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# From modern microeconomics to entrepreneurial theory of evolution and learning – the substantive performance approach

## ABSTRACT

*The rapidly expanding global economy poses new challenges to microeconomic theories. Today, clustered multinationals are powerful players in the global markets. They invest heavily in global R&D and marketing, and they wield market power in the markets and countervailing power in politics. Their behaviour has traditionally been explained by microeconomic theories, which exclude entrepreneurial, innovative behaviour typical to small firms and entrepreneur-driven businesses. To overcome the discontinuity between the orthodox microeconomics and Schumpeterian theory of radical innovation is one of the key challenges to modern microeconomic theories. This article tries to build a bridge between these two by introducing the substantive performance approach. This approach suggests that the function of growth firms and start-ups can be theoretically explained by studying the interplay between proprietary and collective capitalism in the global markets. This dynamics is a learning process that takes place between individual, firms and regions.*

**Key words:** *Microeconomics, Entrepreneurship, Learning, Performance*

## 1. INTRODUCTION

Marshall and Schumpeter are influential writers. Marshall is viewed as the father of managerial economics and Schumpeter as the father of entrepreneurship. Schumpeter (1939) argued that entrepreneurs create innovations in the face of competition and thereby generate (irregular) economic growth. He proposed a three-cycle model of economic fluctuations or waves: (1) Kitchin inventory cycle (3–5 years), (2) Kuznets infrastructural investment cycle (15–25 years), and Kondratieff long cycle (45–60 years). During his career and until the 1950s, Schumpeter gave economists food for thought with the concept of creative destruction. In his book *Capitalism, Socialism and Democracy* (Schumpeter 1950), Schumpeter made his famous prediction of the transition from competitive capitalism to trustified capitalism. Schumpeter shared Karl Marx's conviction that capitalism would collapse, although for different reasons. Schumpeter predicted that the success of capitalism would lead to a form of corporatism and to fostering of values hostile to entrepreneurship, especially among intellectuals. Since the 1960s, Schumpeter's prediction has almost been fulfilled in the EU countries. The social climate needed to allow entrepreneurship to thrive did not exist.

Today, clustered multinational corporation (MNCs) are powerful players in the global markets. They invest heavily in global R&D and marketing, and they wield market power in the markets and countervailing power in politics. Because MNCs dominate the global markets of commodities, they can collectively determine the rules of the game in the core market segments. The global economy is in expansion. The World Bank's Global Economic Prospects 2007 predicts that the global economy will expand from \$35 trillion in 2005 to \$72 trillion in 2030. Global trade in goods and services will rise to \$27 trillion in 2030 from \$10 trillion today. Trade, as a share of the global economy, will rise from 1/4 to 1/3. Roughly half of the increase is likely to come from developing countries which will supply 65 % of manufactured imports to developed countries, compared with 40 % today. China, India and Brazil are expected to have growth rates over 6 %, much above the average. Their dominance will have a major impact on economic thinking and theories. The global challenge of entrepreneurship is immense. We need new radical innovation and, thereby, economic growth. There are one billion young people (15–24 years old), 80% in developing countries, in the labour market with few opportunities for productive work. Capacity-building is the major instrument that the World Youth Report 2005 by the UN stresses. Schumpeterian entrepreneurship is the key area of capacity-building to resolve the global crisis. However, it is not so obvious how modern microeconomics theories respond to these needs. This article suggests that this is the major global learning challenge to all nations and intergovernmental organizations such as the UN and the EU.

## 2. ENTREPRENEURSHIP AS THE INTERPLAY BETWEEN IRRATIONAL HUMAN ACTION AND RATIONAL DECISION- MAKING

### 2.1 Schumpeterian entrepreneurship in our time

Schumpeter (1934) proposed that an entrepreneur, as an innovator, creates profit opportunities by devising a new product, a production process, or a marketing strategy. An entrepreneurial discovery occurs, when an entrepreneur makes the conjecture that a set of resources is not being optionally utilised. According to Lintunen (2000) Schumpeter suggests that: (1) an entrepreneurial function is the act of will of the entrepreneur for the introduction of innovation in an economy, and a source of evolution in a whole society, (2) entrepreneurial leadership is a source of creative energy for innovation and evolution, and (3) entrepreneurial profit is the temporary monopoly return on the personal activity of the entrepreneur. A neo-Schumpeterian writer, Peter Drucker (1985), claimed that 90% of innovations are based on creative imitation with moderate probability of success. Another entrepreneurial strategy is “Being fustest with the mostest”. This is a successful battle strategy applied by a Confederate cavalry general in the American Civil War. Following this strategy, the entrepreneur strives for leadership that is the entrepreneurial strategy *par excellence*. This is the core content of entrepreneurial literature and the one widely used in high-tech industries. Drucker warns that of all entrepreneurial strategies this strategy is the greatest gamble, making no allowances for mistakes and permitting no second chance. But if successful, it is highly rewarding.

David McClelland (1961) proposed that an individual’s specific needs are shaped by one’s life experiences. People with a great need for achievement seek to excell. They prefer work that has a moderate probability of success, ideally a 50% chance. As McClelland (1961) found, entrepreneurs also have a strong human motivation, a great need for affiliation, which refers to harmonious relationships with other people. This is why entrepreneurs perform well in customer service and client interaction situations. The third highly entrepreneurial characteristic in McClelland (1961) is a great need for personal power. Entrepreneurs strive for leadership and may adopt Machiavellian behaviour. Entrepreneurs are socially embedded with their partners, employees or customers. Silver (1985) is one of the first writers on so-called teamwork which is eminently applicable to complex business problems. Silver characterizes his model as a fundamental law of the entrepreneurial process. In Silver’s thinking the goal of investors, as well as of entrepreneurs, is the creation of wealth or high valuation (V), through the process of selecting a potentially successful entrepreneurial team (E) that can identify and conceptualize a large, multidisciplinary problem (P) and create an elegant solution (S) which they intend to apply to the problem via a new company.

$$V = E \times P \times S$$

Where V = Wealth or high valuation of a venture

E = Successful entrepreneurial team

P = Large, multidisciplinary problem

S = Elegant solutions

Formula 1: Silver's model of the valuation of business ventures

Silver's 'entrepreneurial scorecard' is inspiring, since a company with high value (V) has many beneficiaries like the entrepreneurs, managers, employees and investors. Silver summarizes that 'being an entrepreneur is like being the 'builder of civilization'. In Silver's thinking an entrepreneurial team takes holistic responsibility for the process of creative destruction. How can an entrepreneur can be so good in all the key personal qualities that are needed to succeed? One answer is given by Henry Mintzberg (1980) who has identified the entrepreneurial mode of strategy making as one in which the power is highly centralized in the hands of one person. Strategy making in these firms tends to be intuitive rather than analytical. Mark Casson (1982) summarized that for an entrepreneur to obtain control over resources in a way that makes the opportunity profitable, his or her conjecture about the accuracy of resource prices must differ from those of resource owners and other potential entrepreneurs. As Israel Kirzner (1979) has observed, the process of discovery in a market setting requires the participants to guess each other's expectations about a wide variety of things. In Drucker (1985), recognition of entrepreneurial opportunities is a subjective process. Entrepreneurs have a unique way to perceive target markets. The model figure 1 that seems to be valid to describe the reality of an entrepreneur is that developed by Hurst, Rush and White (1989). Following the model of Jung & Hull (1991) of the human mind, they elaborate creative management on four levels: (1) Intuition, (2) Feeling, (3) Thinking, and (4) Sensing.

Human behaviour is the logical result of a few basic, observable differences in mental functioning (Allinson & Hayes, 1996). These differences concern the way people use their minds to develop their skills as decision-makers (Argyris & Schön, 1978). There are two ways of perceiving: (1) indirect perception by way of the subconscious intuition and (2) becoming aware of things through sensing. There are two ways of judging: (1) Feeling, consisting of things that have personal, subjective value and (2) Thinking, a logical process aimed at an impersonal finding. We can assume that an entrepreneurial decision-maker (Schumpeter) is focused on perceiving when managerial decision-making (Marshall) is focused on judging. In both groups, there are many combinations of personal styles of making decisions. Jung holds that one process of sensing, intuition, feeling or thinking must be developed if a person is to be really effective (Bergström, 1984). Although people must use both perception and judgment, these cannot be used simultaneously. In order to come to a conclusion, people use judgment and have to shut off perception for the time being. In the perceptive attitude, judgment is shut off. Field studies in the Nordic

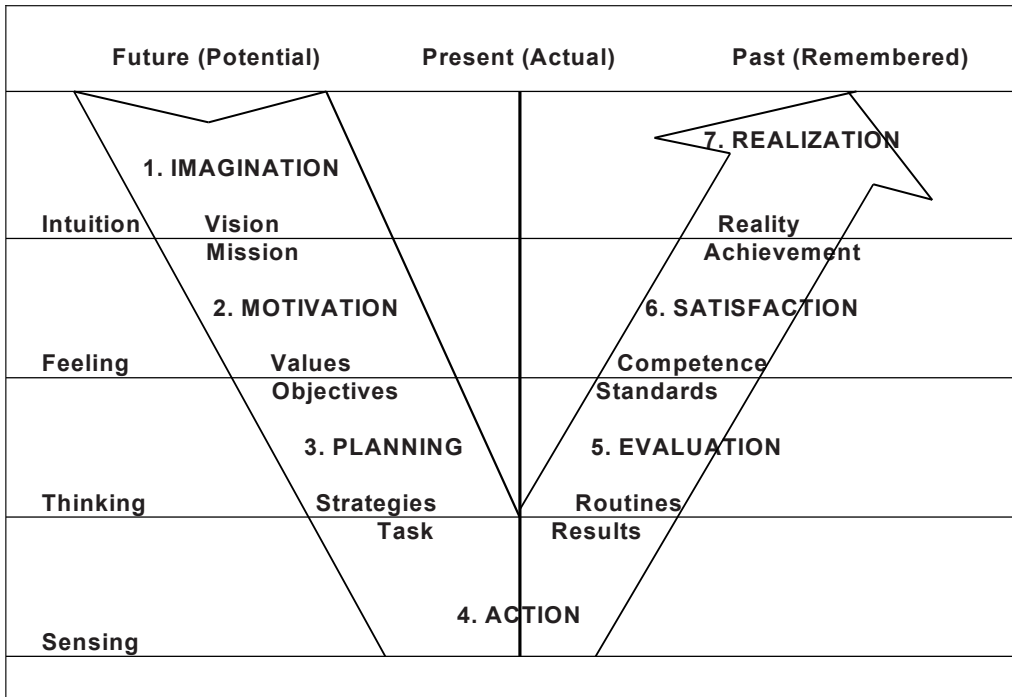


FIGURE 1. Entrepreneurial decision-making.

countries and in some continental countries like Italy identified five elements of successful market strategy making: 1. differentiating, 2. revolutionary, 3. holistic, 4. competitive, and 5. realistic (Lahti, 1989, 1991).

## 2.2 Schumpeterian learning as a challenge to the resource-based view (RBV)

The resource-based view (RBV) of the firm initiated by David Ricardo (1817) is one of the management topics. The RBV was developed by Edith Penrose (1959) who highlighted a firm's heterogeneity and proposed that the unique assets and capabilities of a firm are important, giving rise to imperfect competition and the attainment of super-normal profits. Penrose follows Edward Chamberlin (1933), who identified the key capabilities of a firm as technical know-how, reputation, brand awareness, patents and trademarks, many of which have been revisited in the management literature. Penrose (1959) provides a detailed exposition of a resource-based (or knowledge) view that is at the heart of Schumpeterian innovation. Penrose reinvented the theme of Schumpeter and Marshall and established the dynamic capabilities of the firm in the modern micro-

economics. In Penrose's thinking, opportunities rest on developed internal and external routines. Penrose takes the boundedness of cognition for granted, as in Schumpeter's theory, but at the level of the firm instead of the economy. Penrose proposed that a firm's rate of growth is limited by the growth of knowledge within it. Superior performance and a sustainable competitive position depend primarily on the heterogeneous resources available to the firm. According to Penrose (1959, pp. 11–14) neoclassical price theory (Walras, 1954) tells nothing about the growth of the firm.

Herbert Simon (1960, 1979) an important figure in decision-making theory, claimed that human rationality is bounded. He believed that human beings are neither good natural logicians nor statisticians. The premises for logical operations are often doubtful, and even more likely to be incomplete. Simon's revolution in the concept of decision-making under uncertainty led far from the rational man (*homo economicus*), often assumed in mainstream economics. Instead of maximizing profits, Simon launched the concept of satisfying, i.e. setting an level of aspiration which, if achieved, an individual would content an individual. Cyert and March (1963), the pioneers of the behavioural theory of the firm, are concerned with the day-to-day behaviour of the firm. The fact that short-term objectives can be described, whereas long-term objectives apparently need to be advocated, has a significance of its own in explaining business behaviour. Simon's writing is the foundation of the development of behavioral theory of the firm that can be interpreted as a complement of mainstream theories. Simon's critique is justified, like Penrose's, as a distinction from the equilibrium models of price theory, but Simon's intention was not to deny the usefulness of orthodox economic analysis. In Simon's thinking, the 'rules of thumb' are the best that economic agents, like entrepreneurs and business managers, can use in the 'bounded' and uncertain real world.

Alfred Chandler, the father of strategic management, combined in his book *Strategy and Structure* (Chandler, 1962), historical investigation of some industrial firms with an in-depth theoretical analysis. His empirical data-base consists of big multinationals, in which organization structure tends to become increasingly technical, professional and independent of ownership. Chandler's analysis revealed what Schumpeter had written. Big multinationals did not only passively adapt to prevailing markets. They grew to dominate sectors of the economy, and in so doing, altered their structure and that of the economy as a whole. Chandler advanced Penrose's thinking in the sense that an effective managerial hierarchy, called an organization structure, becomes the driver of the firm's (growth) strategy. According to Chandler's generally accepted axiom, a firm's organizational structure and competencies must be suited to implement the product/market strategy. Models of strategic planning typically propose a rational process of setting objectives, followed by an internal appraisal of capabilities, an external appraisal of outside opportunities, and leading to decisions to expand or diversify based on the level of fit between

existing products/ capabilities and investment prospects (Ansoff, 1965, 1979). Later, the pursuit of sustainable competitive advantage has been at the heart of much of the strategic management.

The RBV initiated by Schumpeter and Marshall is intended to deconstruct the black box of the economist's production function into elementary components and interactions (Spender, 1996). The RBV recognizes that knowledge is a difficult concept to define. Knowledge has been differentiated in terms of explicit vs. tacit, individual vs. collective, and common vs. context-specific. Tacit, context-specific knowledge is difficult to create, transfer, and integrate via markets. This type of knowledge, if valuable and unique, provides a competitive advantage because it is less imitable. A firm's ability to learn maintains it over time (Lei, Hitt & Bettis, 1996). The knowledge-creating theory by Ikujiro Nonaka and Hirotaka Takeuchi (1995) focuses on the transformation and communication of what is already known tacitly by employees. The resources that generate superior performance are those that are difficult to imitate and that are embedded as 'core competencies' within the firm (Hamel & Prahalad, 1994). Such specialized resources are developed, not acquired, and have a low mobility. Thus the interplay between human individual and collective learning comes to be at the core of generating competitive advantage. This is not so obvious in several suggestions evinced to explain this dynamics, like ex-post limits to competition (Peteraf, 1993), isolating mechanisms (Rumelt, 1984) and causal ambiguity (Reed & DeFillippi, 1990). The internal model of resource allocation has a lot of feedback and interactive mechanisms (Hofer & Schendel, 1978) reflecting the complexity of intangible resources.

### **2.3. Business strategy, learning by doing in Schumpeterian firms**

In the 1970s, the Boston Consulting Group's (BCG, 1968) claim for the experience curve was that for each cumulative doubling of experience, total costs would decline roughly 20% to 30% because of economies of scale, organizational learning and technological innovation. The BCG argued that experience-based cost reduction was not restricted to the early stages of production, but continued indefinitely; the BCG provided convincing data showing the effect of experience in a wide variety of industries. The BCG suggests that there is no naturally stable relationship with competitors in any product until a firm has a dominant share of the market for that product and until the product's growth saturates. Although the idea that some cost elements follow a learning-by-doing pattern has been known since Frederick Taylor (1911), it has been ignored by orthodox economists. The logic of the experience curve is convincing. For the first time there was a simple account of what competitive advantage is like, and how it is gained in the long run. A large market share means much experience, low costs, and high profitability. For growth firms a combination of experience curve and economies of speed (Chandler, 1990) is critical, as shown in Figure 2.

## Unit costs of production

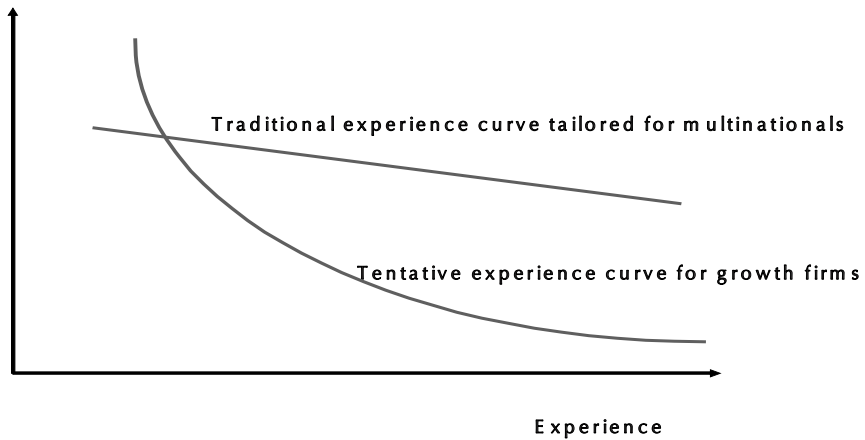


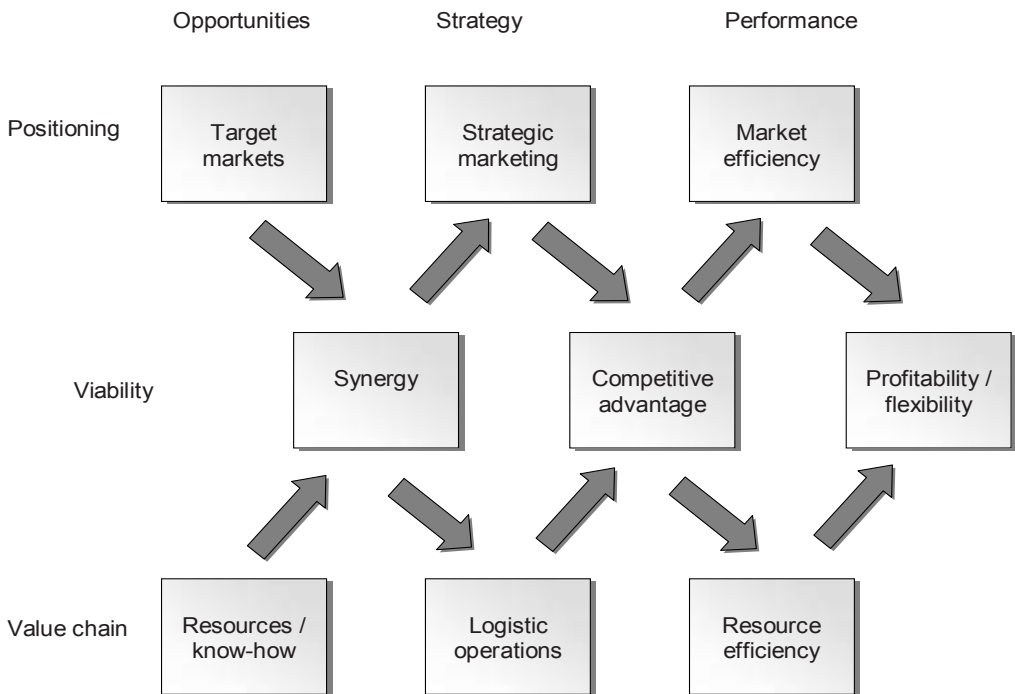
FIGURE 2. A modified experience curve.

A tentative experience curve for growth firms is based on the assumption of a quick scaling effect through economies of speed, when the original BCG claim for the experience curve with roughly 20% to 30% of costs might still be valid for most of the multinationals. The BCG stimulated academic research, like the Profit Impact of Market Strategy (the PIMS) studies (Buzzell & Gale, 1987). The PIMS informed managers that they could increase market share, and thus profit, by redefining their market scope (i.e., redefine their competitors and presumably their market share position). The PIMS completes the notion of a tentative experience curve for growth firms, often medium-sized firms. There is empirical proof of the success of medium-sized firms (Adams and Brock, 1986) with diverse demand and costs curves. Market turbulence (creative destructions) in global markets provides a lot of market niches for medium sized firms to conquer. What is interesting is that the PIMS studies have identified a logic that could be applicable to innovative, often medium-sized firms. The PIMS studies show that the average return on investment in market segments of less than \$ 100 million dollars is 27 percent, while the return in large (billion dollars and over), less differentiated markets averages about 11 percent. Thus this learning-by-doing curve indicates that smaller market niches typical of growing medium-sized firms provide more profit opportunities than large market arenas typical of multinationals.

Schumpeter's thinking is the foundation of strategic management (Lintunen, 2000). Lahti's model is a conceptualization of innovative strategy making. The learning aspect (Reger & Huff, 1993) is essential for innovative, growth firms with unique resources and continuous performance variations according to the life cycles of innovations (Lawless, Bergh & Wilsted, 1989). The starting point of temporary monopoly profit is the entrepreneurial environment, 'Opportunities'.



'Strategy' is Schumpeterian in nature. Temporary monopoly profit, 'Performance', is the result of the fit with opportunities and strategy. Besides time, strategy making has a contextual dimension. Marshall divided a firm's economies of scale into internal and external. The modern interpretation of Marshall's external economies of scale is 'Positioning' and of internal economies of scale 'Value chain'. What is inbetween these two economies? There is management's major concern, 'Viability'. In addition to 'Profitability', there is 'Flexibility' as another performance measure. The 'Synergy' and the 'Competitive advantage' are the two criteria of the fit between opportunities and strategy. A framework model is shown in Figure 3.



**FIGURE 3. Strategy-Performance model (Lahti 1983).**

This model is unique, since it was developed for benchmarking of small and medium-sized firms. This model has been tested in 300 case analyses of growth firms in the EU countries (for an example of the field studies see Lahti and Pirnes, 1987). Parallel to that, Fiegenbaum and Thomas (1995) also develop a new approach by arguing that strategic groups are used as reference groups when firms formulate their future competitive strategy. Their major argument is that an industrial group's structure describes the competitors' strategies and capabilities and enables competitors

to define and direct their future moves towards a better position within the industry. However, the dynamics between positioning, viability and value chain as well as within different elements of opportunities, strategy and performance still need to be further tested. Their theoretical explanation might originate from learning and networking processes crucial to substantive performance approach.

### 3. ECONOMICS OF GLOBALIZATION

#### 3.1 The IO, the core area of modern microeconomics

The dominant doctrine of the IO by Joe Bain (1956) tries to verify empirically the presence of structural (or behavioural) barriers. The Harvard IO seeks to explain how market processes direct the activities of firms in meeting market demand, how market processes break down and how these processes adjust to improve economic performance. The Chicago IO suggests that the institutions which guide production and contractual operations of markets are efficient, and, therefore, strategies such as collusion are not necessarily anti-competitive (Stigler, 1968). The relevant framework for the analyses of structural barriers is that specified by Frederick Scherer and David Ross (1990). The Harvard Department of Economics, under the lead of Richard Caves began to modify the IO to include differing positions or strategic groups of firms within industries. The concept of strategic group was proposed by Hunt (1972). He used this term to describe asymmetry among firms. This asymmetry resulted in four different strategic groups. Newman (1973) and Porter (1973) extended his analysis. Caves' research programme launched the concept of mobility barriers, which are persistent structural features, not only at firm level, but also at group level (McGee & Thomas, 1986). The existence of mobility barriers means that some groups of firms can enjoy systematic advantages over other groups, and initiate strategic acts that lead to a creative destruction, and, hence to structural changes in the whole industry structure. Caves' doctrine attempted to explain the diversity of demand and cost curves of firms within the same industry which is the topic of Schumpeter (1934) and Chamberlin (1933).

In Purdue University, Dan Schendel and Arnold Cooper began to explore the empirical links between a firm's resource allocations, interpreted as strategy. Where Caves' approach estimates strategic groups from the top-down perspective, the bottom-up approach utilized by the Purdue studies (Hatten, 1974; Patton, 1976) assumes that systematic similarities and differences exist between firms as a result of strategic resource choices (i.e. decisions to invest in assets which are often difficult and costly to imitate). While the Harvard studies relied on cross-sectional data in their econometric analyses, Purdue studies used time-series data in their longitudinal studies to draw valid inferences about the relationship between strategic group membership and performance differences. A very important trait of this new theoretical stream was the utilization of nu-

merous variables linked to strategy to identify competitive groups selected within the context of the particular industry under study. The Purdue studies with the bottom-up approach are suitable for growth firms, whereas the new Harvard approach is tailored to multinationals. Growth firms can create their market position through internal economies of scope, and learn to internalize true uncertainty (Knight, 1920). Relying on the Purdue studies, Lahti (1983) and related dissertations (Salimäki, 2003; Killström, 2005) have tried to develop a strategic group paradigm tailored to innovative growth firms. This approach combines human action and learning processes with strategy-performance linkages.

Because growth firms cross industry boundaries there are no simple strategy-performance linkages. A comprehensive approach with many variables is needed. A detailed description of a firm's strategy and performance does indeed managers to learn competitive processes and the logics of market evolution (McGee & Thomas, 1986). Killström (2005, p. 72) adds to the concept of flexibility barriers set the industry specific limit to managerial learning processes. The notion of learning mechanism as the critical driver of the market evolution in the growth firm context has much in common with the 'dynamic capabilities of firms' approach developed by Edith Penrose and her followers. Another parallel concept is lateral rigidity as a behavioural characteristic in the strategic decision-making of Luostarinen (1979) in which a firm's internationalization is seen as an organizational learning process. Lahti's (1983) dissertation is among the pioneering studies of the substantive performance tradition within the strategic group paradigm (Table 1).

While the Harvard studies relied on cross-sectional data in their econometric analyses, the Purdue studies used time-series data in their longitudinal studies to draw valid inferences about the relationship between strategic group membership and performance differences. A strategic group concept is useful because it cumulates the group's learning capacity about strategic group-specific mobility barriers. Therefore, the 'Substantive' measures of 'Performance' are important for strategic decision-makers. 'Across-sector studies' (like Porter, 1979) give valuable information on multinationals that operate in many sectors and on all continents. 'Within-sector studies' are useful for growth firms seeking their 'niches' in various sectors. In growth firms, the customer-based method for positioning is different (Bartels, 1988) from that in multinationals. The substantive performance approach that combines human action and firm's learning process with the Schumpeterian growth firm conception is the one that could offer countervailing power for the dominance of multinationals.

### **3.2 The substantive performance approach of innovative growth firms and the countervailing power of multinationals**

Globalization has shifted the comparative advantages of international trade away from traditional inputs of production, such as land, labour and capital, towards knowledge. The role of MNCs has

**TABLE 1. Studies Testing the Robustness of Groupings (Pitt & Thomas, 1994, p. 93).**

	Prior classification was via:			
	"Substantive" measures of		"Perceptual" measures of	
	Structure / conduct	Performance	Group structures	Patterns of conduct
<b>Within sector studies</b>	Hunt (1972)	Lahti (1983) Johnson and Thomas (1987)	Dess and Davis (1984)	Dess and Davis (1984)
<b>Across-sector studies</b>	Harrigan (1980) Tushman and Anderson (1986)	Porter (1979) Newman (1973) Rumelt (1973) Tushman and Anderson (1986)	Snow and Hrebiniak (1980)	Snow and Hrebiniak (1980)

been acknowledged to be important in the global economy. The number of MNCs grew from 7,000 to 60,000 in the period 1969–2001 (UNCTAD, 2001). Their economies of scale depend on the extent of their capacity and speed with which the capacity is utilized. The key concept propagating openness in international trade is the Ricardian comparative advantage (Ricardo, 1817). When the WTO was established, the industrialized countries oriented towards Smith's (1976) absolute advantage. An indicator of this is the adoption of Porter's (1990) diamond referring to the fact that the home country of a cluster tries to domesticate the cluster elements by hidden mercantilism (Coleman, 1980).

Schumpeter (1950) made his prediction about the transition from competitive capitalism to trustified capitalism. He predicted that the success of capitalism would lead to a form of corporatism and to values hostile to entrepreneurship, especially among intellectuals. Schumpeter himself believed that free market capitalism was the best economic system. Since the 1950s, John Kenneth Galbraith's (1956) extended Schumpeter's prediction of corporatism. He believed that large firms have the countervailing power that describes a certain level of collusion with governments. Multinationals invest in countries like China owing to impressive economic growth rates in coming years. Local small-scale firms cannot compete against multinationals in commodity markets where

the static economic efficiency is decisive. Schumpeter's creative destruction creates economic discontinuities, and in so doing an entrepreneurial environment for the introduction of innovations, and earning monopoly profits. Referring to Frank Knight's (1920) concept of true uncertainty and to the neo-Schumpeterian writers, such as Kenichi Ohmae (1996) and Tom Peters (1990), we expect that there are multiple business cycles in the global markets. The driving forces of globalized economies:

1. The process of Schumpeterian dynamics, proprietary capitalism that requires policies to nurture venture capital investments, start-ups, etc. (Lahti, 2007b). Silicon Valley region is an example of proprietary capitalism, personified by Bill Gates.
2. The formation of globally competitive clusters of multinationals. Geographic concentration of firms has been peculiar to Europe, as Alfred Marshall wrote, and later to the US. Michael Porter proposes (1990) the diamond model as a doctrine for clustering that incorporates the determinants of a company's environment, which influence the firm's ability to create and sustain competitive advantage in the global markets. Regional clusters in general seem to perform better than the national average in the USA (Sassen, 1991; Saxena, 1994).

Geographical proximity can be expected to serve the incubation of new technologies. The economic destinies of locations are not determined by location (Krugman, 1991). The triad of New York, London and Tokyo that dominate global financial services is an example of permanent clusters. Clustered multinationals utilize the collective capitalism of Schumpeter (1950). They invest heavily in global R&D and marketing, and they wield market power in the markets and countervailing power in politics. Because multinationals dominate the global markets of commodities, they can collectively determine the rules of the game in the global economy. There seem to be some measures that can be used to anticipate the origin and initial location of new geographical clusters of firms, and, thereby, new creative destruction that is the only countervailing power to multinationals. The most important is the existence of growth firms and successful new start-ups. If several new firms spin off from a common parent, or a set of parents, then a cluster of firms could begin spontaneously. Schumpeterian entrepreneurship as the combination of proprietary and collective capitalism functions in regional clusters like Silicon Valley somewhere between local networks and global clusters (Figure 4).

This tentative model of the dynamics between local personal networks and global competitive clusters suggests that the dynamics between positioning, viability and value chain is fundamentally the learning process between individuals and firms. The dynamics within different elements of opportunities, strategy and performance relate to networking processes. These are at the core of the dynamics in the substantive performance approach.

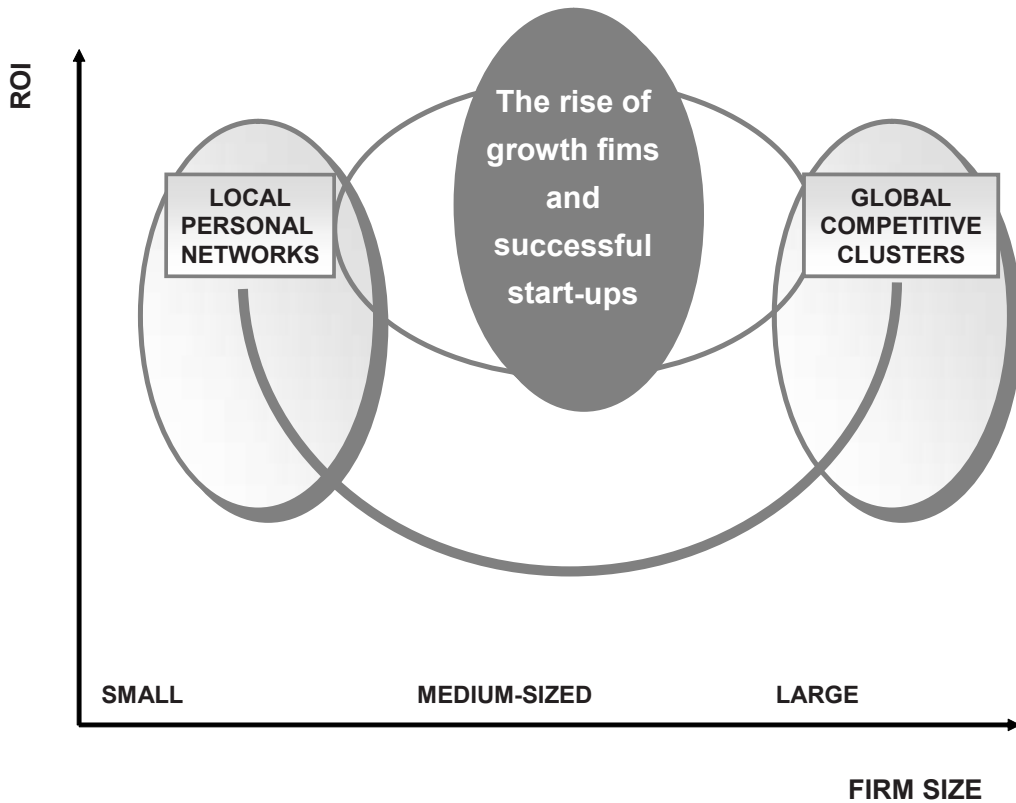


FIGURE 4. Two poles of the Schumpeterian dynamics.

### 3.3. Networking and learning capacity as the core of the rise of growth firms

The internationalization paths of Schumpeterian growth firms are not straightforward (Autio, 1995). There are obstacles, barriers in the markets. The first failure in an international operation in a certain market can be interpreted as a deadlock. This interpretation can lead to withdrawal from the market and operation (Korhonen, 1999). Networking is the commonly used method to increase the managerial learning capacity of growth firms. For example, the experiences of the SEC network (see Subcontracting Excellence Club S.E.C ry, ([www.secry.fi/](http://www.secry.fi/))), indicate that networking is the critical resource needed. The SEC was established in 1993 in a situation when Finland's economy was in crisis. Today, there are 17 top quality entrepreneur driven companies in the SEC. The utilization of advanced technology and virtual networks among a group of growth firms make it possible to cooperate around activities of mutual benefit such as training, benchmarking, marketing, management, research, etc. (Piore & Sabel, 1984). There are three basically different capitals:

### **1. Social (or Trust) capital**

The success of innovative firms is essentially dependent on institutional and business networks with low transaction costs, common language and trust. Informal and social relations within a local area are the basis of the networks. Putnam, Leonardi and Nanetti (1993) studied the relation of civic organizations, good local government and economic development in various regions in the Third Italy, the “Third Italy” around the province of Emilia-Romagna with 3.9 million residents. The success of the “Third Italy” is evident since in the past two decades the “Third Italy” has advanced from being Italy’s poorest province to become the fastest growing economic powerhouse in the country, famous for high-fashion, design-intensive goods. Putnam demonstrated many various means that have been used in the Third Italy to create institutional and business networks with low transaction costs, a common language and trust. Similar dynamics has been adopted in the SEC network in Finland.

### **2. Knowledge (and Technology) capital**

Knowledge is different from the traditional factors of production, since useful tacit knowledge cannot be exchanged without major transaction costs. The rise of Internet is credited with lowering the transaction costs for general codified knowledge. Intelligent networks and virtual spaces are developing rapidly. The greatest innovations are likely to occur from the cross-fertilization of professions. In order to convert knowledge into continuous innovations, innovative firms try to recruit people who can think laterally and holistically, not only adaptively and linearly (Lahti, 2000). Commercialization of new products is related to practical management skills, to adaptive and linear thinking. In the Third Italy, there are both creative designers and rational businessmen. Networks of innovative firms are led by marketing firms located in Milan and Florence. The most talented businessmen appreciate design industries and top positions in the leading firms. The SEC in Finland follows the same model. Skills, technologies, design, etc. are diversified to member firms but there is always one firm with overall responsibility for marketing of a certain customer project.

### **3. Money capital**

Networking is not a substitute for economic and financial skills. In order to understand the commercialization of the value added created by innovative networking, it is useful to benchmark venture capitalists; VCs that have a similar mission to network builders. VCs also have a long-term contract. When networkers seem to rely on trust as the basis of long-term contracting, VCs prefer formal legal contracting. Most VC funds have a fixed life of 10 years and a 3–5 year investing cycle. This is about the same kind of contractual model that most of the MNCs have with their subcontractors. VCs usually have several funds at the same time to avoid lack of capital prior to the end of a fund’s life cycle (Lahti, 2007b).

The problem of growth firms in internationalization operations is how to compensate the small scale in competition against MNCs. Instead of scale, growth firms have to rely on scope. What this means in practice is not easy to state. Networking is the best answer we know. The difficulty of economizing the extended scope of resources through networking, networking economies, depends on the fact that the network research has not succeeded in integrating three vital forms of assets (social, knowledge/ technology and money) into a model that could be applicable to growth firms. Figure 5 shows a model by Lahti (2000, 2007a) where there are three basically different kinds of capital.

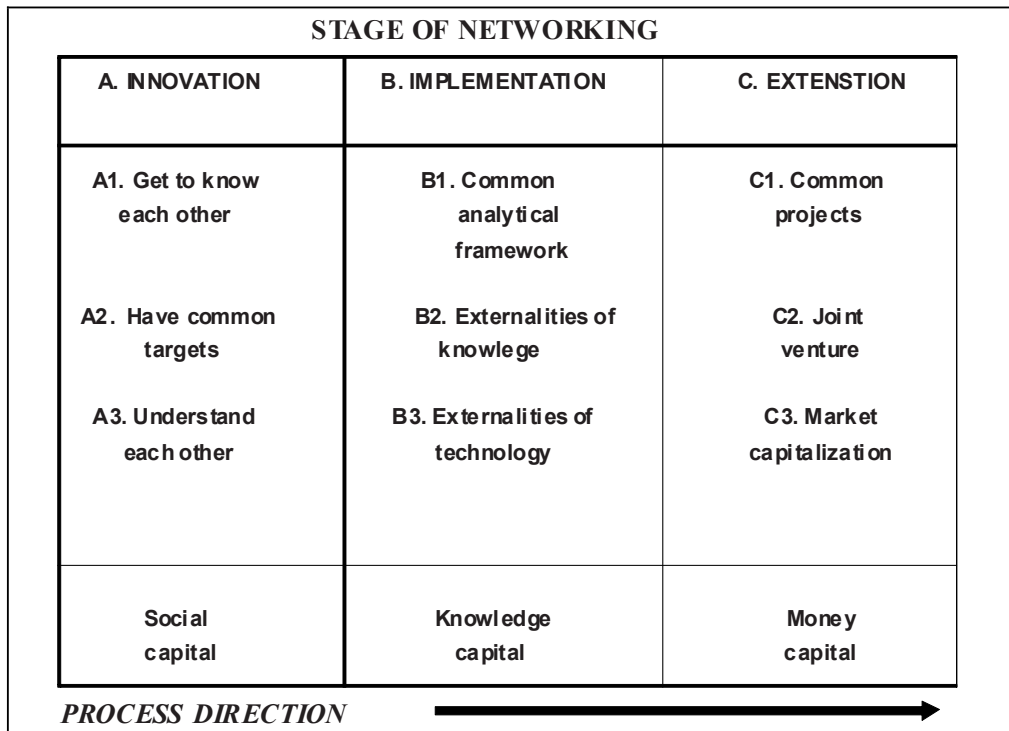


FIGURE 5. Accumulation of intangible and tangible capital.

#### 4. CONCLUSION

It was claimed that the current and future challenges in the global economy can be solved by developing entrepreneurial theories that explain the dynamics of Schumpeterian growth firms in the global markets. The substantive performance approach was introduced as an example of this



kind of dynamics. It turned out that learning and networking processes that combine individual human action with the collective learning processes of the firms demonstrate the promising solution to the processes of developing competitive advantage which is at the core of the substantive performance approach. The Schumpeterian heritage offers an alternative view to the Darwinian theory of evolution (Witt 2003). A Schumpeterian entrepreneur is the one who (1) adapts to the present-day discounted cash-flow (DCF) (Luerman, 1998), (2) learns from past performance (Chandler, 1990) and (3) acts for a better future (Lahti, 1983). As far I understand, this is what Schumpeter tried to say, and it also offers a solution to explain the dynamics of the rise of growth firms and successful startups in global competition as well as a model to support the development of such firms. Thus it has both theoretical and practical implications. However, to further elaborate this approach would require empirical and theoretical research on learning and networking processes in growth firms. ■

## REFERENCES

- ABELL, DEREK** (1980). *Defining the Business: The Starting Point of Strategic Planning*. Englewood Cliffs, New Jersey: Prentice-Hall Inc.
- ADAMS, WALTER & BROCK, JAMES** (1986). *The Bigness Complex, Industry, Labour and Government in the American Economy*. New York.
- ALLINSON, CHRIS & HAYES, JOHN** (1996). The Cognitive Style Index: A measure of intuition-analysis for organisational research. *Journal of Management Studies*, 1996, 33(1), 119–135.
- ANSOFF, H. IGOR** (1965). *Corporate Strategy*. New York: McGraw Hill Book Company.
- ANSOFF, H. IGOR** (1979). *Strategic Management*. London: The Macmillan Press Ltd.
- ARGYRIS, CHRIS & SCHÖN, DONALD** (1978). *Organizational learning*. London: Addison Wesley.
- AUTIO, ERKKO** (1995). *Symplectic and Generative Impacts of New, Technology-based Firms in Innovation Networks: An International Comparative Study* (doctoral dissertation). Espoo: Helsinki University of Technology.
- BAIN, JOE** (1956). *Barriers to Competition*. Cambridge: Harvard University Press.
- BARTELS, ROBERT** (1988). *The History of Marketing Thought*. Columbus: Publishing Horizons.
- BERGSTRÖM, MATTI** (1984). *Luovuus ja aivotoiminta (Creativity and cerebral activities)*. Espoo: Weilin+Göös.
- Boston Consulting Group, Perspectives on Experience Curve*** (1968). Boston: Boston Consulting Group, Inc.
- BUZZELL, ROBERT & GALE, BRADLEY** (1987). *The PIMS Principle*. New York: The Free Press.
- CASSON, MIKE** (1982). *The Entrepreneur: An Economic Theory*. Oxford: Martin Robertson.
- CHAMBERLIN, ERDWARD** (1933). *The Theory of Monopolistic Competition*. Cambridge: Harvard University Press,
- CHANDLER, ALFRED** (1962). *Strategy and Structure*. Cambridge, Massachusetts: The M.I.T. Press.
- CHANDLER, ALFRED** (1990). *Scale and Scope. The Dynamics of Industrial Capitalism*, Cambridge, MA.:The Belknap Press of Harvard University Press.
- COASE, RONALD** (1987). The Nature of the Firm. In: Louis Putterman, *The Economic Nature of the Firm*. Cambridge.
- COLEMAN, DONALD** (1980). Mercantilism Revisited. *The Historical Journal* 1980: 23, 4, pp. 773–791.
- CYERT, RICHARD & MARCH, JAMES** (1963). *Behavioral Theory of the Firm*. Englewood Cliffs, NJ: Prentice Hall.

- DAY, GEORGE S.** (1990). *Market-Driven Strategy: Processes for Creating Value*. New York: Free Press.
- DRUCKER, PETER** (1985). *Innovation and Entrepreneurship*. London: Heinemann.
- EHRBAR, AL** (1996). *EVA: The Real Key to Creating Wealth*. Boston, Massachusetts: Harvard Business School Press,
- EISENHARDT, KATHLEEN** (1989). Agency Theory: An Assessment and Review, *Academy of management review*, Vol. 14, No.1, pp. 57–74.
- FIGENBAUM, AVI & THOMAS, HOWARD** (1995). Strategic groups as reference groups: Theory, modeling and an empirical examination of industry and competitive strategy. *Strategic Management Journal*, 16, pp. 461–476).
- GALBRAIGHT, JOHN KENNETH** (1956). *American Capitalism: The Concept of Countervailing Power*, Boston: Houghton Mifflin.
- HAMEL, GARY & PRAHALAD, CK.** (1994). *Competing for the future*. Cambridge, MA.: Harvard University Press.
- HATTEN, KENNETH J.** (1974). *Strategic Models in the Brewing Industry*, Unpublished doctoral dissertation, Purdue University.
- HOFER, CHARLES & SCHENDEL, DAN** (1978). *Strategy formulation: analytical concepts*, New York: West Publishing.
- HOME, NIILLO** (1989). Kyläkaupan kuolema ja ulonjääminen: valikoituminen lopettavaksi tai jatkavaksi myymäläksi maaseudun päivittäistavara-kaupassa. *Acta Academiae oeconomicae Helsingiensis. Series A*; 63.
- HUNT, MICHAEL S.** (1972). *Competition in the Major Home Appliance Industry, 1960–1970*, Unpublished Ph.D. dissertation, Harvard University.
- HURST, D., RUSH, J. & WIHTE, R.** (1989). Top Management Team and Organizational Renewal. *Strategic Management Journal*, Vol. 10, pp. 87–105.
- JUNG, C. G., & HULL, R. F. C.** (1991). *Psychological Types (a revised ed.)*. London: Routledge.
- KILLSTRÖM, PEKKA** (2005). *Strategic Groups and Performance of a Firm. Towards a New Competitive Environment in the Finnish telecommunication industry*, (doctoral dissertation), Helsinki School of Economics, A-248, Helsinki.
- KIRZNER, ISRAEL** (1979). *Perception, Opportunity and Profit: studies in the theory of entrepreneurship*. Chicago: University Press.
- KNIGHT, FRANK** (1920). *Risk, Uncertainty, and Profit*. Chicago: University of Chicago Press.
- KORHONEN, HELI** (1999). *Inward-Outward Internationalization of Small and Medium Enterprises*, (doctoral dissertation). Helsinki School of Economics, A-147
- KRUGMAN, PAUL** (1991). *Geography and Trade*. Cambridge: Cambridge University Press.
- Lahti, Arto (1983). *Strategy and Performance of a Firm, an empirical investigation in the knitwear industry in Finland 1969–1981* (doctoral dissertation). Helsinki School of Economics, A-41, Helsinki.
- LAHTI, ARTO** (1989). A Contingency Theory of Entrepreneurial Strategy for a Small Scale Company Operating from a Small and Open Economy in Open European Competition. *Entrepreneurship & Regional development*, 1, 221–236.
- LAHTI, ARTO** (1991). Entrepreneurial Strategy Making, Arenas of strategic thinking, (eds. Juha Näsi) *Foundation of Economic Education*, 146–162, Helsinki.
- LAHTI, ARTO** (2000). *Creative Entrepreneurship and New Economy: the Challenge of the Nordic IT Cluster*. Publications of Helsinki School of Economics, W: 248, Helsinki.
- LAHTI, ARTO** (2007a). *Globalization, International Trade, Entrepreneurship and Dynamic Theory of Economics. The Nordic Resource Based View. Part One: Professors Joseph Schumpeter and Edward Chamberlin are still the Best Advisors of How Innovative SMEs Succeed in Globalizing Markets?* Publications of Helsinki School of Economics, W-436, Helsinki.
- LAHTI TOM** (2007b). *An examination of the importance and efficiency of tax incentives for Finnish informal Investors*. MIT publications.
- LAHTI, ARTO & PIRNES, HANNU** (1988). *Nordic Small Business Research*, ISBC 88, Helsinki.
- LAWLESS, MICHAEL, BERGH, DONALD & WILSTED, WILLIAM** (1989). Performance variations among strategic group members: an examination of individual firm capability. *Journal of Management*, 15, pp. 649–661.

- LEVITT, THEODORE** (1983). The Globalization of Markets. *Harvard Business Review* 1983: May-June.
- LINTUNEN, LIISA** (2000). Who Is the Winner Entrepreneur? An Epistemological Study of the Schumpeterian Entrepreneur (doctoral dissertation). Helsinki School of Economics, series A-180, Helsinki.
- LUEHRMAN, TIMOTHY** (1998). Strategy as a Portfolio of Real Options. *Harvard Business Review* 76, no. 5 (September–October 1998), pp. 87–99.
- LEI, DAVID, HITT, MICHAEL & BETTIS, RICHARD** (1996). Dynamic Core Competences through Meta-Learning and Strategic Context. *Journal of Management*, Vol. 22, No. 4, pp. 549–569
- LUOSTARINEN, REIJO** (1979). Internationalization of the firm. An empirical study of the internationalization of the firm with small and open domestic markets with special emphasis on lateral rigidity as a behavioral characteristics in strategic decision making (dissertation). Helsinki School of Economics, A-30, Helsinki.
- MACHLUP, FRITZ** (1967). Theories of the Firm: Marginalist, Behavioral, Managerial. *The American Economic Review* 57, pp. 1–33.
- MCCLELLAND, DAVID** (1961). The achieving society. Princeton: Van Nostrand.
- MARSHALL, ALFRED** (1920). Principles of Economics. an Introductory Volume. London: Macmillan.
- MC GEE, JOHN & THOMAS, HOWARD** (1986). Strategic Groups: Theory Research and Taxonomy. *Strategic Management Journal*, Vol. 7, 141–160.
- MINTZBERG, HENRY** (1980). The Nature of Managerial Work. Englewood Cliffs, New York: Prentice Hall.
- NEWMAN, HOWARD H.** (1973). Strategic Groups and the Structure-Performance Relationships: A Study with Respect to the Chemical Process Industries, Unpublished Ph.D. dissertation. Harvard University.
- NONAKA, IIKUJIRO & TAKEUCHI, HIROTAKA** (1995). The knowledge-creating company. Oxford: Oxford University Press.
- NORTH, DOUGLASS** (1993). Institutions, Institutional Change and Economic Performance. Cambridge: Cambridge University Press.
- OHMAE, KENICHI** (1996). The Evolving Global Economy. Cambridge, MA: A Harvard Business Review Book.
- PATTON, G. R.** (1976). A Simultaneous Equation Model of Corporate Strategy: The Case of the U.S. Brewing Industry, Unpublished doctoral dissertation. Purdue University.
- PENROSE, EDITH** (1959). The Theory of the Growth of the Firm. Oxford: Oxford University Press.
- PETERAF, MARGARET** (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*. 14 (March), pp. 179–191.
- PETERS, THOMAS** (1990). Thriving on Chaos, New York: Harper & Row.
- PIORE, MICHAEL & SABEL, CHARLES** (1984). The Second Industrial Divide: Possibilities for Prosperity. New York: Basic Books.
- PITT, M. & THOMAS, HOWARD** (1994). Industry Groups and Strategic Management: A Reappraisal of Strategic Group Concepts and Research Methodologies. In Herman Daems and Howard Thomas (eds.) *Strategic Groups, Strategic Moves and Performance*. Pergamon.
- PORTER, MICHAEL. E.** (1973). Consumer Behaviour, Retail Power, and Manufacturing Strategy in Consumer Goods Industries, Unpublished Ph.D. dissertation. Harvard University.
- PORTER, MICHAEL. E.** (1979). How competitive forces shape strategy. *Harvard Business Review*, 57(2): 137–145.
- PORTER, MICHAEL** (1980). *Competitive Strategy*, New York: Macmillan, Free Press.
- PORTER, MICHAEL** (1990). *Competitive Advantages of Nations*. New York: Macmillan, Free Press.
- PRAHALAD, CH. & HAMEL, GARY** (1990). The Core Competence of the Corporation. *Harvard Business Review*, 68, 3, pp. 79–91.
- PUTNAM, ROBER, LEONARDI, ROBERT & NANETTI, RAFFAELLA** (1993). Making democracy work: civic traditions in modern Italy. Princeton, NJ : Princeton University Press.
- REED, RICHARD & DEFILLIPPI, J. ROBERT** (1990). Causal ambiguity, barriers to imitation and sustainable competitive advantage. *Academy of Management Review* 15 (January), 88–102.
- REGER, RHONDA K. & HUFF, ANNE** (1993). Strategic groups: a cognitive perspective. *Strategic Management Journal*, 14, pp. 103–124.

- REVE, TORGER** (1990). The Firm as a Nexus of Internal and External Contracts. In: M. Aoki, B. Gustafsson, & O. Williamson (eds.) *the firm as a nexus of treaties*. Sage Publications.
- RICARDO, DAVID** (1817). On the Principles of Political Economy and Taxation [www.econlib.org/Library/Ricardo/ricPContents.html](http://www.econlib.org/Library/Ricardo/ricPContents.html)
- ROBSON, PETER** (1993). The New Regionalism and Developing Countries. *Journal of Common Market Studies*, Vol 31, No. 3.
- ROTTER, JULIAN** (1966). Generalized expectancies of internal versus external control of reinforcements. *Psychological Monographs*, 80.
- RUMELT, RICHARD** (1984). Towards a Strategic Theory of the Firm. In Lamb, R., (ed.) *Competitive Strategic Management*. Englewood Cliffs: Prentice-Hall.
- SALIMÄKI, MARKKU** (2003). Suomalaisen design-teollisuuden kansainvälinen kilpailukyky ja kansainvälistyminen (International competitiveness and competitive advantage of the Finnish designindustry), (doctoral dissertation), Helsinki School of Economics, A-220 , Helsinki.
- SASSEN, SASKIA** (1991). *Global Cities*. Princeton: Princeton University Press.
- SAXENIAN, ANNALEE** (1994). *Culture and Competition in Silicon Valley and Route 128*. Cambridge: Harvard University Press.
- SCHERER, FREDERIC & ROSS, DAVID** (1990). *Industrial Market Structure and Economic Performance*. Boston: Houghton Mifflin Company.
- SCHUMPETER, JOSEPH** (1950). *Capitalism, Socialism and Democracy*. New York.
- SCHUMPETER, JOSEPH** (1934). *The Theory of Economic Development*. Cambridge.
- SCHUMPETER, JOSEPH** (1937). *The Business Cycles*. New York.
- Subcontracting Excellence Club*** S.E.C ry [www.secry.fi/](http://www.secry.fi/)
- SILVER, DAVID** (1985). *Entrepreneurial Megabucks. The 100 Greatest Entrepreneurs of the Last 25 Years*. New York: John Wiley & Sons.
- SIMON, HERBERT** (1960). *The New Science of Management Decisions*. Harper & Row.
- SIMON, HERBERT** (1979). Rational Decision Making in Business Organizations, *American Economic Review*, pp. 493–513.
- SMITH, ADAM** (1976). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Oxford: Clarendon Press.
- SOLOW, ROBERT** (2000). *Growth Theory: An Exposition*. Oxford University Press, Etats-Unis.
- SPENDER, J.-C.** (1996). Making Knowledge the Basis of a Dynamic Theory of the Firm. *Strategic Management Journal*, Vol. 17 (Winter Special Issue), pp. 45–62.
- STIGLER, GEORGE J.** (1968). *The Organization of Industry*. Chicago: University of Chicago Press.
- TAYLOR, FREDERICK** (1911). *The Principles of Scientific Management*. New York: Harper Bros.
- United Nations World Youth Report*** 2005, <http://www.un.org/esa/socdev/unyin/documents/wyr05part1.pdf>
- UNCTAD** (2001). *World Investment Report 2001: Promoting Linkages*, New York and Geneva, United Nations.
- WALRAS, LÉON** (1877, printed 1954). *Elements of Pure Economics*. Harvard University Press.
- WILLIAMSON, OLIVER** (1985). *The Economic Organization. Firms, market and policy control*. Wheatsheaf Books.
- WITT, ULRICH** (2003). *The Evolving Economy*. Cheltenham: Edward Elgar.
- The World Bank's Global Economic Prospects*** 2007 <http://www.google.com/search?hl=en&q=Global+Economic+Prospects+managing+the+next>