

# **The importance of intellectual capital as a primordial factor to success in the new economy**

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## **Abstract**

The contribution of the current paper is to determine the entrepreneurs' knowledge perception based on issues related to innovations as a key actor to success in the new economy system. The theoretical model presented studies the entrepreneur knowledge perception. The entrepreneur uses the personal contact network and customer communication, a customized form of marketing, which is uncomplicated and follows a common-sense approach to business development. This is how market information is gathered. It derives from the ability to identify and respond to market signals. Some individuals have superior knowledge and skill at estimation of consumer wants, superior ability to control and direct the actions of others, greater confidence that their business estimates-business judgments will prove correct.

**Key Words:** entrepreneurs, innovations, intellectual capital, knowledge, success

**JEL Classification:** O. Economic Development, Technological Change, and Growth / O3 Technological Change • Research and Development • Intellectual Property Rights / O34 Intellectual Property and Intellectual Capital.

## **Introduction**

Research into innovation processes generally takes one of two approaches. It either relies on a voluntaristic view to stress the capacity of risk-taking actors (entrepreneurs) who constantly exercise creative and destructive action in an age of revolution and disruption (Christensen, 1997; Schumpeter, 1942); or favors a deterministic position, collectively including innovation processes within the institutional context of structures, in which actions are socially shaped (Garud & Rappa, 1994; Pinch & Bijker, 1987). The action-structure dichotomy has provided important insights into the nature of innovation, but it does not tell the whole story.

Because innovation exists in both voluntaristic (action) and deterministic (structure) realities, any adequate theoretical understanding of it must embrace both aspects (Slappendel, 1996; Tushman & Rosenkopf, 1992; Van den Ende & Kemp, 1999).

Because innovation implies both technological revolution and technological evolution, a satisfactory innovation model must also move beyond a stage conception of the innovation process, to a dynamic, continuous conception of change over time (Van de Ven & Rogers, 1988: 638)

Drucker (1985) explained how managers expect to plan for, or count on a process that is itself utterly dependent on creativity, inspiration, and old-fashioned luck. He described innovation as unexpected occurrences with process needs, industry and market changes, demographic changes, changes in perception, new knowledge (innovation based on knowledge) and a theoretical approach to principles of innovation. New Product Development Management, viewed as a knowledge-creation activity, should emphasize cognitive team processes rather than purely social processes. Drucker's thought is very close to reality. Knowledge creation is therefore perceived as one of the major assets of innovative organizations, and innovative organizations are composed by knowledge creation. It seems that innovation and knowledge creation are defined by themselves. Nonaka and Takeuchi (1995), in their study of knowledge creation, as well as the earlier studies of Bell (1976) and Drucker (1969), focused very strongly on production of new knowledge in the perspective of a knowledge economy. To Lindley (2003), the knowledge society is a long-run structural change in the economy; the production, dissemination, and use of knowledge play prominent roles as sources of wealth creation and exploitation.

Learning is critical to such a society in terms of accommodation, assimilation and transformation, which is in turn dependent on issues, context and conditions; and to individuals, organizations and nations in terms of new skill formations (Illeris, 2002; Lindley, 2003; Nijhof, 2000) in order to be able to produce new knowledge.

Madhavan and Rajiv Grover (1998) proposed a model that linked the cognitive attributes of team members and leaders and the process attributes of the team to the efficiency and effectiveness of their potential knowledge. The objective of their article is to develop some propositions, using the distributed cognition framework, on Drucker's thought is very close to reality. Knowledge creation is therefore perceived as one of the major assets of innovative organizations, and innovative organizations are composed by knowledge creation. It seems that innovation and knowledge creation are defined by themselves. Nonaka and Takeuchi (1995), in their study of knowledge creation, as well as the earlier studies of Bell (1976) and Drucker (1969), focused very strongly on production of new knowledge in the perspective of a knowledge economy. To Lindley (2003), the knowledge society is a long-run structural change in the economy; the production, dissemination, and use of knowledge play prominent roles as sources of wealth creation and exploitation.

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Departing from Drucker is the attribution of innovation to a process that depends on creativity, inspiration and luck. Allen (2003) defines innovation as a random and unpredictable process, whereas innovation is a manageable process that turns an invention into something useful having commercial value. Innovation is also about creating new ways of doing things, and may include the development of new processes or distribution strategies (Allen, 2003). Christensen identified innovations that are paradigm shifters- those that radically change the way we do things (Christensen, 1999). Investments in new businesses are uncertain. There is very little cushion to absorb any bad-news outcomes. Innovation that creates the sort of growth that delights investors is innovation that is genuinely disruptive. Disruptive innovations typically under-perform established products along the dimensions of performance that define competition in existing markets. At the same time, they gain a foothold by over performing along other dimensions that are valued by market segments but could be unprofitable to incumbent firms because they are small, generate thin margins, or (as is usually the case) both. Over time, performance improvements that are valuable to large, profitable markets enable disruptive innovations to capture market share from incumbent firms. The disruptive products eventually provide competitive levels of performance along traditional dimensions, but maintain the benefits that gave them a foothold in the first place (Christensen and Raynor, 2003).

The process of innovation includes much more than the generation of innovative ideas. Frequently the innovation process itself is often not very well understood within organizations or by

the individuals who practice innovation. Ideas are not generated in any conscious or systematic way. The ideas which are tossed up ad hoc, are rarely well-managed through the phases of implementation (Henry et al., 1991). Successful organizations require a process for 'ensuring the usefulness of the innovations that are implemented, without stifling all change' (Fair and Ford, 1990).

The formal and informal structure of organizations and their external linkages have an important bearing on the rate and direction of innovation, and how competencies and capabilities co-evolve (Argyres, 1995; Teece, 1996) Innovative performance in firms refers to their ability to develop and hold intellectual property protection over technology demanded by large commercial markets (Spencer, 2003).

Organizations create value as employees transform the input of resources into products of greater worth. The patterns of interaction, coordination, communication and decision-making through which they accomplish these transformations are processes. Processes include the ways products are developed and made, and the methods by which procurement, market research, budgeting, employee development, compensation, and resource allocation are accomplished.

When creating a new unit to exploit a particular innovation, the processes most crucial to examine are not usually the obvious value-adding processes involved in logistics, development, manufacturing or customer service. Rather, they are the enabling or background processes that support investment decisions. Many managers unwittingly sabotage their own success by not tuning these processes to the needs of new business growth. Some relative observations to fight with the obstacles to expand innovation strategies in large corporations and small and medium enterprises are mentioned in the literature. The most relevant are the following: A frequent mistake in large, mature firms is that they frequently do not have well-defined strategies or strong vertical integration (Argures, 1996). They also have very limited communication channels between departments. These phenomena can kill innovation production before it is born. Mature firms sometimes suffer myopia even if they are close to the innovation change or exposed to new ideas. Contrary to large and vertical firms, the role entrepreneurship plays in determining the level of success realized by individual small firms cannot be overstated. Although external support is essential in enabling a healthy environment that encourages business growth, it cannot function efficiently without effective entrepreneurial input. According to this view, potential entrepreneurs have the ability to control, direct or adjust the outcome of each major influence. Entrepreneurship has been characterized as the interaction of the following skills: inner control, planning and goal setting, risk taking, innovation, reality perceptions, use of feedback, decision making, human relations and

independence (Kuratko and Hodgetts, 1998). To a layman, the word "entrepreneur" means somebody who sets up and finances new commercial enterprises to make a profit. But a widely accepted definition, and one backed by many studies, is that successful entrepreneurs are individuals who are not afraid to fail by taking risks. Risk-taking is the one essential characteristic of entrepreneurs, who distinguish themselves as risk takers. They are risk takers in presenting promises to their clients of fiscal as well as outcomes associated with their innovative products and services. For entrepreneurs, there are financial risks associated with offsetting the costs of establishing and operating a business with income from clients.

Every developed economy wants an enterprise and innovative culture. As the rate of economic change increases, entrepreneurship is seen as vital for future prosperity and competitiveness. But it also has a broader significance, acting as a vital stimulant for an open pluralistic culture and a driver of social and civic renewal. But despite the emergence of a knowledge-based economy, and a distinct shift in the qualities needed for companies to succeed, myths about entrepreneurship still persist.

All entrepreneurs understand that their intellectual capital and the ability to use that capital to improve the products and services of others is an even exchange for financial gain. New core competencies of firms involve innovation and planned change. Also can take various forms, including technical/subject matter know how, a reliable process, and/or close relationships with customers and suppliers (Mascarenhas, et al. 1998). It may also include product development or culture, such as employee dedication

### **Innovation and intellectual capital**

In modern societies entrepreneurship and innovation are widely seen as key sources of Intellectual capital to pursue economic growth and welfare increases. In recent years the concept of Intellectual capital has been widely used in both economics and sociology. Increasingly, the significance of intellectual capital for those interested in studying organizations in general and entrepreneurship in particular has also become apparent (Adler and Kwon, 2002; Anderson and Miller, 2002; Galunic and Moran, 2000).

The essence of intellectual capital is that education, network relationships, including family, friends, co workers, casual relationships and even contact with strangers, provide a rich resource in terms of knowledge, information and support.

A commitment to innovation has long been considered to be important to the success of entrepreneurial ventures and small firms (Fiol, 1996). Research has shown that innovation

stimulates ventures' growth (Wolff and Pett 2006; Motwani et al. 1999; Max and Majluf; 1991) and also provides a key source of competitive advantage in the absence of scale economies (Lewis, et al. 2002). Considered from the resource-based view of the firm (Barney, 1991), successful innovation may be dependent on the presence of other organization-specific skills and capabilities.

Entrepreneurial innovation has also meant losses and hardships for some members of society: it is destructive of some stakeholders wellbeing even as it creates new wellbeing among other stakeholders. Therefore much uncertainty pervades the introduction of innovations by entrepreneurs. In fact, the very concepts of innovation and entrepreneurship are difficult to deal with when the epistemological implication of innovations - true novelty - is taken seriously (Dew and Sarasvathy, 2007). Innovations vary in complexity and can range from minor changes to existing products, processes, or services to breakthrough products, and processes or services that introduce first-time features or exceptional performance. Process definition of innovation proponents concern themselves mainly with how the interplay between events and people at each stage of the process influences events in subsequent stages, determining whether the adoption process will continue (Cooper, 1998). Issues of interest for these scholars include the role of communication in facilitating successful innovation, best practices in terms of sequencing the stages of innovation, the characteristics of individuals and teams in successful and unsuccessful processes, and the nature of the relationships between parties involved in the innovation process (Frishammar and Horte, 2005). In contrast, those who see innovation as a discrete event suggest that implementation of innovation occurs when there is actual acceptance of risk and the commitment of resources occurs. A growing number of practitioners and researchers define innovation as any idea, practice, or object that the adopting individual or organization regards as new (Bhaskaran 2006; Damanpour, 1991). From this perspective, the newness attached to an innovation remains a matter of perception. Innovation has further been defined as "the willingness to place strong emphasis on research and development, new products, new services, improved product lines, and general technological improvement in the industry" (Slevin and Covin, 1990, p. 43). Regardless of definitional debates, success in innovation typically requires strong managerial support and resource commitment (Fujita, 1997). Even then, only 4 percent of all new product innovations beat the expected return on investment (Nussbaum, Berner, and Brady 2005). To make a product innovation success a real goal, organizations should develop economic investment and Intellectual Capital (IC).

Intellectual capital is a primordial factor to success in the new economy and a strong mechanism to stimulate innovation creation in organizations that want to develop outstanding performance in the new economy.

Competence in the new economy is principally driven by information and knowledge. This latter is identified by the Organization for Economic Cooperation and Development as an explanation for the increased prominence of the IC as a business and research topic. Specifically, the importance of the IC is emphasized in:

- The revolution in information technology and the information society;
- The rising importance of knowledge and the knowledge-based economy;
- The changing patterns of interpersonal activities and network society; and
- The emergence of innovations as the principal determinant of competitiveness (Petty and Guthrie, 2000).

The term "intellectual capital" has sometimes created confusion, but in 1999 the OECD described the concept as "the economic value of two categories of intangible assets of a company:

1. Organizational ("structural") capital; and 2. Human capital (Petty and Guthrie, 2000). Structural capital refers to the ability of a company to capture its knowledge and culture. Structural and human capital are the knowledge, skills, and competencies of the people deployed throughout the structure of the company. There are structural elements in a company that allow people to put their capabilities to better use than they could on their own. Such elements exist independent of individual people but provide a framework in which individuals can perform better. (Leiaert, Candries, and Tilmans, 2003)

Intellectual capital, as we can see, is supported by the human capital, and the latter could be considered as the incubator of innovation potential. Inside organizations we find human capital: people with skills to create. This is the latent talent necessary for the birth of innovations. Talent is mental or physical aptitude. Specific natural or acquired ability is also the natural endowment or ability of a superior quality. Innovation is the result of the combination of talent and creativity and is founded only in the human capital of organizations. All kinds of leadership and ideas represent components of human capital. Because innovation comes from the intellect or knowledge sets pertaining to human beings it is apparent that all intellectual capital originates first as human capital (Johnson, 2002). Innovation process then represents components of structural capital, elements that constitute the legal and process value of a firm (Johnson, 2002).

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### **An innovation-diffusion model**

There are many different innovation processes adaptable to different types of business but one described by Mitsufoji proposes a model of innovation-creation and diffusion processes in terms of a self-organizing system. It assumes that considerable interactions between an innovation and the social system exist when it diffuses, and re-examines the innovation-diffusion theory

Examinations of innovation have been divided into two major research streams (Brown and Eisenhardt, 1998). The first stream examines issues related to the diffusion of innovations across nations, industries, and organizations (O'Neill, Poudel, and Buchholtz, 1998). In this stream, an innovation is defined as a technology, strategy, or management practice that a firm is using for the first time, whether other organizations or users have previously adopted it, or as a significant restructuring or improvement in a process (O'Neill, Poudel, and Buchholtz, 1998).

The second stream examines the influence of organizational structures, strategic processes, and people on the development and marketing of new products (e.g., Dibrell and Craig 2006; Zahra, 1993). Within this second research stream, an innovation refers to a new product that an organization has created for the market and represents the commercialization of an invention, where invention is an act of insight (Damanpour, 1991). New products may take different forms, such as upgrades, modifications, and extensions of existing products. The most prominent innovation dimensions within these research streams are radical, incremental, product, process, administrative,

and technological (Camison-Zomoza Lapiedra-Alcami and Boronat-Navarro, 2004). Technology can also be seen from the perspective of core competencies and dynamic capabilities. In fact, technology is nothing more than a competency insofar as "a competency can be defined as a unique combination of knowledge and skills that allow the generation of a series of profile innovations" (Chiesa and Barbeschi, 1994, p. 293). The concept of technology can also be associated with a dynamic capability because "dynamic capabilities reflect the ability of an organization to obtain new and innovative forms of competitive advantage" (Teece et al. 1997, p. 516).

After the appearance of an innovation, relevant engineers or professionals witnessing the innovation conduct various kinds of trial and error exercises to compete with each other. In addition to these professionals, relevant social organizations such as professional users' groups join the innovation-diffusion process so as to interpret it. The effect of incentives on worker innovation, productivity and interaction in an experimental production setting is examined. The incentives used were intended to foster either cooperative or competitive behavior within and between work groups.

Appearance of the dominant design and passing through the irreversible phase. Some innovations diffuse explosively when dominant designs appear, while other innovations may disappear because they cannot catch on among members of the social system and cannot reach the threshold for the diffusion. The population of the potential adopters increases from specific groups to the more generic groups in the social system and full-scale diffusion occurs.

The social system alters its structure from a previous one, and cannot remain effectively without the innovation. Thus, it becomes precipitated and embedded in the social system. On this occasion, the development level of the individual element technologies is not uniform. In order for the innovation to become convergent and stable, relevant element technologies should be fully developed (Hughes, 1983). As the shortcomings of the technology system concerning the innovation diminish to the level at which members of the social system are satisfied with the usage of the innovation, it becomes stable. It can be said that an innovation is shaped not only by engineers but also by various social groups. Now that the innovation-diffusion process enters into the closure phase (Bijker, et al. 1987), the points at issue apparently disappear. The innovative artifact becomes an ordinary one and infiltrates the social system. Creativity and innovation are parts of the daily work in the present century. Many theories have been exposed to redefine its principles and actuation.

Some interesting ideas have been explained. Innovation has been. Throughout intellectual history, the entrepreneur has worn many faces and played many roles. One of those roles is innovator—an association made popular by Joseph Schumpeter. As Schumpeter's view has come to

dominate the field, the earlier history of the concept—particularly that part which linked entrepreneurship and innovation—has become increasingly obscured and forgotten.

## **Conclusion**

We began this paper with the argument that innovation is often the most important strategic resource within organizations (Grant, 1996). Yet innovation usually resides with individuals (Nonaka 1994). This implies that knowledge integration is a fundamental process by which firms gain the benefits of knowledge to create competitive advantage (Grant 1996).

Entrepreneurship is the practice of starting new organizations or revitalizing mature organizations, particularly new businesses generally in response to identified opportunities. It is often a difficult undertaking, as a vast majority of new businesses fail. Entrepreneurial activities are substantially different depending on the type of organization that is being started.

In sum, this paper of how knowledgeable entrepreneurs are, (the technological, market and competition dimensions) categorizes entrepreneurs by technological knowledge-holders with high probabilities to participate in the market place with their products or services. This paper enriches our understanding of knowledge perception and presents possible strategic opportunities to new products or services development. At a time when entrepreneurial theory is oriented to knowledge, human capital, intellectual development creation, our research contributes to this end.

We can conclude that the Entrepreneur's knowledge perception model is a contribution to the science in the construct of entrepreneurs, a measure instrument with a high validation was proposed and can be used for other scientists to prove new studies and finally we can certify that this model is precisely to prognosticate the entrepreneur's market presences depending of the degree of perception knowledge in the context of technology, market an competition

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