

Building Blocks for an Evolutionary Theory of the Firm: Review & Analysis (*)

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Casual observation reveals that many firms constantly and deliberately evolve through the relentless pursuit of competitive advantage. By and large though, efforts to model – conceptually or otherwise – such evolving profit seeking entities have not been made. My objective in this paper is to attempt to offer a conceptual description of the evolutionary (entrepreneurial) theory of the firm. The concepts that emerge as key concepts from the analysis are: creative destruction, competitive advantage, entrepreneurial styles and entrepreneurial habitat. The most important messages are: (1) the evolutionary firm – in its various styles – is a ‘creative destruction’ or ‘mutation inducing’ entity which evolves not only á la Darwin, as a reactor to change, but also á la Schumpeter, as a creator of change; (2) The evolving business firm creates new knowledge through the relentless pursuit of ‘cost’ and ‘differentiation’ advantage which leads to greater consumer and producer surplus relative to its competitors; (3) given a healthy habitat, entrepreneurial capitalism, through its links to improved factors of production and comparative advantage, can greatly contribute to an economy’s growth.

Although three theories of the firm, the neoclassical, the transaction costs and the principle-agent appear to explain rather well some of the principles that guide business firms, none of these theories attempt to explain *why some firms constantly and deliberately evolve through the relentless pursuit of competitive advantage.*

According to the neoclassical theory, the firm is a black box, profit maximizing, entity described by imaginary but plausible functions; these functions satisfy basic principles such as the law of diminishing or increasing returns; their plausibility may be checked through, primarily, experiments involving humans and animals. Examples of such functions are the demand for a firm’s product/service function and the production functions. The theory has fashioned the principle of firm optimization. According to this principle, profit is maximized (or loss is minimized) when marginal revenue equals marginal cost or $MR=MC$. Production and demand functions, both given, enter the black box and what comes out is output/service which in turn gives rise to profit. This is

the only theory that makes no attempt, whatsoever, to explain what happens in the box.

The transaction cost theory asks “Why do firms exist?” and the answer it provides serves as an explanation of what takes place inside the black box. The answer is that the firm is preoccupied with the decision to minimize transaction costs. Thus, according to the theory, the firm is a transaction costs minimizer, or a ‘make input’ or ‘buy input’ decision maker. Business firms that minimize transaction costs are welcomed by society because they free up limited resources for alternative use. The production function emerges from the ‘make’ or ‘buy’ decisions of the firm; the demand function is a given function in this theory as well and together with the production function, it gives rise to output/service and in turn profit.

The principle-agent theory of the firm views the firm as a nexus of contracts between it and its stakeholders; it asserts that inside the black box, the firm is primarily preoccupied with the decision to construct ‘smart’ contracts or incentive structures. More specifically,

according to the theory, the firm is an engineer of incentives utilized in contracts with stakeholders. The firm's production and demand functions are drawn from 'smart' contracts (incentive structures) with stakeholders which in turn create output and profit.

None of these theories deal with the evolving firm, the firm that relies on entrepreneurial activity and habitat in which such firms may flourish. My purpose in this paper is to make an attempt at identifying the key concepts that may be used as building blocks for developing an evolutionary (or entrepreneurial) theory of the firm. In brief, I will try to establish that the firm is a 'creative destruction' or 'mutation inducing' entity which evolves not only as a reactor to change (à la Darwin) but also as a creator of change (à la Schumpeter). I will argue that the *black box* of the firm is a research and development laboratory with the mission to improve and create new competitive advantage which, as is shown in Figure 1, gives birth to the firm's production and demand functions which in turn create output and profit. Additionally, I will make an attempt to describe the basic characteristics of the habitat needed for the evolving firm and the habitat's importance for the overall growth of an economy.

In whatever follows, I describe: creative destruction and stress the essence of Schumpeter in section II; styles of entrepreneurship in section III; entrepreneurial capitalism and stress the habitat for entrepreneurship in section IV; and end with a summary and conclusion.

Creative Destruction

Joseph A. Schumpeter (1883-1950) saw capitalism as an evolutionary system constantly adapting to and creating new competitive environments through cycles of "creative destruction." According to him, the engine of entrepreneurial capitalism is the inventive and always evolving business firm; this firm is capable of, first, creating "shocks" through its own R&D during periods of stagnation or comparative calm, and second, taking advantage of random events (e.g. technological breakthroughs and discoveries) that occur outside the firm. The ultimate objective of the Schumpeterian firm is to destroy old sources of competitive advantage and create new and sustainable ones. The process whereby old sources of competitive advantage are destroyed and replaced with new ones is referred to as creative destruction.

For example, consider the third industrial revolution and one of its powerful destruction forces that drives production capacity: the transistor. The number of transistors on a chip doubles approximately every two years. Hence, since the early 1950s, 50 years to present, we have experienced about a 10-billion-times reduction in costs. The advent of this technology has created new products, markets, forms of organization and institutions and cause existing products and markets to evolve or disappear; for example, among many others, consider personal computer vs. typewriter, automobile manufacturing from human to robot assembly lines,

electronic vs. print publishing, computer vs. non-computer animation, m-forms of organization vs. networks, internet markets and even cyber vs. traditional warfare.

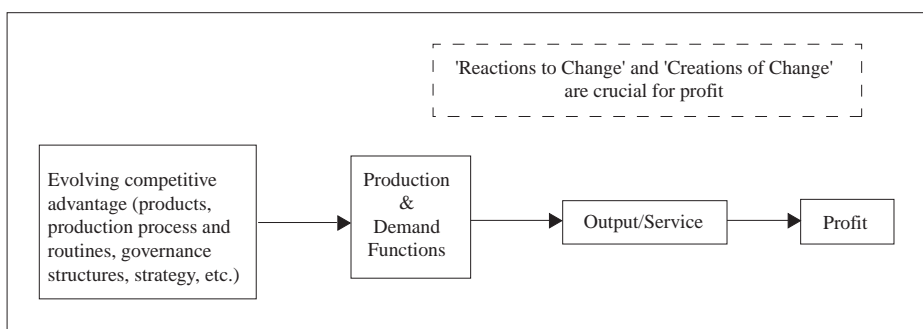
Creative destruction implies that dynamic efficiency is more important than static efficiency and that what really matters is not price competition but competition from innovations as applied to products and/or services and forms of organization.¹ As per Schumpeter's analogy (words in parentheses added),

"... This kind of competition (competition from innovations) is as much more effective than the other as a bombardment is in comparison with forcing a door ..."²

Schumpeter saw static efficiency (e.g. price competition at a given point in time) as marginally valuable to the firm or as nothing more than tactical maneuvering, and dynamic efficiency (e.g. competition from new products, new technologies, and new organization forms) as exponentially more valuable or as the kind of efficiency that gives a firm superior strategic or competitive advantage. Thus, according to Schumpeter, optimum allocation of resources at a given point in time (static efficiency) is not as important as the attainment of growth and technological advancement over time (dynamic efficiency).

As it is implied by the models of technological innovation surveyed by Reinganum (1989), some economists, that call themselves 'Schumpeterians,' have been trying for sometime now to break away from the orientation of general equilibrium theory, which sees the economic problem as allocating resources efficiently, given technologies. The 'neo Schumpeterians' seem to be basically interested in how new ways of doing things (e.g. technologies and ways of organizing and governing work) are introduced, winnowed, and where proven useful, spread, as contrasted with how familiar technologies and organizational modes are employed. Many years ago Schumpeter insisted that the focus of general equilibrium theory was on questions that, over the long-run, were of minor importance compared with the question of how Capitalist economies develop, screen, and selectively adopt

FIGURE 1
The Evolutionary Theory of the Firm



new and better ways of doing things. However, the dynamic processes Schumpeter described are not captured by the new neoclassical models: capitalism is an evolutionary process and these models do not subject themselves to evolution. He clearly had in mind a context in which people and organizations had quite different views about what kinds of innovations would be possible, and desirable, and would lay their beds differently. There are winners and losers in Schumpeter's process of creative destruction, and these are not determined mainly in ex-ante calculation, but largely in ex-ante actual contest.

The Essence of Schumpeter

“(T)he job of the entrepreneur is precisely to introduce new knowledge.”³

As Langlois (1987, p. 14) explains, Schumpeter's theory, or conceptualization of competition, is non-Walrasian: it emphasizes disequilibrium, like the Austrian school, and it is empiricist rather than rationalist in nature. Langlois (pp. 14 – 25) very eloquently describes the empiricist essence of Schumpeter, an essence at the heart of today's information/knowledge industrial revolution:

“In an empiricist theory, the criterion of rationality is less demanding, typically requiring only reasonable behavior in light of the situation the agent faces ... (T)he agent's knowledge is empirical in character; it is gained from experience rather than deduced. As a result, the agent's knowledge is frequently tacit or contained inexplicably in various habits, conventions, and institutions ... For Schumpeter, rationality as conscious calculation exists only within a small sphere carved out from and defined by the larger mass of the agent's inexplicit knowledge ...

The other important aspect of an empiricist epistemic theory of the sort Schumpeter adheres to ... is the inherently open-ended or evolutionary character of economic knowledge it implies. Since economic knowledge is not a matter of logical

deduction from givens, that knowledge is potentially unbounded. There is always new knowledge that is not yet within the agent's 'calculative sphere' or means/ends framework. Indeed, the job of the entrepreneur is precisely to introduce new knowledge ... Economic growth occurs at the hands of entrepreneurs, who bring into the system knowledge that is qualitatively new — knowledge not logically contained in the existing economic configuration.”

The evolving business firm creates new knowledge through the relentless pursuit of 'cost' and 'differentiation' advantage which leads to greater consumer and producer surplus relative to its competitors. As Besanko et al. (p. 441) explain “a firm can achieve competitive advantage ... only if it possesses capabilities that allow it to create more total value than its competitors.” 'More total value' implies that the firm would have to create enough value and distribute it in such a way so that, both, it and its consumers become better off; it should give consumers more consumer surplus than its competitors and, simultaneously, enable itself to earn more profit than its competitors.

The amount of value the firm creates depends on cost and product differentiation advantages relative to its competitors. Hence, the firm's profit depends positively on, primarily, two variables: 'Firm's Market Share' which may be used as a proxy for industry structure, and 'Value-Created Relative to Competition' or,

$$\text{Firm's Profit} = f(\text{Firm's Market Share, Value-Created Relative to Competition})$$

where

$$\text{Value-Created Relative to Competition} = g(\text{Differentiation Position Relative to Competition, Cost Position Relative to Competition})$$

Firms should always ask 'What do we give our consumers relative to our competitors?' and, 'How much do we earn relative to our competitors?' For a successful firm, the answer to both

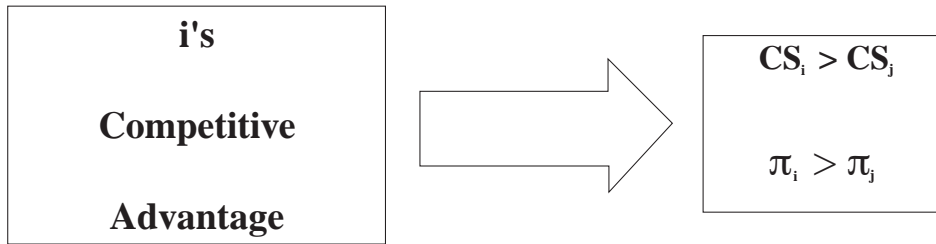
questions should be 'more' See Figure 2. If firm i has a competitive advantage over firms j , then consumers who buy from i realize more surplus than the surplus they would realize had they decided to buy from j ($CS_i > CS_j$) and, simultaneously, it realizes more profit for itself relative to its competitors ($\pi_i > \pi_j$). Essentially, Schumpeter's message is that a firm should react to change and, simultaneously, create change; it should evolve via 'creative destruction,' or 'mutation inducing,' and create competitive advantage subject to improving its profitability relative to its competitors. Some examples, from the history of previous industrial revolutions, may be found at the end of this section.

In his 'Theory of Economic Development,' Schumpeter (1911) saw the key innovative actors as 'entrepreneurs'. His 'firms' were basically the vessels used to by entrepreneurs, and other decision makers forced to adapt to the changes wrought by entrepreneurial innovators or to go under. By the time he wrote 'Capitalism, Socialism, and Democracy' in 1942, Schumpeter's view of the sources of innovation had changed, or rather it might be better to say that there had been a transformation of the principle sources of innovation from an earlier era, and Schumpeter's views reflected this transformation. Firms, equipped with R&D laboratories or modern internet-type firms, became the central innovative actors; these are the firms that cause 'creative destruction.'

The factors that drive the 'creative destruction' process are invention, entrepreneurship, investment, development, core capabilities, competitive advantage and diffusion. Scherer et al (1990, p. 616), define some of these factors as follows:

- ◆ **Invention** is the act of insight by which a new and promising technical capability is worked out (at least mentally, and usually also physically in its essential, most rudimentary form);
- ◆ **Entrepreneurship** involves deciding to go forward with the effort, organizing it, obtaining financial support, and cultivating the market;
- ◆ **Investment** is the act of risking funds for the venture;

FIGURE 2
Competitive Advantage, Consumer Surplus and Profit



- ◆ **Development** is the lengthy sequence of detail-oriented technical activities, including trial-and-error-testing, through which the original concept is modified and perfected until it is ready for commercial introduction;
- ◆ **Diffusion** (or imitation) is the process by which an innovation comes into widespread use as one producer after another follows the pioneering firm's lead. The remaining of the factors may be defined as follows:
- ◆ **Core Capabilities** are unique, *tacit* routines that the firm is involved in relative to its rivals; activities which are difficult to copy or imitate by reducing them to any simple formulas.
- ◆ **Competitive Advantage** is the firm's capability "to create more total value than its competitors. A firm that creates more total value can simultaneously earn higher profits and deliver higher net benefits to consumers than its competitors. The amount of value it creates depends on both its cost position and its differentiation position relative to its competitors." See Besanko et al, (p.441).

The existence of the above factors finds empirical support in the work of Christensen et al (2001) who, have studied profitability trends of companies such as IBM, Microsoft, Cisco etc. The authors have documented that successful firms are totally vertically integrated in the early stages of product development; later on, with more customers to rely upon, they strategically select a (several)

range (ranges) of their value chain to develop and exploit further or to sell it (them) for profit. As Christensen et al (web site) explain:

"In the early stages of a product's evolution, companies compete on the basis of performance. ... (and) it works best if companies are vertically integrated. But as the underlying technology improves to meet the needs of most customers, companies begin to compete on the basis of convenience, customization, price, and flexibility. At that point, vertical integration is no longer an advantage – in fact, it quickly becomes a disadvantage. Different links in the industry value chain become modular, and the chain subsequently fragments.

In either stage, most profitability goes to the companies that own the interdependent links in the value chain – the places where everyone's still vying to satisfy their customers with ever-better product functionality. Initially, that's the makers of the proprietary products aimed at the end-use consumers. But as those products become standardized, profitability shifts to the makers of components, and as components themselves become standardized, it can shift further back in the value chain.

That's predictable, but it causes a problem for incumbents. As their products become commodities and profits decline, pressure from investors to maintain ROA causes them to spin off asset-intensive units

that design and manufacture components – the very places where profits are heading."

The history records of the first, second and third industrial revolutions indicate that "creative destruction" is cyclical (see Figure 3). Consider the invention of the engine (steam, internal combustion, hydraulic, etc.) which gave rise to the first industrial revolution; this engine, or new capital, gave its owners competitive advantage which contributed tremendously to higher profit, consumer surplus and, in general, to the alleviation of the economic problem especially in North Europe and North America. In turn, the diffusion of technology and methods of production that followed the first industrial revolution gave birth, in the beginning of the 20th century, to the second industrial revolution driven, mainly, by electricity and chemicals and their various applications, the electric motor, the inventions of the transistor, the assembly line, the multi-divisional form of organization, new forms of transportation and communication, etc. The second industrial revolution contributed to even higher levels of market gains and diffusion in more areas around the world. In the last two decades of the 20th century, we witnessed the advent of the third industrial revolution (otherwise called the information revolution) driven primarily by computers and the internet, advancements in biotechnology, the development of new materials and space exploration. Competitive advantage from the third industrial revolution has moved market gains to record levels all around the globe. Diffusion, this time around, appears to be borderless and, undoubtedly, a new cycle of creative destruction will soon begin.

Styles of Entrepreneurship

But not all *creative destructionists* are alike; they come in different styles. According to Lee (2000, pp 112-121), there are four distinct styles of entrepreneurs: visioneer, acquisition, transformational, and serial. Table 1 (based on Lee) lists these styles along with hallmarks and examples.

The **visioneer** starts a company and stays with it as a vision guru and/or a

TABLE 1
Styles of Entrepreneurship

Style of Entrepreneur	Hallmarks	Examples
Long-Term Vision Entrepreneur (Visioneer)	<ol style="list-style-type: none"> 1. Define success as public acceptance of the company and its vision, not personal money or power; 2. Stick with company long-term to play out the vision; 3. Perceive the company as a community that can offer both fulfillment and a sense of belonging to its employees. 	Jerry Yang, David Filo of Yahoo! & Jeff Bezos of Amazon.com
Acquisition Entrepreneur	<ol style="list-style-type: none"> 1. Ability to articulate a high-level vision that can accommodate each acquisition; 2. Talent to create a sustained business success from the assembly of many disparate corporate components; 3. Ability to maintain an effective management team. 	John Chambers of Cisco & Bill Gates of Microsoft
Transformational Entrepreneur	<ol style="list-style-type: none"> 1. Capacity to envision the transformed organization; 2. Ability to build a new team within the existing company; 3. Ability to learn a new business model, on the job, in real time. 	Scott McNally of Sun Microsystems
Serial Entrepreneur	<ol style="list-style-type: none"> 1. Articulate a vision with passion, attract all necessary resources, and 'make things happen'; 2. Know limitations; 3. Stay with company long enough to build it up to a sizable valuation and then move on. 	Jim Clark of SGI and later on of Netscape, Healtheon, myCFO and Shutterfly

Based on Lee (2000, pp 112-121)

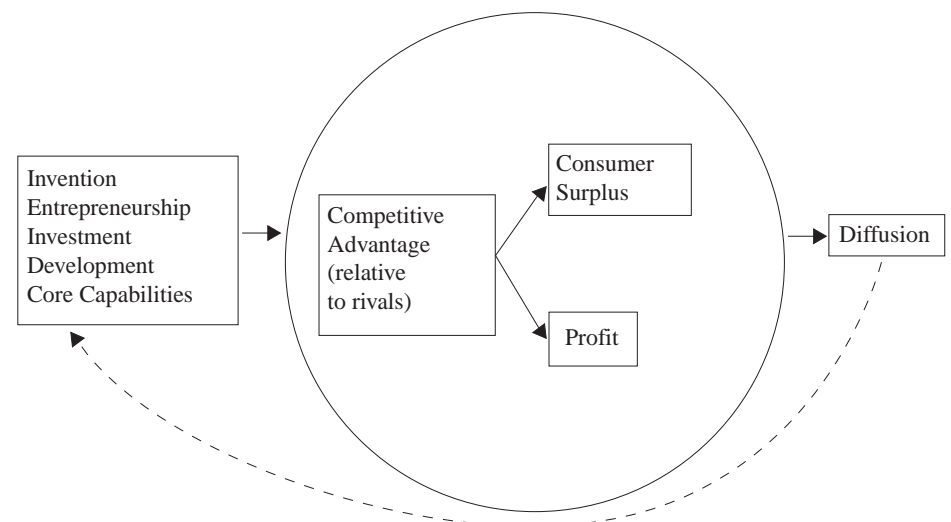
member of the management team. The entrepreneur has a long-term vision, expandable to increasingly more profound applications, and strongly believes that success for her company maximizes contribution to society. She wants to make money but not by selling the company; she feels like a parent who, rationally, would never sell her kids.

The **acquisition entrepreneur** is mostly interested in acquisition and development instead of research and development. As Lee states (2000, pp 114-115), she "assimilates the visions of others into one cohesive but continually evolving vision. (Her) role is to recognize, nurture, and promote the new ideas embodied in an acquired company, just as a venture capitalist might." This entrepreneur merges the employees of her company with the employees of the acquired company and for modernization purposes she may even acquire conflicting technology. Although many acquisitions would fail, such failure is considered cost of exploring business opportunities.

The **transformational entrepreneur** causes metamorphosis. She recreates her company and redirects it toward a new headship position in a new

technology sector or market. According to Lee (2000, p.117), "Scott McNealy ... has embraced the Internet and made it central to his new vision for Sun. For the

FIGURE 3
Schumpeter's "Creative Destruction" Cycle



past four years he has used the introduction of the Java programming language as a vehicle for this transformation.” Metamorphosis of course implies ‘change’ and ‘reconfiguration’ for all in the company as well as the company’s remaining stakeholders subject to real time, while the company tries hard to maintain its market share.

The **serial entrepreneur** creates a company and stays with it up until the Peter Principle surfaces. At that point she sells the company and starts a new one. According to Lee (2000, p.121), this entrepreneur is a master salesperson for herself. She is very effective in creating “notoriety (or) manipulating public opinion through the press building up (her) mystique as a star” which she then uses for her next new venture.

Entrepreneurial Capitalism

The Schumpeterian evolutionary or creative destruction process gives rise to entrepreneurial capitalism which, as described by Petrick (1999, p.25),

“focuses on generating innovation and leading change to stimulate and accelerate economic transformation in the market place. Economic progress ... today is stimulated by the inventive activity of a critical mass of entrepreneurs, working occasionally alone, but more often in partnerships of collective creativity. The R&D budgets of industries and nations are indicators of their willingness to assume macroeconomic risks for the successful introduction of new products/ services. The most favorable ... Venture capital is drawn toward and rewards successful entrepreneurial capitalism. ... At the macroeconomic level, those industries and nations that engage in and support constant economic creativity will set the competitive pace for global economic progress.”

Schumpeter asserted that market-disequilibrating innovating entrepreneurs cause markets to become more dynamic thus generating more asymmetric information and uncertainty, profit and, in turn, entry of more market-disequilibrating innovating or market-

equilibrating imitating entrepreneurs. According to Minniti (1999), although there are similarities between Schumpeter and the Austrian perspective on entrepreneurial capitalism, there is an important difference: the Schumpeterian entrepreneur/firm is a ‘creator’ of change, whereas the Austrian-perspective entrepreneur/firm is a ‘reactor’ to change. Figure 4 summarizes the similarities and differences between the two perspectives.

The Austrians’ and Schumpeter’s conceptions of entrepreneurial capitalism are described in Figure 5. Random events such as changes in production methods, consumer tastes, etc., as well as market-disequilibrating innovative entrepreneurs, contribute to the dynamic nature of markets, increase information asymmetry and uncertainty and enable alert entrepreneurs to realize profit. In turn, profit attracts two types of entrants: market-equilibrating imitators (A) and market-disequilibrating innovative entrepreneurs (B). Obviously, whether or not (type-A) is more prevalent than (type-B) is an empirical question and, of course, in the extreme case of (type-B = 0), the market will move toward the familiar long-run equilibrium of zero profit. In his seminal empirical paper, Mueller (1986) reports that profits persist in the long-run. His analysis shows that profitability differences between high-profit and low-profit firms diminish over time, but are not entirely eliminated. This finding implies that,

while the forces pushing markets toward the zero profit, perfectly competitive long-run equilibrium are not entirely absent, other forces (such as those mentioned above) impede the competitive dynamic. Thus, as per Mueller’s empirical results, type-B innovative entrepreneurs are more prevalent.

According to Lee et al (2000, Preface, p.v), essentially, there are three ways to attain economic growth: (a) by improving and increasing factors of production, (b) by taking advantage of comparative advantage through specialization and trade, and (c) through entrepreneurship. Naturally, these ‘three ways’ are inter-linked and may reinforce and affect each other at various degrees. Entrepreneurship contributes to growth via its links with (a) and (b). See Figure 6.

For entrepreneurship to be a growth multiplier, an economy needs a conducive business environment or, in the words of Lee et al (2000, Preface, p. vi), a “habitat geared toward the creation of new firms and new industries.”

Habitat for Entrepreneurs

An entrepreneurial habitat or network includes service firms, people, and institutions (universities, governments, etc.) As Minniti (p.32) explains, entrepreneurial capitalism is more likely to succeed when it is highly concentrated (e.g. USA’s Silicon Valley-California and Route 128-Massachusetts); high

FIGURE 4 Schumpeter and the Austrians: Similarities and Differences

Similarities between the two perspectives:

1. Markets never actually achieve a state of equilibrium;
2. Since markets never clear, there are endless opportunities for entrepreneurial activity;
3. The existence of asymmetric information is a necessary condition for entrepreneurship.

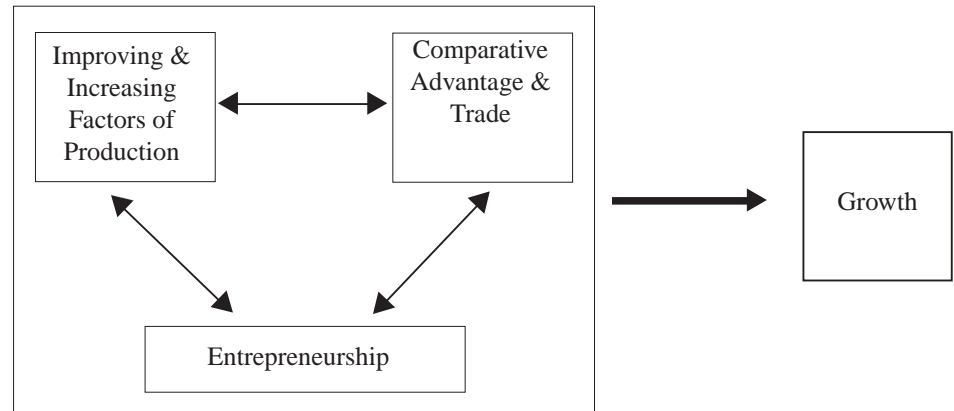
Differences between the two perspectives: What disequilibrates markets?

Austrian School (Knight, Mises, Kirzner): Change disequilibrates markets and the entrepreneur acts to equilibrate them.
(The firm reacts to change.)

Schumpeter: The entrepreneurial process is a disequilibrium force.
(The firm creates change.)

concentration allows entrepreneurs to take advantage of proximity and reduced transaction costs through the creation of network externalities. In general, entrepreneurial capitalism fosters the emergence of new markets and, if it is 'fertilized' by proper incentives provided by private and/or public institutions, it may significantly contribute to a region's and/or nation's development and growth. As stated by Warren (1999, p.43), "(t)he ability of a nation to nurture and combine its science-base with industry in order to generate competitive advantage, through the development of new products, processes and services, is the lifeboat of any strong economy." The same author explains the importance of "Technology Foresight" and defines it as a method "systematically attempting to look into the longer-term future of science, technology, the economy and society with the aim of identifying the areas of strategic research and emerging generic technologies likely to yield the greatest economic and social benefits." Warren further explains that "Foresight exercises attempt the systematic identification and promotion of those areas of research — scientifically strong and commercially desirable — likely to yield the greatest economic and social benefits." According to Warren (p.44), an important aspect of Foresight is that it "is not about picking winners or predict-

FIGURE 6
Entrepreneurship and Growth



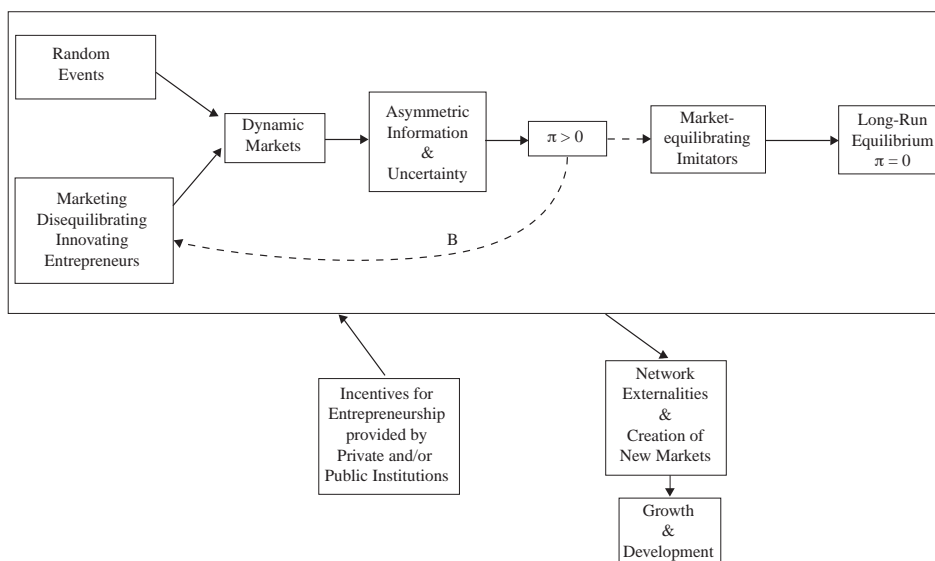
ing the future. It adopts the philosophy that the future is created not forecast and is, therefore, not a forecasting tool, but a mechanism for the advanced preparation of national science and technology advantage." Thus, entrepreneurship accompanied by incentives and the proper supportive institutions may significantly contribute to a region's/nation's growth and development.

Lee et al (2000, p.4) maintain that "like a natural habitat, (the entrepreneurial habitat) is marked by complex, dynamic interdependent relationships" and identify numerous, mutually

reinforcing, necessary but not sufficient crucial features of such a habitat. Some of these features, slightly modified, are summarized below:

1. **Favorite rules of the game and role of Government.** The habitat would need a national system of laws, regulations, and conventions for securities, taxes, accounting, corporate governance, bankruptcy, immigration, research and development, and more. The system should be decentralized, decidedly market-oriented and non-opportunistic, aiming to protect people through transparency and disclosure instead of microregulation. In general, as Rowen (2000, p. 188-193) points-out, the government may help entrepreneurs by acting (1) as setter of rules, (2) as buyer of their services and products and (3) as a provider of funds for research and early development.
2. **Knowledge intensity.** The habitat should harbor the highest possible flow rate of ideas for new products, services, and business models that originate from entrepreneurs, employees of established firms, university faculty and students, venture capitalists and people elsewhere in the world.
3. **A high-quality and mobile global work force.** The habitat should reward merit and thus serve as a magnet of global talent; additionally, it should encourage work force mobility so that employees find jobs

FIGURE 5
Entrepreneurial Capitalism



that maximize their incomes and contribute to collective learning. In the habitat, talent and ability should be king. Gender, ethnicity, age, seniority, and experience should not dictate opportunity or responsibility. For example, results-oriented meritocracy would remove obstacles for immigrant entrepreneurs who in turn would build connections to high-tech centers in their home countries. These networks would give habitat firms access to skills, technologies, and markets in other regions, two-way flows of capital lead to outsourcing, co-investments, technology exchanges, and network-based innovations across nations.

4. **A climate that rewards risk-taking and tolerates failure.** Calculated risk-taking and an optimistic entrepreneurial spirit should be part of the habitat. In an effort to reinforce the taking of bold initiatives, laws should be enacted that would permit entrepreneurs to receive stock in a company for the ideas, organization, and hard work they put into it. On the other hand, failed entrepreneurs should be allowed to view their experience as a 'learning experience' and should not be punished in subsequent ventures. This toleration of failure (up to a point) should be reinforced by bankruptcy laws that provide for limited liability for entrepreneurs.
5. **Open Business Environment.** The habitat should embrace a philosophy of open standards by enabling companies to gain by sharing knowledge that is not company-secret or, in general, by taking advantage of economies of scope. Adoption of open standards would lead to win-win exchanges of knowledge and the dismantling of vertical integration.
6. **Local government and non-profit institutions that interact with industry.** It would be beneficial to the habitat if, by circumstance or design, universities and research institutions are in close proximity and entrepreneurs are linked to faculty, students and other well-trained research scientists. Such links may be facilitated by the possibility of 'leave of absence,'

ability of faculty to serve as consultants and on the board of directors of newly founded enterprises as well as local seminars, workshops and conferences. Additionally, joint ventures between companies and trade/service associations, labor councils, and governmental agencies may set a forward-looking policy agenda for long-term sustainability of the habitat in terms of economics, education, health and, very importantly, quality of life.

7. **A specialized business infrastructure.** The habitat needs an array of support services such as finance (through 'angels,' venture capital limited partnerships, commercial and investment banks that understand the special needs of entrepreneurs and are willing to offer advice); lawyers (especially suited to foster entrepreneurial activity); headhunters (to match people with jobs effectively and more efficiently); accounting firms (ready to serve beyond their traditional roles); and consultants (to offer specialized services in all aspects of business development, from marketing to strategic management to public relations).

Summary & Conclusion

I made an attempt above to build a conceptual model for the evolutionary (entrepreneurial) firm. The concepts that emerged as *key concepts* from the analysis were: creative destruction, competitive advantage, entrepreneurial styles, entrepreneurial habitat and its impact on growth. The most important messages were: (1) the evolutionary firm – in its various styles – is a 'creative destruction' or 'mutation inducing' entity which evolves not only à la Darwin, as a reactor to change, but also à la Schumpeter, as a creator of change; (2) The evolving business firm creates new knowledge through the relentless pursuit of 'cost' and 'differentiation' advantage which leads to greater consumer and producer surplus relative to its competitors; (3) given a healthy habitat, entrepreneurial capitalism, through its links to improved factors of production and comparative advantage, can greatly contribute to an economy's

growth.

Let me conclude by stressing that the evolutionary theory of the firm is not the only theory. There are other theories that supplement our understanding of the firm. There is the **neoclassical theory** which asks "if we know what we produce and we are informed about the markets in which we sell, what conditions have to be satisfied for more profit or even profit maximization?" This neoclassical theory reasonably takes as given 'competitive advantage,' 'market segmentation,' 'contestability' and the 'number of relevant competitors and their strategies' and teaches us the principles of optimization. There is also the **transaction costs theory** primarily preoccupied with the question "should a firm make the inputs it needs or buy them in available markets?" which brings home the importance of transaction costs. Moreover there is the **principle-agent theory** which brings to the forefront the problems associated with asymmetric information (adverse selection, moral hazard, holdup) and makes us aware of the importance of opportunism-minimizing incentives and the need to constantly improve and invent incentive mechanisms. As stressed in Kantarelis (2002) each one of these theories focuses on important aspects of the firm and all together are needed for a complete view of the forest; undoubtedly, the addition of an evolutionary theory of the firm will make the view better.

End Notes

(*) I am deeply grateful to the editor of this journal for corrections and valuable constructive comments. All errors remain mine.

¹ Without a doubt, 'form of organization' may cause creative destruction. For example, consider the multi-divisional form of organization, which was one of the factors that contributed to the second industrial revolution in the first quarter of the 20th century. In turn, the network organization is partially responsible for the third industrial revolution that started in the last quarter of the same century. As stated by Williamson (2002) though, only

recently scholars have realized that the firm as a “governance structure” matters and that it should be an integral part of the theory of the firm and its evolution through time. According to Williamson (p.171), reasons for the delay are: over-reliance on the neoclassical theory of the firm for analysis, and that it is difficult to explain how and why organizational issues matter due primarily to complexities associated with bounded rationality and contracts. As Williamson (p.177) explains, difficulties associated with contracts may diminish if firms, and the institutions that affect them, start seeing ‘*contracts as frameworks*’ instead of ‘*contracts based on hypothetically ideal markets.*’ For more on the importance of organization form in conjunction with the evolutionary theory of the profit-making firm, see Kantarelis (2004).

² Schumpeter (1942, pp. 83-85). This quotation was found in Besank et al (p.578).

³ Langlois (1987), p.15).

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