CRUCIAL ROLE OF THE INSTITUTIONAL SETUP

Douglass North criticized the received view that economic growth is caused by the accumulation of factors of production.¹³ He claimed that these are just proximate causes of growth. The ultimate causes for development resided instead in the incentive structure that encouraged individual effort and investment in physical and human capital and in new technology. This incentive structure was in turn determined by “the rules of the game in society” or the institutional setup broadly construed.¹⁴ The role of institutions has in recent years re-emerged as a dominant explanation of long-term economic performance.¹⁵

Baumol pioneered the role of institutions for entrepreneurial behavior, *viz.* how “the [social] structure of payoffs” channeled entrepreneurship to different activities—some of which are productive, some unproductive, and some destructive/predatory.¹⁶ On the surface, the logic is deceptively simple. If institutions are such that it is beneficial for the individual to spend entrepreneurial effort on circumventing them, the individual will do so rather than benefiting from given institutions to reduce uncertainty and enhance contract and product quality. The outcome in this case is expected to be one where corruption and predatory activities prevail over socially productive entrepreneurship.

William J. Baumol simplifies matters somewhat in that he assumes that the supply of entrepreneurial effort in society is constant, so that the institutional setup only matters for its allocation across activities. This is one important aspect of the role of institutions, but the supply of entrepreneurial effort is also likely to be influenced by the institutional setup. Baumol’s analysis of non-productive and destructive entrepreneurship is not only applicable to less developed

13. See, e.g., DOUGLASS C. NORTH, *INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE* (1990).

14. *Id.* at 3.

15. In particular, see Dani Rodrik, Arvind Subramanian & Francesco Trebbi, *Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development*, 9 J. ECON. GROWTH 131 (2004); Daron Acemoglu, Simon Johnson & James A. Robinson, *Institutions as the Fundamental Cause of Long-run Growth*, in HANDBOOK OF ECONOMIC GROWTH 386, 388–89 (Philippe Aghion & Steven Durlauf eds., 2005).

16. Baumol, *supra* note 9, at 899.

societies. The wealthy world does a good job of directing entrepreneurship toward inherently productive purposes (a large part of the explanation for the wealth), but there are nevertheless many instances of unproductive or predatory entrepreneurship in rich countries as well. Typical examples include the impressive networks of illegal cigarette smuggling and distribution in Sweden or the highly competent and successful lobbying firms in Brussels.

The central conclusion of the discussion above is that *entrepreneurs and entrepreneurial behavior can only be evaluated given the institutional context*. There is no guarantee that a potential entrepreneur will actually put his or her time and effort to productive use. If the institutional setting encourages behavior that is wasteful or destructive from the point of view of society more entrepreneurship means less prosperity. However, the existence of externalities does not automatically make entrepreneurship unproductive. New software programs that simplify tax planning may increase tax avoidance, and result in more resources being spent by the government on auditing. But they may also reduce the time used by taxpayers on socially wasteful tax avoidance efforts.

In reality, the interaction between various dimensions of the institutional setup and the type and level of entrepreneurial activity is highly complex and therefore difficult to disentangle. A first step toward a better understanding of this complexity is to analyze the different motives for self-employment and whether and to what extent these motives are entrepreneurial.

IV. SELF-EMPLOYMENT VS. ENTREPRENEURSHIP

In the empirical literature on the determinants of self-employment a distinction is often made between *pull* and *push* factors.¹⁷ An individual can either be pulled into self-employment in order to pursue a lucrative business opportunity (rather than having a regular job, or perhaps not working at all) or s/he can be pushed into it because there is no better choice for making a living. Paul D. Reynolds et al. explicitly distinguish between “opportunity-based” and “necessity” entrepreneurship in their annual effort (*Global Entrepreneurship Monitor*, GEM) to measure the rate of entrepreneurial activity across countries.¹⁸

17. See, e.g., DAVID J. STOREY, UNDERSTANDING THE SMALL BUSINESS SECTOR (1994).

18. PAUL D. REYNOLDS ET AL., GLOBAL ENTREPRENEURSHIP MONITOR EXECUTIVE REPORT 2002 (2002).

It may be useful to distinguish between first-best and second-best solutions, as well as whether the self-employed are entrepreneurial or non-entrepreneurial. Another important distinction is whether the self-employed pursue productive or unproductive/predatory activities.¹⁹

In Table 1 these distinctions are used to identify different motives to start a business. The top row gives society's first-best alternatives. Here, an entrepreneurial business is started because it provides the best vehicle for pursuing a business opportunity. Other, strictly speaking, non-entrepreneurial motives are to give the owner the opportunity to pursue a certain life style, to earn her/his living independently or to facilitate the organization of certain projects best pursued as an independent firm but without being an entrepreneurial venture. A franchise could be owned by the manager in order to overcome or mitigate agency problems, without implying any entrepreneurship.

In the second-best case the entrepreneurial motives arise as a result of various obstacles barring the optimal outcome. Entrepreneurship here provides a means to circumvent obstacles that could emanate either from inappropriate institutions or from within the private sector. For instance, inferior management and business organizations may prevent an intrapreneur from introducing and reaping the rewards from his or her ideas. Legislation could ban the use of stock option incentives to encourage intrapreneurship or it could make it prohibitively expensive. A last example is how various forms of discrimination often hinder marginal groups from seeking regular employment, leaving self-employment as the remaining opportunity. Other incentives are also at work, for instance, becoming self-employed can be a way to escape restrictive employment regulation or pay schedules. This kind of entrepreneurship may be called evasive.²⁰ Evasive entrepreneurship may also consist of efforts to evade the legal system or to avoid the predatory activities of other agents. Tax evasion and bribes paid to regulators or inspectors used to evade onerous regulations are two examples. Hence, formally illegal evasive activities may in some systems be necessary in order to achieve productive entrepreneurship.²¹

19. Murphy, Shleifer & Vishny, *supra* note 9, at 506.

20. Christopher J. Coyne & Peter T. Leeson, *The Plight of Underdeveloped Countries*, 24 CATO J. 235 (2004).

21. See also Jolanda Hessels, André van Stel, Peter Brouwer & Sander Wennekers, *Social Security Arrangements and Early-Stage Entrepreneurial Activity*, 28 COMP. LAB. L. & POL'Y J.

Table 1
Reasons for Self-employment

	Entrepreneurial	Non-entrepreneurial
First-best	Pursue a business opportunity most suitably pursued in a new firm.	<ol style="list-style-type: none"> 1. Seeking independence, a certain life style, etc. 2. Local service production; working in networks in temporary projects.
Second-best	<ol style="list-style-type: none"> 1. Inferior management by current employer bars efficient intrapreneurship. 2. Mechanism to escape effect of discrimination or lack of social capital for marginal groups. 3. Necessity entrepreneurship. 	<ol style="list-style-type: none"> 1. Safety valve to circumvent excessive labor market regulations. 2. Means to achieve flexibility hindered by other regulations. 3. Mechanism to escape effect of discrimination or lack of social capital for marginal groups. 4. Necessity entrepreneurship.
Unproductive/ predatory	<ol style="list-style-type: none"> 1. Set up a business to exploit subsidies and tax breaks rather than create value for customers. 2. Fraudulence. 3. Looting, warfare, etc. 	<ol style="list-style-type: none"> 1. Transform consumption expenditure into tax deductible business costs. 2. Fraudulence, where revenue is partly unreported etc.

Note: The table lists the major motives for self-employment. There are also intermediate cases. Entrepreneurial self-employment may, for instance, be partly pursued in search of independence.

In the most unfavorable outcome, the incentives are such that entrepreneurs strive to exploit the business opportunities arising from the regulation itself. Entrepreneurial incentives to start a business may then be geared toward exploiting tax breaks and subsidies rather than creating value. Sidestepping or reducing the impact of taxes and other legislation are also the prime motives for non-entrepreneurial businesses under this kind of regime. In cases where the government does not manage to uphold a monopoly on violence and where the

743 (2007), who argue that institutions determine the distribution of business activity between the formal and informal sector of the economy.

rule of law does not prevail, entrepreneurship may also take on highly destructive forms such as looting and private warfare.

In a world where institutions were such that there were no opportunities for unproductive or predatory entrepreneurship and in a world of perfect contracts where productive entrepreneurship could always be pursued efficiently within existing firms, the only reason to be self-employed would be the personal quest for independence. Even independence could perhaps theoretically be provided through advanced contractual arrangements inside the organization. This state of affairs is of course far from reality. In fact, the long period during which large firms predominated while small firms were increasingly marginalized came to an end in the 1970s. Entrepreneurship and small firms experienced a global resurgence.²² Scholars have suggested several first-best reasons why this occurred.²³ However, in reality there exists no economic system where the institutional setup is entirely “appropriate” in the sense that there are no second-best reasons for self-employment and no opportunities for unproductive or predatory self-employment.²⁴

In sum, from a societal perspective the aggregate level of self-employment, measured as the rate of self-employment, is not necessarily a meaningful measure. In order to evaluate whether there is too much or too little self-employment one needs to decompose the aggregate carefully and make it contingent on the institutional setup. Based on this fact, some skepticism is warranted toward results from cross-country studies using the rate of self-employment as a measure of entrepreneurial activity.²⁵

V. ENTREPRENEURSHIP AS THE CREATION OR DISCOVERY OF RENTS

In Section II it was pointed out that entrepreneurship entails the discovery or creation of new economic opportunities. Several distinct

22. Gary Loveman & Walter Sengenberger, *The Reemergence of Small-Scale Production: An International Comparison*, 31 SM. BUS. ECON. 1 (1991).

23. See generally ARE SMALL FIRMS IMPORTANT? THEIR ROLE AND IMPACT (Zoltan J. Acs ed., 1999).

24. ALEXANDER GERSCHENKRON, ECONOMIC BACKWARDNESS IN HISTORICAL PERSPECTIVE 40 (1962).

25. Three recent examples are Martin A. Carree et al., *Economic Development and Business Ownership: An Analysis Using Data of 23 OECD Countries in the Period 1976–1996*, 19 SM. BUS. ECON. 271 (2002), André van Stel, Martin A. Carree & A. Roy Thurik, *The Effect of Entrepreneurial Activity on National Economic Growth*, 24 SM. BUS. ECON. 311 (2005), and David G. Blanchflower, *Self-employment in OECD Countries*, 7 LAB. ECON. 471 (2000), who instead use the GEM measure of total entrepreneurial activity to explain cross-country differentials. However, the same criticism largely applies to this measure as well.

types of entrepreneurship were also identified: productive, unproductive, evasive, and predatory/destructive. The types of entrepreneurship are defined based on the social value of the expended entrepreneurial effort. However, when seen from the perspective of the self-serving entrepreneur, entry is based on which type of entrepreneurship that is expected to have the largest private return.²⁶ A venture that is highly profitable for the individual entrepreneur may give rise to large social losses.

One fruitful way to analyze entrepreneurship is to posit that entrepreneurs are searching for rates of return exceeding the risk-adjusted market rate of return, i.e., they try to create or discover economic rents. In other words, entrepreneurship may be seen as *rent seeking*.²⁷ The entrepreneurial rent arises when entrepreneurship is combined with the use of other inputs such as capital and labor. Yet, neither in the conventional financial accounts at the firm level nor in the national accounts is there an item entitled entrepreneurial income. In the case where the entrepreneur is also the business owner successful entrepreneurship will instead show up as high rates of return on equity and/or as high labor income earned by the entrepreneur. Given asymmetric information and moral hazard, the risk-adjusted rate of return demanded by external investors may of course be extremely high in some cases, often so high that the entrepreneur cannot become a qualified entrepreneur unless s/he can finance the venture out of her/his own wealth. Likewise entrepreneurs may face a high cost of labor, including being forced to concede stock options, if potential workers perceive that the venture is highly uncertain and demands firm-specific human capital investments from them. If an entrepreneurial venture turns out to be successful, the risk premium demanded by outside financiers (at some point debt financing also becomes available) and potential workers will decline and the rate of return required for obtaining a positive entrepreneurial rent also declines.

26. This maximizing behavior does necessarily imply narrow selfishness. The entrepreneur could care about the welfare of kin and friends, or even about the welfare of the general public. It suffices that the business decisions are decoupled from such considerations. The entrepreneur maximizes profits selfishly, but no constraint is put on the use of the profits. They may or may not be spent with altruistic considerations.

27. It should be noted that the term is not used in the constrained way usually applied in public choice to "describe behavior in institutional settings where individual efforts to maximize value generate social waste rather than social surplus." James M. Buchanan, *Rent Seeking and Profit Seeking*, in *TOWARD A THEORY OF THE RENT-SEEKING SOCIETY* 4 (James M. Buchanan & Roger Tollison eds., 1980). In that tradition, rent-seeking is an activity that, by definition, generates social loss. That can be seen as a specific subset in our general framework.

It is useful to distinguish between two types of entrepreneurial rents, namely Ricardian and Marshallian rents.²⁸ David Ricardo defined rents as return to a factor of production exceeding the level necessary to ascertain its supply. Scarce land and unique pieces of art are typical examples. Entrepreneurs may create Ricardian rents in several ways, perhaps most obviously through the patenting of valuable innovations and copyright. They can also protect all or some of their innovations themselves through rent protecting techniques, in general acquiring some resource that potential competitors cannot easily obtain. One example is the implementation of tacit knowledge in organizations that is hard to imitate. Still, most rents do not last forever, in particular if they rest on a fixed supply of a factor that is man-made. First, patents and copyrights are only granted for a fixed time period. Second, in the long term competing firms will normally come up with substitutes to the product yielding a Ricardian rent, sometimes by producing a completely different product that fills the same basic need or by developing a new mode of production. These effects tend to erode the rent in the longer term, since the scarce resource is only fixed or highly constrained for some time. Such temporary rents are usually called Marshallian or quasi rents. See Table 2.

28. See also Peter Lewin & Steven E. Phelan, *Rents and Resources: A Market Process Perspective*, in *ENTREPRENEURSHIP AND THE FIRM* 221 (Nicolai J. Foss & Peter G. Klein eds., 2002); Sharon A. Alvarez, *Theories of Entrepreneurship: Alternative Assumptions and the Study of Entrepreneurial Action*, 1 *FOUND. & TRENDS IN ENTREPRENEURSHIP* 105 (2005) (discussing entrepreneurial rents).

Table 2
Types of Entrepreneurial Rents

	Arises as a result of
Ricardian rent	an entrepreneurial discovery or creation that requires a resource where the supply is fixed (unique competence, organizational advantage that cannot be imitated, patent, copyright, locational advantage, etc.).
Marshallian rent (quasi rent)	an entrepreneurial discovery or creation that requires a resource where the supply is fixed or highly constrained for some significant period of time (organizational superiority, patent protection of limited duration, creation of a strong brand name, etc.).

The difference is one of degree, depending on how fast the rents are eroded. The duration of rents varies substantially. Rents that exhibit the fastest decay pertain to activities that are easy to imitate and where the knowledge or skill is not embodied in a specific individual or organization. In such cases, the knowledge is easily transmitted at low cost and is expected to rapidly disseminate through the economy. Normally, imitating competitors enter the market, which increases the supply and lowers the price. According to calculations by William D. Nordhaus, entrepreneurs retain on average a mere two percent of the total societal surplus generated by their activities.²⁹

However, each firm is at the same time a unique combination of resources and technologies. A particular combination of human capital and entrepreneurial talent can in some cases result in a company where productive entrepreneurship is greatly facilitated. Such firms cannot at any reasonable cost be replicated, and the rents generated thus seem to be Ricardian.

29. William D. Nordhaus, *Schumpeterian Profits in the American Economy: Theory and Measurement* 26 (Yale Univ. Cowles Found. For Research in Econ., Discussion Paper 1457, 2004), available at <http://ssrn.com/abstract=53742>.

The Ricardian and Marshallian rents are generated when resources and technology are put to use in a way that cannot (at least in the short run) be replicated by other agents. But what if replication cannot occur because of government entry regulations? In other words, what about a monopoly situation? Such rents seem, *prima facie*, to be different from the ones discussed as Ricardian and Marshallian rents; they are dependent on some formal privileges, awarded only to a subset of all entrepreneurs. This is, however, an artifact of not taking institutions into account when discussing entrepreneurship. The easiest way to see this is to consider the case of patent protection of an innovation. Obviously, the expected rent from an innovation depends on the duration of the patent protection. The flip side of patent protection is a barrier to entry for other entrepreneurs. The cost for the latter is especially high if certain firms are better at innovation and others at cost reduction and marketing. Intellectual property rights tend to involve a tradeoff between the two costs.

Hence, entrepreneurs are characterized as rent seekers, i.e., individual agents with particular talents for the pursuit of economic rents. Rents can be obtained in many ways, such as by introducing an innovation, attaining a monopoly position through a government license, earning arbitrage profits and bribing an official to keep competitors out.

Entrepreneurial rents should not be considered as excess return that can be taxed away with no behavioral effects. Instead, it is the ubiquitous quest among entrepreneurs to create and/or discover entrepreneurial rents that gives rise to the continuous structural change and dynamism that is necessary for economic development.³⁰ If the supply of entrepreneurial effort is elastic with respect to the rents it could be argued that the entrepreneurial rents are conceptually not much different from the rent of workers (wage income) and the rent earned by savers (interest rate).

Treating the entrepreneur as a rent seeker introduces a change in perspective, where the entrepreneur is analyzed at the individual level. As such, entrepreneurs are responsive to incentives embedded in their environment.

30. RICARDO CABALLERO, SPECIFICITY AND THE MACROECONOMICS OF RESTRUCTURING (2007).

VI. EXPLORING THE EFFECTS OF INSTITUTIONS ON ENTREPRENEURSHIP

I will now briefly explore the effects of four pertinent institutions in order to illustrate at some length why entrepreneurship can only be meaningfully analyzed and understood given the institutional context.³¹

A. *Protection of Property Rights*

Based on broad historical studies such as Nathan Rosenberg and Luther Birdzell and Douglass C. North³² and more recent econometric studies such as Rodrik et al. and Daron Acemoglu and Simon Johnson,³³ it is now widely recognized that protection of private property rights is of fundamental importance for economic growth. With secure exclusive private property rights that can be used in voluntary exchanges based on contracts, productive entrepreneurship is likely to thrive. This follows because successful entrepreneurs know that they will retain the entrepreneurial rents they earn and because specialization and the division of labor is greatly facilitated, which broadens the range of potential entrepreneurial discoveries.

But weaker property rights will spur other types of entrepreneurship including the production of (increasingly diverse and sophisticated) private security services. The weaker the property rights, the more predatory the entrepreneurial activities are likely to be. This is obvious from a simple comparison of contemporary Zimbabwe and Russia with countries like the United States or Finland. On the other hand, today's China shows that self-employment and entrepreneurship (some of which is evasive and unproductive) provides an important avenue for overcoming the impediments caused by weak property rights protection. Thus, all

31. There are a number of additional institutions that are likely to be important determinants of the incentives for entrepreneurship, e.g., the regulation of product markets, start-up costs, the regulatory burden on firms, the social security system, and cultural values vis-à-vis entrepreneurship and self-employment. See, e.g., Parker, *supra* note 5; André van Stel, David Storey & A. Roy Thurik, *The Effect of Business Regulations on Nascent and Young Business Entrepreneurship*, 28 SM. BUS. ECON. 171 (2007); Kanninen & Poutvaara, *supra* note 5; Jolanda Hessels et al., *Social Security Arrangements and Early-stage Entrepreneurial Activity: An Empirical Analysis* (SCALES, Working Paper No. 200518, 2006), available at <http://www.ondernemerschap.nl/pdf-ez/N200518.pdf>.

32. See, e.g., NATHAN ROSENBERG & LUTHER E. BIRDZELL, *HOW THE WEST GREW RICH: THE ECONOMIC TRANSFORMATION OF THE INDUSTRIAL WORLD* (1986); DOUGLASS C. NORTH, *STRUCTURE AND CHANGE IN ECONOMIC HISTORY* (1981).

33. See, e.g., Rodrik, Subramanian & Trebbi, *supra* note 15, at 157; Daron Acemoglu & Simon Johnson, *Unbundling Institutions*, 113 J. POL. ECON. 947 (2005).

forms of entrepreneurship are likely to co-exist when private property rights are insecure; although it is clear that below some threshold level property rights protection is so low that anarchy ensues (Sierra Leone and Zimbabwe are two recent examples).

This point is well illustrated in Christopher J. Coyne and Peter T. Leeson's study of entrepreneurship in Romania.³⁴ They conclude that:

There are two ways to interpret the situation in Romania. The standard interpretation, reflected in reports by development agencies, is that there are high barriers to entrepreneurs and, hence, a shortage of entrepreneurship. Another interpretation is that entrepreneurship in Romania is flourishing. The key is the distinction we made between productive, unproductive and evasive entrepreneurship. Productive entrepreneurship is currently stagnant in Romania. Unproductive and evasive entrepreneurship, on the other hand, are alive and well.³⁵

Still, there may also be counteracting effects; if intellectual property rights protection is overly strong, innovativeness may be stifled by large incumbent firms that spend large resources on defensive patenting and purchases of patents from small innovators in order to reduce competition. Similarly, firms may file patents for ideas, business models, software strings, etc., that are obvious and have been around for quite some time without somebody having tried to patent them before.³⁶ As documented by Adam B. Jaffee and Josh Lerner,³⁷ changes in the procedure for the granting of patents in the early 1990s has resulted in a deluge of patents and patent suits. Carol Shapiro describes the United States' intellectual property landscape as a "patent thicket."³⁸ Even an inventor with a truly novel idea has to face a great risk of running up against related patents whose holders may sue for infringement. This overburdened system of excessive protection of property rights functions as a tax on innovation, in that both the risk and expected expense associated with innovative activity rises sharply. For obvious reasons it also benefits large incumbent firms with financial strength and a great deal of legal expertise relative to small start-ups.

34. Coyne & Leeson, *supra* note 20.

35. *Id.* at 243.

36. Wesley M. Cohen, *Patents and Appropriation: Concerns and Evidence*, 30 J. TECH. TRANSFER 57, 58-63 (2005).

37. ADAM B. JAFFEE & JOSH LERNER, *INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT?* (2004).

38. Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, in 1 *INNOVATION POLICY AND THE ECONOMY* (Adam B. Jaffee, Josh Lerner & Scott Stern eds., 2001).

We conclude this subsection by noting that secure property rights in the basic sense is likely to spur productive entrepreneurship. On the other hand, it is in fact likely to *reduce* entrepreneurship as usually measured, since the need for evasive entrepreneurship to offset weak property rights is likely to decrease. The same is true for unproductive and predatory entrepreneurship, since the opportunities for entrepreneurship aiming at the redistribution of income and wealth proliferate when property rights are weakly protected or largely undefined. Finally, in recent years the protection of intellectual property has been strengthened in ways that raise both the cost and risk associated with innovative activity. This excessive protection of property rights is likely to impede productive entrepreneurship, but it also spurs evasive and unproductive entrepreneurship to circumvent and to exploit the excessive protection of intellectual property.

B. Savings and Wealth Formation

There are numerous research results suggesting that strong incentives for saving and individual wealth accumulation are likely to raise the propensity to entrepreneurship. The availability of equity financing is a critical factor for both startups and the expansion of existing firms. In general, the riskier the business, the greater is the reliance on equity relative to debt financing. The smaller and newer the firm, the more difficult for outside financiers to assess the viability and profitability of the venture proposed. Thus, *ceteris paribus*, small and newly established firms are more dependent on equity financing than large, well-established firms. Low private savings also exacerbate the inherent problem caused by asymmetric information, since wealth-constrained would-be entrepreneurs are unable to signal forcibly to outside investors by means of making sizeable equity infusions of their own, or, if needed, fully finance the firm until the stage where organic growth based on retained earnings is possible.

There is also substantial scientific evidence supporting the idea that the individual wealth position has important effects on the probability of becoming an entrepreneur and on the propensity to expand. This is perhaps the most well-established finding in the small business economics literature.³⁹

39. For an overview of this topic, see SIMON C. PARKER, *THE ECONOMICS OF SELF-EMPLOYMENT AND ENTREPRENEURSHIP* (2004).

At the aggregate level it is easy to find supportive *prima facie* evidence of this contention. Entrepreneurial activity as conventionally measured tends to be low in the mature welfare states in northern Europe. Welfare state provisions remove a number of savings motives for the individual. As long as unemployment insurance, income-dependent pensions and sick-leave benefits, higher education and highly subsidized health and care services are provided by the government, most of the essential savings motives for the average person disappear.

But the verdict is not that clear cut. The United States, which is generally considered highly entrepreneurial, has a low savings rate. Moreover, Alwyn Young documents that for a long time savings rates were about double in Singapore compared to Hong Kong, but the latter economy was considered to be the more entrepreneurial of the two, while the GDP growth rates were similar.⁴⁰ In contemporary China personal savings are extremely high (in excess of 30% of disposable income) without spurring entrepreneurship and business formation commensurately. This partly results from a lack of an insurance system that can substitute for the traditional family during a phase of rapid industrialization and sharply reduced fertility,⁴¹ but also the lack of secure property rights, the absence of land titles, and poorly developed financial markets that can channel funds from savers to entrepreneurs.

In an economy with a well-developed financial sector there is a whole spectrum available ranging from highly liquid savings that are readily available to long-term institutionalized pension saving schemes that put severe restrictions on the owner's control of the assets. In many countries the bulk of personal savings is in the form of long-term pension savings, often tied to employment. In addition, pension savings is often tax favored. Peter Drucker warned against these tendencies more than thirty years ago, when he claimed that the trend toward sharply increased saving in the form of corporate pension plans was a dire threat to the entrepreneurial society when it concentrated too much power in too few hands.⁴²

40. Alwyn Young, *A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore*, in NBER MACROECONOMICS ANNUAL 13, 14–17 (Olivier J. Blanchard & Stanley Fischer eds., 1992).

41. Assar Lindbeck, *Economic-Social Interaction during China's Transition* 15–17 (Research Inst. of Indus. Econ., IFN Working Paper No. 680, 2006), available at <http://www.ifn.se/Wfiles/wp/wp680.pdf>.

42. PETER F. DRUCKER, *THE UNSEEN REVOLUTION: HOW PENSION FUND SOCIALISM CAME TO AMERICA* (1976).

Hence, the composition, and not just the volume, of saving is of importance for entrepreneurship. For this reason, any social arrangement that channels savings and asset control to large institutional investors is likely to limit the supply of financial capital to potential entrepreneurs.

C. Taxation

In principle, taxation is an infringement on private property rights since it implies that the government has a stake in an individual's income or assets. The effect of taxation on entrepreneurship has been much discussed in economics. Following Evsey D. Domar and Richard A. Musgrave,⁴³ high income taxes have been claimed to encourage self-employment both because the self-employed can more easily avoid reporting some of their income and they may be able to shift from labor income taxed at a high marginal rate to corporate income taxed at a lower rate.⁴⁴

However, these mechanisms are too simplistic to assess the effect of taxation on entrepreneurship. To begin with, income from entrepreneurial activities is not a separate income category in the tax code. Hence, from a tax perspective entrepreneurial income can show up in many different forms: labor income, dividends, capital gains, capital gains on stock options, interest income on lending by the entrepreneur to her/his own business, and so on.

Given the complexity of the tax code in a typical OECD country it is obvious that the incentive effects of the tax code on entrepreneurial behavior are also highly complex. Some features are likely to be of particular relevance.

Merwyn A. King and Don Fullerton document that by the 1970s effective tax rates on business income came to differ tremendously by source of finance and ownership category in rich countries.⁴⁵ Debt was the most tax-favored form of financing, and new equity issues were the most penalized. In general, business ownership positions held directly by individuals and families were taxed much more heavily than other ownership categories. The wave of tax reforms

43. Evsey D. Domar & Richard A. Musgrave, *Proportional Income Taxation and Risk-Taking*, 58 Q.J. ECON. 388 (1944).

44. Martin S. Feldstein & Joel Slemrod, *Personal Taxation, Portfolio Choice, and the Effect of the Corporation Income Tax*, 88 J. POL. ECON. 854 (1980).

45. MERVYN A. KING & DON FULLERTON, *THE TAXATION OF INCOME FROM CAPITAL: A COMPARATIVE STUDY OF THE UNITED STATES, THE UNITED KINGDOM, SWEDEN AND WEST GERMANY* (1984).

that swept the OECD in the 1980s evened out many of these differences.⁴⁶

These differences in effective tax rates have potentially powerful effects on the organization of business activity and the industry mix of productive activity, and therefore also on the incentives for entrepreneurship. To the extent that debt financing is less costly and more readily available for larger and firmly established firms, high statutory tax rates coupled with tax-deductible interest payments work to the disadvantage of smaller firms and potential entrepreneurs. Debt financing is also more easily available to firms with ready forms of collateral. Hence, firms and sectors that intensively utilize physical capital reap greater benefits from tax code provisions that favor debt financing. This aspect of the tax system favors capital-intensive industries and modes of production relative to labor and knowledge intensive ones, which is likely to work to the detriment of entrepreneurial, often equity-constrained, firms.

Many economic activities that are highly substitutable between market provision and home production (e.g., cooking, cleaning, laundering, landscaping, home repairs) offer greater than average scope for self-employment, employment in small firms, startups, and family-owned businesses. Hence, the effective tax rates on labor income and business income accruing directly to households provides yet another channel determining to what extent these activities are open for entrepreneurial exploitation.

To a large extent the return on entrepreneurial effort is taxed as wage income. First, the tax code may restrict the extent to which income accruing from closely held companies may be taxed as capital income. Second, a great deal of the entrepreneurial function is carried out by employees without an ownership stake in the firm, and for them the labor tax schedule is always applicable.

A further mechanism to encourage and reward entrepreneurial behavior among employees is stock options. The efficiency of stock options is highly dependent on the tax code. If the gains on stock options are taxed as wage income when the stock options are tied to employment in the firm this mechanism will lose much of its incentive effects. The situation would be very different if an employee who accepts stock options could defer the tax liability to the time when the stocks were eventually sold. This effect would be further reinforced if

46. Dale W. Jorgenson, *Introduction and Summary*, in *TAX REFORM AND THE COST OF CAPITAL: AN INTERNATIONAL COMPARISON* 1, 5–6 (Dale W. Jorgenson & Robert Landau eds., 1993).

there are no tax consequences to the employee upon the grant or the exercise of the option and if the employee is taxed at a low capital gains rate when the stock acquired from the exercise of the option is sold. In the latter case the tax risk of the options is pushed back to the government. This accomplishes two things: it increases the potential profit from the stock options and it allows budget-constrained individuals to sell stocks whenever they chose to do so. The United States changed the tax code in the early 1980s along the latter lines, which paved the way for a wave of entrepreneurial ventures in Silicon Valley and elsewhere.⁴⁷

Venture capital firms can also play a crucial role in the development of a small entrepreneurial venture by converting high-risk opportunities to a more acceptable risk level through portfolio diversification, and adding key competencies that the firm may be lacking. This is achieved by means of developing arrangements that align the incentives of the three agents—investors, venture capitalists, and entrepreneurial start-ups.⁴⁸ The extent to which this is possible is also largely governed by the tax code for stock options, capital gains, and whether pension funds are allowed to invest in high risk securities issued by small or new companies and venture capital funds.

A further effect may be that certain actors such as private equity firms can act from offshore tax havens putting them at an advantage relative to individual entrepreneurs. If this effect is present it is increasing with respect to the effective tax rates levied on entrepreneurs legally domiciled onshore.

To sum up, high taxes may spur self-employment but reduce productive entrepreneurship.⁴⁹ On the other hand, a high aggregate tax rate is normally associated with a generous welfare system, which reduces the push into self-employment. Moreover, high tax rates encourage entrepreneurship in the black market and evasive entrepreneurship such as the production of legal services helping productive entrepreneurs to lower their effective tax rate. But most importantly high effective tax rates tend to benefit large incumbent, capital intensive firms that can have high debt equity ratios and be

47. Norman Misher, *Tax Consequences of Exercising An Incentive Stock Option with Stock of the Granting Corporation*, 36 TAX EXECUTIVE 357 (1984).

48. Bob Zider, *How Venture Capital Works*, HARV. BUS. REV., Nov.–Dec. 1998, at 131, 134–135; PAUL A. GOMPERS & JOSH LERNER, *THE MONEY OF INVENTION: HOW VENTURE CAPITAL CREATES NEW WEALTH* (2001).

49. Empirically, it has been difficult to establish a negative relation between tax levels and the rate of self-employment. See Herbert J. Schuetze & Donald Bruce, *Tax Policy and Entrepreneurship*, 11 SWEDISH ECON. POL. REV. 233 (2004) (concluding that the evidence is inconclusive).

owned by institutions, in particular if they are domiciled in tax havens. All in all there is reason to believe that high taxes stifle productive entrepreneurship, although this effect can be mitigated if the taxation of capital gains and stock options is low.

D. Labor Market Regulations

The degree of regulation of labor markets and wage-setting can be expected to influence incentives for entrepreneurship, since it restricts the freedom of contracting and therefore curtails the possible combinations of factors of production. There are also large cross-country differences in the extent of labor market regulation. A 1994 OECD study compares the extent of government regulations on labor standards by measuring five different aspects: working time, fixed-term contracts, employment protection, minimum wages, and employee representation rights. In each of these aspects, a country is ranked on a scale of 0, 1, and 2, where a 2 represents the highest degree of regulation. Adding the five aspects together produces an index ranging in value from 0 to 10. Of the 18 countries included in the survey, Greece and Sweden exhibited the highest index value (8 and 7 points, respectively).⁵⁰ The average for all European countries was 4.9. The United States scored a zero and Canada 2.

There are reasons to believe that strict employment security provisions and other regulations that restrict contracting flexibility are more harmful for smaller and/or more entrepreneurial employers. One reason involves the gains from efficiently matching heterogeneous workers to a variety of tasks and positions. As an employer learns about a worker's abilities over time, or as those abilities evolve with the accumulation of experience, the optimal assignment of the worker to various tasks is likely to change. The scope for task reassignment within the firm can be expected to rise with firm size. In an unfettered labor market, optimal task reassignment often involves mobility between firms, and such mobility is more likely when the initial employment relationship involves a small business. Moreover, both the rate at which workers separate from jobs and the rate at which employers destroy job positions decline with the size, age, and capital intensity of the employer.⁵¹

50. ORG. FOR ECON. COOPERATION & DEV., OECD EMP. OUTLOOK, at tbl. 4.8 (1994), available at <http://www.oecd.org/dataoecd/4/8/2409984.pdf>.

51. Charles Brown & James Medoff, *The Employer Size Wage Effect*, 97 J. POL. ECON. 1027, 1041-44 (1989); Steven J. Davis & John Haltiwanger, *Gross Job Flows*, in 3 HANDBOOK OF LABOR ECONOMICS 2711 (Orley Ashenfelter & David Card eds., 1999).

Ricardo Caballero also shows that the gross flow of workers is higher in firms with high productivity growth.⁵² These patterns in worker separation and job destruction rates suggest that any costs imposed by labor security regulation are likely to fall more heavily on younger, smaller, and less capital-intensive employers. To the extent that entrepreneurial firms are overrepresented in these categories, labor security regulation disproportionately burdens entrepreneurial firms.

Finally, a strictly applied "last in – first out" principle in case of redundancies implies that tenure at the current employer becomes relatively more important for labor security than individual skill and productivity. This fact increases an employee's opportunity cost of changing employers or of leaving a secure salaried job to become self-employed.

Another labor market arrangement that may impact the incentives for entrepreneurship is wage-setting institutions. Institutional pressures for wage compression are likely to disadvantage smaller and more entrepreneurial businesses. Wages are consistently higher at larger employers, even after exhaustive efforts to control for observable worker characteristics and other job attributes.⁵³

If regular employment is highly regulated there may be strong incentives to devise arrangements that circumvent the regulations. In several European countries new forms of flexibility have emerged, which has created more job opportunities than otherwise.⁵⁴ The most important of these arrangements are increased self-employment, the emergence of an underground economy where the government refrains from enforcing regulations, and growth of temporary employment. It is likely that part of the increase in self-employment in recent years is driven by such considerations.

To sum up, there is quite a bit of evidence pointing toward differential effects of labor market regulations and non-decentralized wage-setting arrangements. Small and entrepreneurial firms appear to be disadvantaged. However, rigid regulation may in itself spur various entrepreneurial responses to offset and circumvent the rigidities. Self-employment is one important way, since compensation and working hours are totally unregulated and no labor security is

52. CABALLERO, *supra* note 29.

53. See Walter Oi & Todd L. Idson, *Firm Size and Wages*, in 3 HANDBOOK OF LABOR ECONOMICS (Orley Ashenfelter & David Card eds., 1999), for a review the evidence in this regard.

54. Francine D. Blau & Lawrence M. Kahn, *Institutions in the Labor Market*, in 3 HANDBOOK OF LABOR ECONOMICS 1399 (Orley Ashenfelter & David Card eds., 1999).

mandated. Very small firms may also be able to avoid unionization and the signing of collective agreements, and therefore benefit from greater freedom of contract. On the other hand, this room of maneuver is likely to be lost once the firm size exceeds a certain threshold. These opposing effects are also consistent with the findings of Robson⁵⁵ and Torrini,⁵⁶ neither of whom find any relationship between the rate of self-employment and the degree of regulation of labor markets in rich countries.

The differential effect of labor market regulations may go a long way toward explaining why the rate of self-employment is fairly low in the United States, while it is very high in Italy. One may hypothesize that in the United States the really good entrepreneurial firms become fast-growing gazelles, while the heavy regulations (and high tax rates on labor) make it difficult and risky to build large firms in Italy.⁵⁷ Instead the firms tend to remain small and resort to a strategy of cooperation with other small firms in clusters.⁵⁸ A comparison of Sweden and Denmark provides another illustration of this general point. The Danish so-called flexicurity model, where hiring and firing can be done at low cost, differs greatly from the Swedish model, where workers can only be dismissed in case of redundancies⁵⁹ and number of years of tenure at the present employer determines the order of dismissal.⁶⁰ Although large firms are more predominant in Sweden than in Denmark, the Swedish self-employment rate is nevertheless higher.

VII. CONCLUSIONS

In this paper entrepreneurs have been characterized as rent seekers.⁶¹ Rent seeking entails an attempt to reap rewards in excess of the level determined in competitive equilibrium. There are numerous

55. Martin T. Robson, *Does Stricter Employment Protection Legislation Promote Self-employment?*, 21 SM. BUS. ECON. 309, 310 (2003).

56. Riccardo Torrini, *Cross-country Differences in Self-employment Rates: The Role of Institutions*, 12 LAB. ECON. 661, 662–623 (2005).

57. David L. Birch & James Medoff, *Gazelles*, in LABOR MARKETS, EMPLOYMENT POLICY AND JOB CREATION (Lewis C. Solmon & Alec R. Levenson eds., 1994).

58. Mark H. Lazerson & Gianni Lorenzoni, *The Firms That Feed Industrial Districts: A Return to the Italian Source*, 8 INDUS. & CORP. CHANGE 235, 236–37 (1999).

59. Excepting gross misconduct, which is very hard to prove for the employer.

60. Torben M. Andersen, *The Scandinavian Model—Prospects and Challenges*, 14 INT'L TAX & PUB. FIN. (forthcoming 2007).

61. For a full-fledged analysis where the rent seeking entrepreneur is integrated into a growth system, Robin Douhan & Magnus Henrekson, *The Political Economy of Entrepreneurship: An Introduction* 4–6 (Research Inst. of Indus. Econ., Working Paper No. 688, 2007), available at <http://www.riie.se/Wfiles/wp/wp688.pdf>.

means by which rents can be obtained, e.g., introducing a new innovation in the form of a superior product or a more cost-effective mode of production, attaining a monopoly position by virtue of being granted a government license, arbitrage profits, bribing an official to keep competitors out, and, in extreme cases, even looting and private warfare.

Although productive entrepreneurship is a key factor in any prosperous and dynamic economy, it is still true that entrepreneurship is not inherently socially productive. This is easy to understand if we consider that although the human species has harbored a potential for productive entrepreneurship for tens of thousands of years there are no clear signs of an entrepreneurially driven growth process until a few hundred years ago. The requisite institutions were not in place. Gradually this changed when financially weak rulers were forced to concede more and more property rights to other groups. As shown by William J. Baumol it gradually became apparent that more economic freedom spurred economic growth, something that gave liberal kingdoms an upper hand.⁶² Thus, entrepreneurs' positive and productive response to institutional change created a shift in power, which further reinforced the move toward protection of private property.

This account entails a strong claim that the rules of the game, or the institutions, largely determine how and where entrepreneurial talent and effort is channeled and the extent to which it is supplied. In my view, the larger lesson from these observations is that entrepreneurship cannot be studied without taking institutions into account. Entrepreneurs are always responsive to the incentives embedded in the environment in which they act, and they may even expend entrepreneurial effort to try to change the institutions.⁶³

The effect of institutions on entrepreneurship was explored by looking more closely into four key institutions in this respect, namely the protection of private property rights, savings policies, taxation, and the regulation of labor markets. The two most important conclusions from this analysis are that (i) institutions have far-reaching effects, and (ii) to identify these effects on productive entrepreneurship, the respective institutions have to be studied in depth. The Devil is in the details!

62. WILLIAM J. BAUMOL, *THE FREE-MARKET INNOVATION MACHINE* (2002).

63. David Daokui Li, Junxin Feng & Hongping Jiang, *Institutional Entrepreneurs*, 96 AM. ECON. REV. 358 (2006).

The institutional analysis also makes clear that it is problematic to use the rate of self-employment as a proxy for productive entrepreneurship. There are numerous reasons for becoming self-employed, and in many cases it is a second-best response to unfavorable institutions. This observation alone justifies a sound skepticism of many of the cross-country studies trying to explain the variation in entrepreneurial activity using self-employment as a proxy measure.

Hence, entrepreneurship is an elusive concept; it is both analytically intractable and hard to measure. So where does this leave us? Should we despair and give up on trying to show that entrepreneurship is an essential function in a dynamic economy? Not at all, but we should heed the fact that the data used in our analyses were generated in a particular institutional environment.

Still, an exhaustive characterization of the institutional setup is not feasible, but the crucial elements can and should be identified. Here, entrepreneurship research has a great deal to learn from labor economics, where considerable knowledge has been gained from the study of quasi experiments, often using instrumental variable techniques.⁶⁴ There are many possible instances that could be utilized. Let me just mention two: (i) the different strategies by universities vis-à-vis the involvement of their faculty in the commercialization of research;⁶⁵ (ii) the lessening of the employee protection legislation in Sweden in 2001 for firms with fewer than ten employees.⁶⁶

In short, the main message of this article is that analyses of entrepreneurship should be conducted through the lens of the institutional setup. Few, if any, societies have managed to completely quell the individual's innovativeness and pursuit of personal gains. However, there are large differences as to whether and to what extent they have managed to gain rather than lose from these human traits. Although we may be fairly confident that these differences have a great deal to do with institutional differences, we still know little at a more detailed level how these effects are borne out, and how entrepreneurs would react to specific institutional changes, let alone

64. See, e.g., Joshua D. Angrist & Alan B. Krueger, *Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments*, 15 J. ECON. PERSP. 69 (2001).

65. Donald S. Siegel, David Waldman & Albert N. Link, *Assessing the Impact of Organizational Practices on the Relative Productivity of University Technology Transfer Offices: An Exploratory Study*, 32 RES. POL. 27 (2003).

66. Assar Lindbeck, Mårten Palme & Mats Persson, *Job Security and Work Absence: Evidence from a Natural Experiment*, (CESifo, Working Paper No. 1687, 2006), available at <http://ssrn.com/abstract=894210>.

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when and how entrepreneurial effort is expended to induce institutional change. There is no lack of important questions for future research in this area.