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Entrepreneurship

Creativity and Innovative Business Models

Edited by Thierry Burger-Helmchen

ENTREPRENEURSHIP – CREATIVITY AND INNOVATIVE BUSINESS MODELS

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Contents

Preface

The birth and infancy of entrepreneurship was turned into a specific area of academic study and empirical research quite early. The field greatly evolved, and at the same time, a constant urge to deal with real problems existed, from firm creation to industrial growth, including firm strategy and economic policy.

Economic, sociological, and managerial academics began to devise a detailed and interpretative framework for the study of entrepreneurship. Many people came from different fields, and there was a need to overcome the limitation of the standard neoclassical theory of entrepreneurship. New areas of research were embraced, thereby recognizing that powerful mechanisms are at work in entrepreneurship and require systematic analysis.

The economics of entrepreneurship

Entrepreneurship, in a very broad sense, has always been at the heart of firm and industrial dynamics – extoling its influence on a macro level. Starting with the analysis of the specific properties and effects of entrepreneurship as an economic function, researchers then proceeded to the historical and normative analysis of resource allocation mechanisms in the field of entrepreneurship. More generally, they analyzed the socio-economic institutions that could be relied upon to produce, mediate and favor entrepreneurship.

Many authors tried to define Entrepreneurship:

"*Entrepreneurship is an act of innovation that involves endowing existing resources with new wealth-producing capacity*"

Drucker (1985)

"Entrepreneurship is a process by which individuals pursue and exploit opportunities irrespective to the resources they currently control"

Stevenson (1985)

"Entrepreneurship is the creation of organizations, the process by which new organizations come into existence"

Gartner (1988)

"Entrepreneurship is a way of thinking, reasoning, and acting that is opportunity drive, holistic in approach, and leadership balanced"

Timmons (1997)

"Entrepreneurship is about how, by whom, and with what consequences opportunities to bring future goods and services into existence are discovered, created and exploited"

Venkataraman (1997)

From these definitions, we can see that the academic understanding of entrepreneurship broadened over time. The first dimension of the entrepreneurial space is the continuum between economic approaches oriented towards the origin and context of entrepreneurship, social science approaches and managerial concerns. Among others, influences can also be found in the education context, or, the institutional context. And finally, researchers raised the question of what happens if we do not take those issues into account? What if we take them for granted and simply state that entrepreneurs do things differently, for whatever the reason and have ideas in different ways other than economic factors?

The following table summarizes these three divisions of research in entrepreneurship.

	Approaches		
	Classical economic and social context *Where*	Education, development and institutional context *Why*	Managerial context *How*
Description of the entrepreneur, object of the study:	The entrepreneur is an important element of macro and local development. The impact can depend on gender, geographical location and social context.	Is one a born entrepreneur? Does one become an entrepreneur through a specific education system or a special institutional context?	The entrepreneurial process, the detection of opportunities, the development of ideas, creativity, and innovation. The construction of new business models
Sectors of interest:	Political level (country, region, town level)	Educational system, historical studies, political influence	Economists involved in theory of the firm, management science

The three volumes of entrepreneurship are each dedicated to one of the above divisions. The first volume "**Entrepreneurship - Gender, Geographies and Social Context**" sheds new light on how the entrepreneur is an important element of macro and local development by taking into account gender, geographical places, and social context.

The second volume "**Entrepreneurship - Born, Made and Educated**" raises the question why some human beings turn into great entrepreneurs. Is it a gift of Mother Nature, or the outcome of a specific education system or from other institutional construction?

The last volume "**Entrepreneurship - Ideas, Creativity and Innovative Business Models**" is more managerial oriented and takes into account the detection of opportunities, the creative processes, and the impact of the entrepreneurial mindset on business models.

Entrepreneurship – Creativity and innovative Business Models

This book on entrepreneurship is composed of two sections. **Section I: Ideas, Creativity, and Entrepreneurship** is devoted to the specific processes, actions and visions developed by entrepreneurs. **Section II: New Business Models**, is composed of articles studying the concrete impact of entrepreneurship and the way a firm can carry out its activities.

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Part 1

Ideas, Creativity & Entrepreneurship

1

Entrepreneurial Creativity as Discovery and Exploitation of Business Opportunities

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1. Introduction

Our perception of the creative formation of organizations through entrepreneurship has changed dramatically during the past ten years (e.g., Carlsson and Eliasson 1993: Davidsson 2003). For a long time, entrepreneurship was construed in terms of managing a small business or being the owner-manager thereof. However, entrepreneurship is not directly associated with this particular context; it is essentially context-free organizational creativity (Gartner et al. 2003; Hjorth 2003, 2004; Sarasvathy 2001; Steyaert and Hjorth 2003). It is equally likely to be present in large corporations' renewal efforts and in the identification of new markets and technologies as in the development projects of public organizations or, for that matter, in the reorganization of universities (cf. institutional or social entrepreneurship). At the core of entrepreneurship lies the creation and exploitation of entrepreneurial opportunities regardless of the context (Shane 2003). Entrepreneurship is a creative activity taking place when neither the goal nor often the initial conditions are known at the start, but constructed during the process (Sarasvathy 2001). This happens, because there is no single right or best solution, and even the starting situation may be so complex and constantly changing that it is difficult to analyze it reliably in the extent necessary. Bearing in mind the discussion above, this paper uses the term entrepreneur to refer to an individual or a community of individuals (organization) that creates new business in its operational environment (cf. Hjorth 2003).

Crucial for the study of entrepreneurship is the theory of organizational creativity (Hjorth 2004), for it is impossible to understand the behaviour of an entrepreneurial individual without considering the entrepreneur's psychological abilities, the social impact of the environment and the interplay between the two, manifesting itself in the entrepreneur's capacity to create something new or original (see Woodman, Sawyer and Griffin 1993). Rational models of entrepreneurial activity presume that the environment induces individuals to perceive opportunities in it, to identify promising market niches or introduce new innovations (Shane 2003). Regarding this view as being too narrow (Wood and McKinley 2010; see also Burrell and Morgan 1979), this paper assumes that individuals construct their own realities using concepts available in their culture (Downing 2005). Thus, entrepreneurs and their business opportunities are not merely products of the environment, which the entrepreneurs will find, if they only know how to

search rationally (Kirzner 1979); rather, they are a product of the interplay between the entrepreneurs' own creativity and their organizational environment (Kirzner 1997). This line of thinking is in alignment with the research of Sigrist (1999), who posits that perceiving and exploiting business opportunities involves the creative discovery of something new (see also Sarasvathy 2001).

How can we explore the link between business opportunities and creativity, given that only a few research papers have been published on creative processes in business (Jenssen and Kolvereid 1992; Muzyka 1992; de Koning and Muzyka 1996; Kirzner 1997; Hills, Shrader and Lumpkin 1999)? Too few in number, the conceptual foundation provided by these papers is insufficient for constructing an adequate framework for research. Nonetheless, research papers on entrepreneurship often hold entrepreneurship as a form of creative activity (see, e.g., Schumpeter 1934; Johannisson 1988; Baumol 1993; Bull and Willard 1993; Bygrave 1993; Hjorth and Johannisson 1997; Kirzner 1997; Wood and McKinley 2010). Moreover, research has demonstrated that the dynamic, change driving spirit of entrepreneurship is associated with the ability of entrepreneurial individuals to generate new ventures. More often than not, however, this research merely stakes its claim, while failing to systematically explore the creative processes of entrepreneurship (Alvarez and Barney 2010).

This is not to say that no research exists that specifically investigates entrepreneurship as a type of creative activity (e.g., Fernald and Solomon 1987; Winslow and Solomon 1987, 1989, 1993). Unfortunately, this research is plagued by a problem that, according to Gartner (1990), pervades the entire history of entrepreneurial research; namely, that is has focused on distinguishing entrepreneurs from other business people in terms of creativity and innovation, instead of making an effort to study and understand the creative process itself (see also Steyaert, 2007). Personality characteristics of entrepreneurs have little bearing on how they—as individuals or organizations—create new business. As a result, even these studies fail to provide a sound basis for research. Although falling short of adequately supporting the development of the idea of viewing organizational creativity as a form of perceiving and implementing business opportunities, they justify exploring the emergence of new business ventures as a creative process (cf. Hjorth 2003)

This paper reflects on organizational creativity in terms of discovery and exploitation of entrepreneurial opportunities. A theoretical foundation for the notion of perceiving and seizing business opportunities as a creative process is first sought in creativity research. On this basis, the paper constructs a view of entrepreneurial creativity as a creative process and presents a theoretical conception of the discovery of business opportunities as a creative process. The structure of the paper is as follows: First, a theoretical background will be provided for the research area, followed by an inquiry into what makes the processing of business opportunities a creative activity. Third, this paper will present a review of existing research on creativity, which it then uses as a foundation for developing an understanding of creativity as a phenomenon. Fourth, the essence of creativity will be charted and the concept of creativity, as it emerges from research, will be discussed. Next, a framework, based on a theoretical approach to creativity, will be presented for the entrepreneurial ability to generate business opportunities. Finally, a discussion will be conducted on the issues raised by this research.

2. Theoretical background — entrepreneurship as the creation of new business

A core attribute of entrepreneurship is the ability to develop and exploit business opportunities (Shane and Venkataraman 2000). Some have gone as far as claiming that in today's complex and ever-changing financial and business environments, venture opportunities and the ability to recognize and seize them are more vital to success than the entrepreneurs/manager's personal characteristics or the firm's efficiency (e.g., Puhakka 2007). One interesting reference in this context is MacMillan and McGrath's book on strategic management (2000), which states that the central weapon in the strategic arsenal of business organizations is the ability to create and exploit new venture opportunities. This represents a remarkable opening gambit to a wider mindset in which entrepreneurship is regarded as a strategic competence, capable of being utilized in all manner of organizations.

Recognized as the creation of business opportunities, entrepreneurship comprises ideas, beliefs and actions directed toward generating new economic activity that emerges gradually as the process continues (Sarasvathy, Dew, Velamuri and Venkataraman 2003). Hence, entrepreneurship is strongly present when the actors enter a business space ("entre") without knowing what it is all about, what kind of business they want to conduct or even what they are striving at. It is also less relevant, whether the outcome of the activity is the establishment of a new firm, an extension of existing activities or expansion into a new market. We are dealing with a problem-solving situation in which the situation, rules, solutions and goals must be created through action (Sarasvathy 2001). Under these conditions, it is practically impossible to apply logic to arrive at the right and best solution. Central to the effort is identifying and creating a business opportunity using the entrepreneur's creative ability as functional instrument. This is precisely the phenomenon that entrepreneurship circles around and one that researchers should delve into (Davidsson 2003). After this event, when the actors move forward into the next space ("prendre") centering around the implementation of the new business activity, we are no longer concerned with intrinsic elements of entrepreneurship.

"Entreprendre", the original French term for entrepreneurship, offers an excellent description of the concept's essence (for further details, see Hjorth 2003; Chell 2007). Entrepreneurship is stepping into a space where new business can be hatched, without an idea of the nature of that business, and then making an effort to outline it. It also includes stepping out of that space with a business opportunity and realizing it through other measures, such as management initiatives and marketing. What goes on in this space is an exceedingly interesting phenomenon. This entrepreneurial space and the creation of a business opportunity within it, is by no means an isolated process, detached from its environment, nor a closed, internal process from which a novel business idea crops up. Rather, this space is a process in which the mental creative powers of the entrepreneur and the environment are in continuous dynamic interaction. Occurring within this space is something that absorbs influences from present business activities, bringing chaos and discontinuity into it. How can we characterize this process is the question that the next section seeks to answer.

3. Processing of business opportunity — a creative or rational undertaking

As an organizational process, the task of entrepreneurship is to revitalize and promote the economy by breaking old routines and patterns. Moreover, a business opportunity can be viewed in terms of entrepreneurial cognition of the business situation, the entrepreneur's internal model of it, arising out of the entrepreneur's construal of not only the situation's temporary dimension, window of opportunity and key business elements, but also of their interrelationships (Vesalainen and Pihkala 1996). It is through these three factors and their relations that the entrepreneur constructs an internal model of the opportunity.

By regarding business opportunity in terms of cognition, we must presume that it originates from a cognitive process. This, then, leads to a notion that the ontological stance of this study is cognitive (social) constructivism (Chell 2007; Chiasson and Saunders 2005; Steyeart 2007). Cognitive constructivism, according to Steyaert (2007), *"focuses upon (mostly individualized) cognitive processes through which individuals mentally construct their worlds using socially mediated categories, simultaneously 'downplaying' the role of language as an external expression of internal cognitions"*.

In this research, cognitive process is not seen as a systematic and rational arrangement of knowledge gleaned from the environment (e.g., Christensen, Madsen and Peterson 1994), but as a creative process, in which information is utilized to develop a completely new knowledge structure (Chell, 2007; de Koning and Muzyka 1996; Hills, Shrader and Lumpkin 1999). In other words, business opportunities are not the result of first searching for seeds of knowledge in the available resource base, including technological innovations, markets, competent personnel, available production facilities and equipment, and then applying logic to single out the best possible opportunity (see Cadotte and Woodruff 1994).

It is not as simple as that, because perceiving a business opportunity calls for a creative insight (cf. Kirzner 1997) to combine the wealth of information at hand in a meaningful way. Were it only a matter of organizing information, everyone would be able to identify venture opportunities. This is blatantly not the case (e.g., de Koning and Muzyka 1996; Hills and Shrader 1998), however, it is entrepreneurs who are specifically good at spotting business opportunities based on snippets of information found in the environment. Nevertheless, information alone is not enough, because piecemeal information tells us precious little about business opportunities. They only emerge when the entrepreneurial mind (either individually or collectively) arranges and assembles the pieces, putting them in a meaningful relation to one another, and thereby creates a new knowledge structure. Similarly, a large circle, two small circles, a triangle and a line are devoid of meaning as separate entities, other than as geometric shapes, and yet they acquire a meaning when arranged in a specific order, such as a human face. Relationships among the pieces are just as important as their meaning content.

Thus, business opportunities are processed such that the entrepreneur uses acquired knowledge and previous experiences to assemble a new whole of the pieces, because the situation is baffling, confusing, chaotic and, most of all, inconducive to providing a right answer (see Singh, Hills, Hybels and Lumpkin 1999). Reassembling the pieces does not lead to a collection of pieces, but to a novel image, whose totality is defined by the relationships among its elements. Equalling the content of knowledge in importance, these relationships are forged through creative thinking. This cannot be achieved merely by rearranging

existing knowledge content. For example, working on a jigsaw puzzle, we know that each piece has a specific place in the overall picture. Through diligence and a systematic approach to the task, the pieces can eventually be fitted together. Business is not a jigsaw puzzle. Instead, it constitutes a situation in which you have a few pieces, but no idea as to what to make of them. Relying on your creative talent you have to figure out what the pieces are all about and how to arrange them into something meaningful. Similarly, the entrepreneur must work out how to combine the snippets of information to come up with a viable solution. And not only that, the entrepreneur also needs to learn from that experience, in order to draw on this personal resource in analogous situations.

In a situation where business opportunities could be arrived at simply by the application of logic, the entrepreneur would be able to determine the starting conditions and decide what information will be required and relevant, where to get it and what aspects to focus on. At the onset, the entrepreneur would be in a position to obtain an overview of the business situation. In the same way, it would be a relatively straightforward task to envision the desirable end state. In addition, the entrepreneur would be able to deduce by what means the business potential inherent in the starting situation could be converted into a profitable business opportunity (see Mayer 1992: 5-7)

As already noted, the creation of a venture opportunity is not a rational process of this type (Sarasvathy 2001). Humans are incapable of capturing all information available in any situation, or using it to construct a comprehensive representation of reality (cf. Simon 1979). Instead, they focus on the parts they deem salient and ignore the rest. Through internal processing they create their own versions of reality, based on the knowledge they possess and the social situation that prevails in that particular problem-solving situation (cf. Weick 1979).

In terms of problem solving, acquisition and processing of information are not rational in the strict sense, because humans are creative and innovative information processors. Opportunity identification is more closely linked to creating meaning from a fragmented and ambiguous context than reaching a decision grounded on exact information within a confined decision space (see Weick 1979). Thus, the entrepreneur creates reality rather than selects it.

Reasons behind the non-rational nature of the problem-solving process are the following: firstly, due to cognitive and social constraints, entrepreneurs are incapable of deciding what information is important. Relying on previous experiences, they tend to select information that they are already familiar with (Tversky and Kahneman 1974). However, since this information may not be relevant to the present situation, the rational underpinnings of the process will be compromised. Secondly, situations in which business opportunities maybe present are so complex that correct answers are not deducible from its elements. This impels the entrepreneurial mind to search for a novel solution, a mental construction providing an at least somewhat coherent interpretation of the environmental clues. Further, if opportunity discovery were a rational process, entrepreneurs would be able to utilize proven solution models, either directly or in modified form. This is prevented by the dynamic and complex nature of the situation, compelling the entrepreneurial mind to jettison past solutions and devise a new one, which manifests itself as a business opportunity (see Saariluoma 1990).

In a rational process, the entrepreneur would be able to collect all information that has relevance to the present situation, gain an overview of it and all of its elements, and then look for a solution based on existent, definable and selectable operations. Opportunity identification in real life suffers from the constraints discussed above, hampering the rational, logical approach. Somehow the entrepreneurial mind must sweep the situation and apply creative thinking to arrive at a viable solution. But what is creativity, a notion often cropping up in entrepreneurial literature, yet rarely subjected to a rigorous conceptual analysis. In which scientific discourse may we find the basis of creativity? That is the question this paper shall address next.

4. Creativity as a research topic

Creativity research on has traditionally been the domain of psychology (Busse and Mansfield 1980), but in recent years creativity has increasingly attracted the attention of other sciences as well, including organization theory (e.g., Drucker 1998). Interest in it has increased, because theories on creativity offer conceptual tools for explaining and understanding the genesis of novelty, which is an integral part of competitive business (de Konig and Muzyka 1996; Muzyka, de Koning and Churchill 1997). It also provides a basis for understanding the emergence of new business (Hills, Shrader and Lumpkin 1999). This section aims at using major theories of creativity to provide a conceptual framework for creativity and then anchoring entrepreneurial creativity in this framework.

Schools of creativity

Creativity has been approached from several different theoretical perspectives, which can be viewed as different schools of creativity (see Getzel and Jackson 1962; Gowan 1972; Woodman, Sawyer and Griffin 1993; Treffinger 1995). According to Woodman, Sawyer and Griffin (1993), these schools fall into three categories: personality, cognitive and social psychological. This classification will be used here as a starting off point for a more detailed survey.

Personality-oriented school of creativity. Not a coherent approach, the personality-oriented school of creativity can be divided into several sub-groups. What they all have in common is that they approach creativity from the perspective of the individual personality. Thus, they see creativity as an expression of personality. The following is a brief description of these approaches, based on Woodman's classification (1981) in which this school comprises the psychoanalytic, humanistic, behaviourist and trait perspectives.

Foremost among the representatives of the *psychoanalytic* perspective on creativity are Freud, Jung, Rank, Kris and Kubie (see Taylor 1975). Their concept of creativity draws on ideas formulated by Freud (e.g., 1958), who associated creativity with the individual's need to maximize satisfaction of desires while minimizing punishments and guilt. To Freud, creativity translated into sublimation of unconscious drives and instincts. He claimed that individuals have needs and desires which they cannot satisfy directly; instead, they transform their urges into socially acceptable creative outcomes. In his thinking, Quentin Tarantino's intense and violent, yet highly acclaimed films, such as Kill Bill, are creative reflections of the film-maker's sexual and aggressive repressions.

Jung, a one-time student of Freud, renounced the latter's idea of sublimation of libidinal energies as the source of creativity (see Jung and Franz 1964). It was unacceptable for Jung that behaviour, including creative activities, would be motivated by animalistic, especially sexual, drives. He too viewed creativity as springing from the human unconsciousness, but assumed that it stemmed from the collective rather than individual unconsciousness (cf. Woodman 1981). Collective unconsciousness is a repository of all knowledge and experiences we have inherited from our ancestors. Constantly accumulating, this shared repository is the origin of all new ideas, which, according to Jung, the conscious mind then shapes into a creative product (e.g., Jung and Franz 1964). Tarantino's films can thus be seen as reflective of the entire human society and its historical development. Having consciously accessed the repository of collective knowledge, Tarantino has picked his outrageous themes from the collective unconsciousness and then presented reflections of our own thoughts about modern society back to us.

Further developing Freud and Jung's theories of creativity, Rank (e.g., 1996) emphasized the central importance of creativity in explaining and understanding human nature. To Rank, creativity amounted to overcoming life's fears (cf. Chambers 1969; Woodman 1981), and he saw the creative individual as an ideal, an artist of his or her own life, who has consciously managed to solve unconscious fears. Tarantino's films are then a way of unravelling his inner fears. In this way, he has solved his problems and translated them into creative products.

Kris' theory of creativity stressed the importance of the conscious at the expense of the unconscious (Kris and Kurz 1981). Alike his predecessors, Kris believed that the source of creativity is located in the unconscious, but that the conscious mind taps into this creative potential and gives it a concrete expression. He equated creativity with regression at the service of the ego (id) (cf. Busse and Mansfield 1980; Woodman 1981; Heikkilä and Heikkilä 2001). In other words, using regression as a mediator to put the individual in touch with an earlier developmental stage, creativity engages the conscious and unconscious in fruitful collaboration. Tarantino's films can be seen as expressions of his return to childhood war games with their unrestricted brutality and cruelty. Guided by his strong ego, he now consciously re-enacts these games, albeit at a more varied and sophisticated level.

Kubie (1958) broadened Kris' theory of creativity and contended that the origin of creativity is the preconscious, falling between the conscious and the unconscious (see also Busse and Mansfield 1980; Woodman 1981; Heikkilä and Heikkilä 2001). He regarded the preconscious as a system that transmits ideas from unconscious deep structures to conscious thinking processes. On this view, creativity corresponds to the realization of preconscious images. Within this framework, Tarantino's work represents an outpouring of preconscious images, emotions and ideas. In short, the psychoanalytical school holds that creativity is the transformation of resources contained within the deep structures of the human mind into socially acceptable forms.

In its essence, the *humanistic* approach to creativity is based on work by Rogers (1961), Maslow (1943) and Fromm (1947) (see also Heikkilä and Heikkilä 2001). Rogers placed particular emphasis on freedom and safety as sources of creativity, meaning that creativity cannot be forced or mandated, but springs from free will, like a child's play (see West 1990). Freedom permits the individual to access primal processes and tap into unconscious

impulses for stimulus. Creativity is seeing the versatility of life in new ways, and Rogers (1961) stressed that this is possible only when the individual is open to new experiences, has the ability to play around with elements and concepts and is capable of evaluating when something valuable emerges out of the process. In this framework, Tarantino's work could be interpreted as the purposeful exploration of a novel perception of life. He may be able to bring forth something from his unconscious, a reflection of the shape of things to come.

Maslow, equating creativity with the voluntary self-fulfilment of a free individual in a free environment (see also Woodman 1981; Treffinger 1995), ranked creativity at the top of the hierarchy of human needs. Moreover, he asserted that, while all people are born with a creative ability, civilization lays restraints on some of our basic instincts. And yet, there are individuals who do not lose their childlike craving for self-actualization and creative expression. Everyone has the right, as well as the opportunity, to be creative and innovative, provided that they grasp that opportunity. Like a child in a safe and free environment, Tarantino seizes the opportunity for self-actualization, and does things he has always dreamed of doing. While fulfilling his dreams, he makes artistically ambitious movies.

In Fromm's view (1947, 1989), creativity allows people to recognize themselves and find their place in the world (see also Woodman 1981; Levine 1999). He would say that Tarantino uses films as a vehicle for defining his position in the social environment; they are a means of determining his identity and place in the world. Thus, Tarantino employs creativity to forge a meaning for his life.

The humanistic approach converges with the psychoanalytic view on the point that creativity and innovation involve both primary (unconscious) and secondary (conscious) processes. Also humanistically oriented thinkers believe that the unconscious is a pool of resources, providing material for conscious processing. The difference is that they do not agree on the pushing effect exerted by drives, energies or needs. Creativity is not the result of impulses pushed or even forced up from the psyche, but a voluntary and consciously chosen state. Driven by the conscious, it is a lifestyle, representing the most advanced way of leading a life. In the humanistic view, creativity is a self-chosen, voluntary realization of goals and objectives arising from an individual's personality, indicating the human need to find one's place in the world by fulfilling one's life goals.

In *behaviourist* conceptualizations, creativity is the result of learning. Behaviourists posit that creativity is based on cumulative, hierarchical knowledge that is processed in response to environmental stimuli (Woodman 1981). Furthermore, creative products are no different from any other, but because the creators possess superior knowledge, the solution or product appears as exceptional or original to others. Behaviourists hold that creative output is never achieved by discrete jumps, it is always anchored in previous experience and knowledge, albeit the stimulus may be unique.

Skinner (1957) argued that creativity is a reflection of that which is learned and that its originality derives from future expectations. Thus, a painter's creativity is based on anticipation of positive feedback. In essence, the creative process represents a normal response to a stimulus in a situation where a creatively productive individual has been conditioned by future expectations and where the individual has such vast knowledge and experience as to be able to produce high-quality output eclipsing that of others (Woodman 1981). Future expectations serve as stimuli and the creative product represents the response

(see Skinner 1957), with the quality of the product being dependent on the respondent's level of knowledge.

Behaviourists would therefore tend to think that Tarantino is creative, because he expects to receive something in exchange. The excellence of his motion pictures attests to the fact that he is in possession of relevant and sufficient knowledge and skills. In principle, though, he is not doing anything that is qualitatively different from what anyone else could do—the only difference is in the amount of accumulated knowledge. As apparent, there is a sharp distinction between the behaviouristic approach on one hand and the humanistic and psychoanalytical approaches on the other. Underlining the importance of knowledge and learning, behaviourists do not regard creativity as a higher dimension of personality, but as a perfectly ordinary activity—a mere response to stimuli, albeit one that is socially valued.

Trait theorists attribute creativity to certain personality traits (e.g., Guildford 1967; Barron 1969; MacKinnon 1978), which are relatively enduring predispositions to behave in a particular way (Guildford 1967). Having studied creative individuals, trait theorists have identified a host of traits that characterize them, including independence, diligence, originality, stubbornness, enthusiasm and openness to new ideas and experiences (see Mellou 1996). Trait theorists look upon creativity as a special mental capacity, stemming from certain personality traits.

Tarantino, for example, is creative, because he has the intellectual wherewithal to do so. He has such relatively stable attitudes toward film-making and ways of working as allow him to turn out critically acclaimed movies. Compared with the psychoanalytic and humanistic approaches, trait theorists are shallower and more practically minded. In their view, creativity does not originate from within the unconscious, nor does it represent the fulfilment of life goals. Creativity is the sum total of clearly distinguishable traits, and individuals in possession of these traits are intrinsically creative. While both behaviourists and trait theorists regard creativity as a response to stimuli, the former see the response as based on knowledge, the latter as based on personality traits. It must be noted, however, that this comparison is unfair to trait theorists, because they are not interested in stimulus-response relationships. Despite their differences, both theories agree that creative output occurs in response to a need, although the foundation for creativity is different in these two approaches.

Fragmented though the personality-oriented school of creativity may be, all the different approaches regard creativity as a personality dimension. Creativity is a characteristic of personality, and in a sense, creativity is personality. What these approaches fall short of is explaining the creative process itself. How does a creative personality find its expression in a creative product? While psychoanalysts analyzed primary and secondary processes, humanists self-actualization processes, behaviourists learning processes and trait theorists life stories as processes, the cognitive school of creativity started exploring creative processing in the human mind.

Cognitive school of creativity. Focusing on process models of creativity (Pesut 1990; Sapp 1992; Mellou 1996; Kirschenbaum 1998), cognitivists look on creativity as a mental process involving the generation of new ideas and concepts. Wallas (1926) suggested that the creative process comprises four stages: preparation, incubation, illumination and verification. At the first stage, individuals collect information required for solving the

problem at hand. Then, at the incubation stage, they push out the problem from the conscious mind, allowing the unconscious to do its work. Reaching the third stage, they solve the problem through a sudden cognitive insight. Finally, at the last stage, they verify the correctness of their solution by applying it to the problem. Criticism has been levelled against Wallas' model on the basis that it is largely the result of introspective observations (Mayer 1992: 48). It is not without empirical support, however, and current process models of creativity are not so far removed from his theory (cf. Sternberg 1988: 132–135).

Cognitive approaches associate creativity with normal cognitive processes such as perception, remembering and understanding. Sternberg (1988) has postulated that creativity arises from selective classification, selective encoding of information, selective combination of relevant information and selective comparison interrelating new information with what is already known. If existing knowledge suffices to solve the problem, there is no need for a creative approach. However, in case a novel solution is required, new information must be integrated with previously stored knowledge. Thus, creativity is a mental process that includes the perception, comparison, selection and synthesis of existing knowledge and new information to generate a creative output.

Furthermore, presuming that creativity favours the prepared mind (Sternberg 1988), cognitivists believe that a diligent effort to seek for and apply information is a prerequisite of creativity. In addition to viewing creativity in terms of mental processing, they also see it as an intellectual style, a way of conceptually organizing the environment (see Woodman and Schonfeldt 1989, 1990). Creativity is thus associated not only with processing (Wallas 1926) and manipulating information (Sternberg 1988), but also with cognitive styles, or preferred ways of using our intellectual capacity (Sternberg 1997). Research has shown that the cognitive style of creative individuals can be characterized as flexible, fluent, original and divergent (Woodman and Schoenfeldt 1989, 1990). Amid fragments of information, these individuals are capable of discerning something that others fail to see (flexibility), they can reject old models and assimilate new knowledge with ease (fluency), their solutions are different from those of others (originality) and they seem able to find relationships and connections between things that are superficially very different (divergence).

Cognitivists would say that Tarantino's creativity involves subtle perception, classification, comparison and transformation of information relating to movie making, and that he applies his flexible, fluent, original and divergent cognitive style to the task. Tarantino has just the right type of mental capacity that allows him to process information into the motion picture format.

The cognitive school is set apart from the personality-oriented school by its focus on the creative process and how it works. Uninterested in the personality of the creative individual, cognitivists turned their attention to mental processing of information. As the personality-oriented school had failed to find a satisfactory explanation for creativity, cognitivist theories sought to fill the gap and provide a deeper understanding of the phenomenon. Aside from their obvious differences, both schools centre on the individual, neglecting to attend sufficiently to the environment/society surrounding the creative individual. Because these factors have an undisputed effect on creativity, a new school emerged, referred to as the social psychological school of creativity.

Social psychological school of creativity. Creativity is the product of environmental influences is the basic tenet of the social psychological school. These influences are so powerful that creativity cannot be studied without an understanding of its context (Woodman and Schoenfeldt 1989). Csikszentmihalyi (1988) has noted that creativity does not occur in a vacuum, but has a domain in which it takes place, as well as a symbolic field, in which it belongs. The domain and field can be thought to generate the knowledge, skills and characteristics that the individual is in possession of —and thereby creativity. To the social psychological school, individuals are embedded in their context, and vice versa, which is why the two cannot be dissociated from one another when investigating creativity. Depending on whether emphasis is placed on the sociological or psychological aspects of social psychology (see Eskola 1982: 14), context is seen either as the direct source of creativity or as exerting its influence through the individual. The latter interpretation is more prevalent among creativity researchers (e.g. Amabile 1995, 1997). A likely explanation for this is that, in the psychological perspective, creativity appears as a trait possessed by individuals. We may therefore conclude that, regardless of the social psychological school, creativity research suffers from a lack of engagement from sociological theory, which could shed new light on creative processes.

Currently, the most prominent representative of the social psychological school of thought on creativity is Amabile (e.g. 1988). She has advocated a psychological perspective, in which context, expressing itself through the individual, either impedes or promotes creativity (Hennessey and Amabile 1988). She has also pioneered the idea that creativity is a manifestation of intrinsic motivation, which arises largely from social motivators. Hence, strict discipline and punishments block intrinsic motivation and hamper creativity in consequence. Amabile's background is in motivational research, where empirical evidence suggests that performance is not significantly improved though external rewards only, but through an intrinsic interest in the task. It has also been found that the quality of creative output increases as a function of intrinsic motivation (e.g., Deci and Ryan 1985).

Having studied the effects of internal and external motivation on the quality of creative work, Amabile has concluded that, while intrinsic motivation stimulates creativity, external motivation may even serve as an impediment (Hennessey and Amabile 1988). In addition, she has noted that intrinsic motivation is adversely affected by such external factors as restrictions, rewards, control and feedback. When intrinsic motivation is replaced with external motivation, the joy of doing something for its own sake is substituted with an extrinsic motive, with a resulting decline in quality and creativity. Noteworthy though Amabile's findings may be, it must be borne in mind that, among the schools of creativity, the social psychological school suffers the distinction of being the least theoretically structured and sophisticated (Woodman and Schoenfeldt 1989). Nonetheless, it has demonstrated the value and impact of social aspects for the study of creativity, and that creativity can only be understood in context.

The presentation above is not intended as a complete description of the schools of creativity, but as a brief overview of the most important ones, selected on the basis of previous researchers' findings. The presentation was kept succinct, for its purpose was merely to provide a theoretical and historical framework for discussion. It may be concluded that the different schools have brought different perspectives and different units of observation to bear on creativity. Some focus on the individual, others on the process and yet others on the

context of creativity. Many have a shared interest in the creative outcome. Due to the number of schools and perspectives, the field is somewhat fragmentary, an impediment that this overview, albeit short, has sought to remedy.

Creativity research on tends to cluster around four perspectives: context, individual, process and product. Conceptualizing creativity as a process, context constitutes a field in which this process takes place and which empowers the individual to be creative. Creative individuals are defined as actors seeking to find their place in the relevant context to fulfil their goals by the dynamic interaction of resources in their deep structure, learned symbol systems and individual capabilities. Potentials in the context and individual are channelled by the creative process, a mental transformation, in which the individual redefines problems, finds novel solutions and tests them against reality. The artefact of this activity is a creative product, a communicable symbol, which is an improvement of previous ones and which the social organization deems creative.

To make a long story short, we may conclude that context is a field in which and for which creative output takes place. Striving to find their place in this field, individuals tap into resources residing in the field and in themselves and transform these into creative energy. They accomplish this by engaging in a mental process focused on finding new solutions to problems. The result of this process is a concrete product that in the view of the social organization advances the field in a creative fashion. This summary, while seeking to elucidate the essence of creativity, is still conceptually defective and even confusing. It has provided a description of the different schools of thought and of the perspectives adopted and attempted to link them together in a meaningful way. However, this process is still very much underway and more needs to be done. To that end, this paper suggests that conceptualization may best be achieved by combining the varying views and perspectives of the different schools. Based on previous theories and perspectives, the next section makes an effort to sketch an outline for a unified approach to creativity.

5. Entrepreneurial creativity – entrepreneur's capacity to generate novel economic artefacts

The previous section was rounded up by the conclusion that creativity is a system which, through the dynamic interaction of personal characteristics, social psychological context and cognitive processing, produces an output that the social organization in the field finds valuable (cf. Csikszentmihalyi 1988). Of particular significance in this formulation is the notion of interaction. Rather than a manifestation of a separate part of the system, such as specific personality characteristics, creativity is seen as the sum total of the various system elements. The theoretical framework adopted in this paper is the interactionist view, which posits that the individual and context are engaged in a dialogue and that behaviour stems from the individual's interpretation of this context. This makes the entrepreneur the unit of observation, although it might just as well the organization, community or network. Although creativity research would benefit from a community-based approach, it has been left outside the scope of the present paper, which centres on the entrepreneur as an agent of organizational creativity.

As evidenced by the brief review above, creativity requires an entrepreneur, a context and a process as well as interaction between these elements to produce a novelty, such as a

business opportunity. This section aims at sinking its teeth into the heart of creativity and presenting its viewpoint on the topic. The goal will achieved by finding answers to the following questions: what does creativity mean to the entrepreneur, what is its role or significance to her and how does creativity function within the entrepreneur.

In terms of the entrepreneur, the essence of creativity may be explored by asking what it means to the entrepreneur; or rather, what is entrepreneurial creativity. In other words, what happens within the entrepreneur, when she creates something new? What are the forces, desires or intentions that pull or push her forward? Then again, creativity might equally well turn out to be a commonplace and even constantly ongoing human activity, which just happens to produce something new and unique on particular occasions. Maybe creativity is at the core of the human experience, a key function that separates us from other, purely biological organisms. It has certainly been the subject of vehement argument across the centuries, particularly in conjunction with the relationship of mind and matter as the basis of human activity. Or, perhaps creativity can be reduced to a biological, chemical and/or electric activity, which is how brain researchers at the end of the day seem to conceive of it. Since human creativity spawns a multitude of questions, it is not only interesting, but of paramount importance from the standpoint of this paper to stop and reflect on what creativity really is. Although everyday thinking offers a host of answers, we are unlikely to get past the discussion stage. As a result, this presentation focuses on gleaning answers from the views and ideas that the different schools of creativity have expressed on entrepreneur creativity.

Personality. Attempts to explain the creative personality are many and varied, but this lack of unity is not necessarily a disadvantage (Woodman 1981) but an asset, helping to construct a many-faceted picture of it. By illustrating various aspects of creative personality, the different approaches in effect complement each other, providing valuable insights for the development of a more complete understanding of the phenomenon. Thus, the notion of creative personality is a composite of the various views presented by the different schools of creativity.

As the starting point for a description of creativity, this research contends that creativity is self-actualization (Maslow 1973). This starting point was chosen, because it treats the entrepreneur as a conscious agent with intentions, i.e., as a human actor, who proceeds purposefully towards an open-ended goal, driven by inner needs. Self-actualization is intimately bound up with the entrepreneur's social environment. Sought after, held in high esteem and self-fulfilling, creativity is tied to our historical context, our field of activity or our social networks. This is because entrepreneurs are neither separate entities, satisfying their own motives regardless of those around them, nor are they entirely social or institutionalized. Rather, they have a free will within the framework we, as rational agents with restricted abilities, are able to understand (see Tversky and Kahneman 1974). This paper treats the entrepreneur as a social psychological actor.

Creative personalities have internal intentions that drive them to realize their dreams (Rogers 1961). In this sense, the goal of the creative personality is self-actualization, and the means of achieving that goal are mustered from the deep structures of personality. Creative personalities have the ability to tap into the preconscious and conscious, and even to access the unconscious, and use the symbol collections found there as material for self-fulfilment

(Kris and Kurz 1981; Kubie 1958). Thus, they pursue their internal intentions under conscious control and exploit preconscious and unconscious deep structures to find an expression for their creative urges.

However, creative personalities must be able to give concrete shapes to their ideas, to express themselves and function within their environment (Guildford 1967). Consequently, they are characterized as possessing specific, and rather conspicuous, traits. These include being energetic, having a broad sphere of interests as well as a fascination with the aesthetic and the complex, being independent-minded and self-confident as well as self-reliant in decision making, intuitive, aware of the relative nature of all things and, finally, having a firm sense of self as creative (Barron 1969; MacKinnon 1978). By making the best of these traits, entrepreneurs are in constant interplay with their environment and realize their dreams and themselves as well as the potential creativity residing in the deep structure of their personalities.

In addition, these entrepreneurs need a tool for incorporating their creative ideas into preconscious and unconscious symbol structures for future reference. This tool is learning. Thus, creative personalities take in what they have learned and apply their learning to new situations (Skinner 1975). To sum up, we may conclude that the creative personality can be viewed in terms of self-actualization, whose content and concrete expression are drawn from the deep structures of the mind by means of personality traits and which, once learned, constitute raw material for further innovation.

In this way, the humanistic school provides a goal to creativity and the psychoanalytic a source, while trait theorists provide the means and behaviourists the tool for transferring knowledge to new situations. However, the creative process must also be carried out, and this is accomplished through cognitive processing. The personality-oriented and cognitive schools differ from one another in that the former looks at creativity as an expression of personality, while the latter places the main emphasis on active intellectual engagement. If the creative personality is a reflection of creative goals, sources, tools and an ability to transfer knowledge, how do these elements interact to produce an innovation? To find a concrete manifestation, creativity relies on the active realization of potential residing within the personality. Outlining this process is the primary focus of the next few pages.

Process. It is through the creative process that entrepreneurs seek to realize themselves (Sternberg 1988), as it allows them to fulfil the potential their personality holds. However, the creative personality itself does not generate a product; it merely sets a goal and provides a source from which to derive content, tools with which to work toward that goal and means of converting experiences into new sources of creativity. But the implementation of a creative product requires the concrete process of actualizing an entrepreneur's potential.

Broadly speaking, the creative process has been conceptualized as a cognitive event (Pesut 1990; Sapp 1992; Mellou 1996; Kirschenbaum 1998), which can be viewed in terms of its stages and its essence. The stages through which entrepreneurs progress in gradually giving a concrete form to their creative ideas are problem definition, information gathering, generation of solution alternatives, selection of a solution and creative outcome (e.g., Wallas 1926). Logical though it appears, the process is characterized by peculiar aspects. First of all, it involves a creative entrepreneur with a capacity to exercise fluent, flexible, original, elaborate and lateral thinking (Woodman and Schoenfeldt 1989, 1990). Despite having

discernible stages, the creative process is unpredictable in nature and produces unforeseen results. For example, the creative entrepreneur may take an unexpected turn or jump off the beaten path and head in a new direction, unguided by logical analysis. Moreover, the process is very fluent and flexible; if a particular solution model fails to address the problem, the creative entrepreneur changes the model and goes in pursuit of a more suitable one. A process that is both original and elaborate ensures that the outcome is also somehow unique.

To sum up, the creative process includes problem definition, information gathering, generation and selection of a solution and generation of a product. However, these stages can be found in the entire range of human thinking and are not specific to creativity. What really makes the process creative is its characteristic nature: creative thinking is fluent, flexible, original, elaborate and lateral in essence. The unpredictability and unexpectedness inherent in this type of thinking enable the entrepreneur to generate new ideas, resorting, at times, also to logical reasoning. Fundamentally then, at the core of the creative process are not the stages, since they can be assumed to be present in all human thinking processes. What is of paramount importance is the quality of the process.

Weaving together these diverse strands of thought on the essence of creativity, we arrive at the following: creativity is the expression of creative personality, which is the active agent in the creation process. Creative personality seeks self-actualization within the framework provided by the collective knowledge contained in the social context. To achieve its goals, the creative personality taps into its very own deep structures for material, and uses its personality traits as a tool for transforming this material into a creative outcome. Also learning is an instrument for transferring new material for creative exploitation. Through the creative process, the entrepreneur converts creative potential into genuine creative activity. This process has several stages: problem definition, information gathering, generation of solution alternatives, selection of a solution and, finally, the production of a creative outcome. Even this description does not suffice to truly describe the essence of creativity, because creativity does not take place in a vacuum. Entrepreneurs are always situated in a context, in which they conduct creative activities. This context will be the focus of the next section of this paper.

Context. Referred to as context, the creative environment in which entrepreneurs perform creative acts influences their personalities and processes (Amabile 1995, 1997; Amabile, Conti, Coon, Lazenby and Herron 1996). This environment also determines what is recognized as creative (Csikszentmihalyi 1988). Thus, though entrepreneurs may feel creative, the context may not confirm this belief, and it is the context that ultimately settles the matter. Social relationships, contextual factors and the entrepreneurs' social history (Woodman, Sawyer and Griffin 1991) create a context, which has a deep effect on what self-actualization goals they perceive as worth pursuing, what kind of deep structures they develop, how their personality traits evolve, what and how they have learned—and will learn—as well as what they process and how they process it. In this way, context prevails over all aspects of entrepreneur existence.

A creative context consists of three subcontexts: social, contextual and historical (Woodman, Sawyer and Griffin 1990). Of these, the historical subcontext, comprising entrepreneur experiences, can be viewed as having the most immediate influence on how entrepreneur

identities crystallize and what the entrepreneurs do. Also the social context, that is to say other people, has an instant, deeply transformative effect by the provision of evaluations, expectations, role models, support, rewards and punishments. Contextual factors, on the other hand, have a more indirect effect by setting up frameworks that, when unsuccessful, subdue creativity. Such contextual factors include culture, physical environment, atmosphere and different types of constraints. The environment either promotes or suppresses entrepreneurs' activities and quest for creativity, while creativity offers the environment a way of revitalizing itself and staying viable. Society progresses by drawing on the creative potential of its entrepreneur members.

What, then, is the essence of creativity? This paper seeks to provide a synthesis of previous studies to highlight the multidimensional essence of creativity. There are good reasons for adopting a multidimensional approach, because creativity is beyond a doubt a multifaceted phenomenon that does not easily lend itself to a single approach. The essence of creativity comprises three elements: a creative personality, a creative process and a creative environment. A creative personality is driven by an entrepreneur's need for self-actualization, which is enabled by calling on resources in deep structures of the mind, character traits that value goal-oriented work and a learning system that allows the transfer of knowledge. The creative process consists of several overlapping stages, namely, problem definition, information gathering, solution generation, solution evaluation and creative outcome and is characterized by fluent, flexible, original, elaborate and lateral thinking. The third element, creative context, incorporates a historical, social and contextual subcontext. The essence of creativity functions as a system in that the creative personality is either stimulated or suppressed by the context. When creative personality traits are activated to find ways of expressing themselves, the creative process sets in motion. In other words, the creative personality turns on the creative process. Once this process has produced an outcome, this outcome becomes part of the creative context, activating it either to encourage new ideas or to stifle them.

6. Discussion

This paper kicked off with a discussion on the nature of entrepreneurship. A crucial distinction was drawn between the traditional notion of entrepreneurship as the management and/or ownership of a small or medium-sized enterprise and the perspective adopted here. Building on work originally conducted by Schumpeter (1934), this perspective focuses on the entrepreneur's ability to recognize new business opportunities and innovate solutions, thereby creatively destroying existing business models and solutions. Having gained considerable support from recent research on entrepreneurship (e.g., Davidsson 2003), this view does away with the notion that entrepreneurship is not a valid function for already established business ventures. On the contrary, entrepreneurship is always present when an individual creates new business, regardless of whether it takes the form of setting up a new venture or expanding an existing firm using novel technology (Davidsson 2003).

Why should the entrepreneurial approach to business opportunity be regarded as a creative activity? Numerous studies show that the innovative activities of individuals produce changes in reality (Amabile 1988; Woodman and Schoenfeldt 1989; Puccio 1991). Creativity, manifesting itself in the form of unexpected, original and unique results, is a force that generates something that it better than what existed before. Saariluoma (1990) has

maintained that creativity is called for in the face of complicated novel problems for which no established solutions are readily available. Findings such as these seem to suggest that business opportunities are results of creative entrepreneurial activities, and that they can be considered as expressions of creativity, because their generation requires complex information processing and they lead to unpredictable and original solutions. This line of thinking has been followed by researchers such as Gilad (1984), who has asserted that business opportunities arise from creative behaviour and that the generation of new business invariably involves a creative component. Such a component can also be found in the work by Schumpeter (1934), for he has stressed the importance of creative destruction in entrepreneurial ventures. Also Leibenstein (1966) and Kirzner (1979) have emphasized the role of creativity for entrepreneurship.

What consequences does all this have on research focusing on entrepreneurial creativity and innovation? At the very least, we may conclude that since business opportunities are unique expressions of organizational creativity, they are quite hard to investigate. Complex and multidimensional, the task facing the researcher could be described as follows: creativity is like joining a game halfway through without knowing what the game is all about or what its goals are, and yet you are expected to grasp its essence and figure out what problem needs to be solved—and then solve it. In other words, creativity is not an activity, where all the pieces are known before the game begins, and the right solution is arrived at simply by arranging the pieces correctly (as in a jigsaw puzzle). Rather, it is a game, whose name, pieces, rules, logic and outcome have to be decided, while it is in progress. Having the skills to needed to play the game is a crucial success factor in the dynamic organizations of the digital age, but academic research and conceptual understanding of the phenomenon is lagging behind. As a result, this paper proposes that research into both private and public organizations should focus attention and resources on such dynamic organizational processes as entrepreneurship.

7. References

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2

Inside the Entrepreneurial Event: Creating Schemata of Opportunity for New Business

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1. Introduction

My wife and I argued about what kind of film we would watch on Saturday evening. We were at a movie rental and were browsing through the selection – Hollywood action, romantic comedies, psychological thrillers and a few British dramas. I suddenly remembered that I had purchased the previous day two movies from a sale: a psychological drama about repressing a child and the evil in the world by an Italian director, and a documentary-style filmed drama about the relationship of two brothers and their attitude towards their youngest brother's cancer – difficult subjects and serious films. The reason for our argument was that my wife doesn't want to relax in her free time by watching movies on the dark and tragic side of human nature. She particularly would like to avoid them in movies, because life is hard enough without having the movies we watch emphasize it. I myself tried to explain that one can learn things from them, that one can live lives that one cannot otherwise experience and one can feel emotions with them that one would not normally experience. I was not terribly satisfied with my own explanations. I felt, however, I was on the right track, but I could not put my thoughts and feelings into words. How does this relate to entrepreneurship?

Entrepreneurship is a very personal and emotional matter. It is difficult to explain and present logically, like when I was trying to put into words that watching a film can be more than just a light-hearted nine-day wonder. Please note that this is my interpretation of my world and from my wife's world the situation looks completely different. In the same way I am bothered by the way entrepreneurship is handled using rational logic as if we had the possibility of defining entrepreneurship using one method in order to satisfy our research needs so that we can research phenomena more efficiently, productively and better. From my perspective this perhaps possesses the biggest danger to entrepreneurship research, that we are too hastily "engraving into stone" what entrepreneurship is and at the same time proclaiming how it should be researched, where it should be discussed and who really knows about it.

This study approaches entrepreneurship from the angle that nothing is more common than the most personal (see Rogers 1989). This research is my interpretation of entrepreneurship

and the objective is to discuss the nature and concept of entrepreneurship. When I present my personal interpretations of entrepreneurship, I hope that it touches as many as possible and so would be as prevailing as possible. But not so that my view is "The" definition of entrepreneurship, rather that it would arouse discussion and diverseness in entrepreneurship research and especially in the creation of new business activities amongst businesses, and would support the possible doubts and thoughts of others, which there no doubt is, and so would support the diversity that has prevailed in entrepreneurship research. I admire the work of many leading researchers of the field, through which they have been able to redirect entrepreneurship research, but I also suspect that something valuable is being thrown away. As the conception of entrepreneurship unifies, the questioning, recreating, alternativeness and the testing of new ideas decreases. Entrepreneurship researchers should perhaps perceive that this may be part of the field's evolution and that unity is on some time frame dangerous to the vitality of research. A need amongst researchers to reach equilibrium is interacting in the background, even though the phenomenon of research is usually seen as being continually out of balance – there is a significant conflict between the two.

I am purposely approaching the research topic in a structurally different manner – as a pondering essay. How a scientific article is normally written is in a specified form and is precisely defined. The normal form of an article is to reflect the rational requirements of efficiency, sense of direction and transferability of information. These are, of course, understandable goals, but at the same time they reflect the impression of doing something, which is the opposite of entrepreneurship – creating something from nothing. Thus, in a way when we write about entrepreneurship in such a manner as we usually do, we are anti-entrepreneurs. Every one of us knows that writing is creative problem solving in that moment and place one happens to be. One tries to manage that place where one is and has to give space and time to what the end result is and to the form it takes. From my perspective entrepreneurship is fundamentally about this kind of activity. Entrepreneurship is not a product nor should entrepreneurship research be an average product, which has been made sleek, true to shape and predictable.

This research essay flows as it was created: raw, genuine and untidy, complete with mistakes and flaws. The content is however the most essential element in scientific writing and next I shall begin creating my own view on entrepreneurship. The aim of this research essay is to examine and present a conceptual frame for studying entrepreneurship as a creative activity.

2. What then is entrepreneurship – a definition for a common foundation

Let us think of Aki Kaurismäki's film "*The Man Without a Past*", where the main character losses his memory and has to rebuild his life from scratch – he has no past, no future ambitions and no goals. Instead in his present moment where he currently is and with the people he bumps into, he starts to process the present and future. He starts with a clean slate and creates a new life as he goes along. The situation demonstrates well the kind of social-cognitive processing of information, which is at the core of entrepreneurship. I do not mean that the person who acts as an entrepreneur is simple or starts from the clean slate but rather

that the activity creating entrepreneurship is constructive. In entrepreneurship initial situations and goals are created as you go along (Sarasvathy 2001).

Now you must be wondering what has a European filmmaker Aki Kaurismäki got to do with this research and what has he got to do with entrepreneurship? Aki Kaurismäki is one of Europe's most well known and individual directors, but to Hollywood he is relatively unknown. He is a very important reformer of films and an idiom re-molder, but unfamiliar to the masses even though he has won many of the most important film prizes. I use this analogy because entrepreneurship is like Aki Kaurismäki. Entrepreneurship is creative activity where new activity is created without knowing precisely what the goal is or what is the initial situation, but still new activity is created (see van Eijnatten 2004). Entrepreneurship is a renewable force, which questions the existing, but which has not gained the attention deserved while in the crush of rational business logic.

The concept of entrepreneurship has changed drastically over the past ten years (e.g. Eckhardt and Shane 2003; Shane 2003; Alvarez and Barney 2007). Entrepreneurship was long seen as the leading of a small business or a business's owner-management. However entrepreneurship does not directly relate to these concepts, rather entrepreneurship is context free (see Alvarez and Barney 2007). Entrepreneurship is noticeable in big companies' renewal efforts, in identifying new markets and technologies and also in public organization development projects. The core to entrepreneurship is creating new opportunities and implementing them irrelevantly to the contexts in which they take place (see Carlsson and Eliasson 2003). Entrepreneurship is creative activity, where the goal is not clear and nor is often the initial situation, instead both of these are created as one goes along. This happens because there is no one right and best solution and often the initial situation is so complex and continuously changing that it is impossible to analyze in a broad and reliable enough manor.

The traditional view on entrepreneurship has unnecessarily bounded research, the development of knowledge and the transfer of information for the use of businesses and people. Entrepreneurship is an everyday occurrence in every organization, but gratuitously glorified to be a characteristic and behavior of heroic business people (Christensen and Raynor 1997). One of the most important research findings relates just to this, it has been reliably shown that entrepreneurship is not anyone's or any thing's property (e.g. Gartner 1990). The view that entrepreneurship cannot be learnt because self-confidence or energetic traits are so heavily involved is also a myth. Entrepreneurship is today that same sort of myth that creativity was a few decades ago when creativity was linked to genius.

The latest empiric research on entrepreneurship has shown that entrepreneurship is episodic, especially in the use of resources, in the level of commitment and in risk taking (e.g. Sarason, Dean and Dillard 2006). Entrepreneurship is also about taking affordable expenses (Sarasvathy 2001). That means doing things in the beginning that if fail, can be endured. The gradual weaving of ambitions and goals as one goes along is also key to entrepreneurship. An important way of accomplishing this is by building strategic partners in order to understand the market place, the customers and the technology and to create trade. So, it is the building of understanding with the stakeholders, and

convincing them of the correct direction. Entrepreneurship also seems to be about the tolerance of surprising events and seeing them as possibilities – without surprises there is no entrepreneurship. Entrepreneurship is the opposite of a goal-directed world-view, in which case every surprise is dangerous because they interfere with reaching the goal and what one does and the way the business has to adapt in order to get back on the path to the set goal.

Entrepreneurship is more about creativity, of which rational decision-making is not part of. Entrepreneurship does not work or at least most often does not work by analyzing the customers and competitors, by defining segments, manufacturing products for these segments and test marketing (see Sarasvathy 2001). Entrepreneurship is not most often so rational in existing businesses, although that is how new business activity is wanted to be perceived or how it is imagined to be. It works if the market can be clearly seen, what we have to offer and what others do not have is precisely known, and it is known how to get the demand and supply to meet (Sarasvathy, Dew, Velamuri and Venkataraman 2003). Rarely is the situation so clear. The traditional rational model works here, but it is based on the idea that knowledge of the markets is available to everyone if you are prepared to spend time analyzing it. This way the market gap is definable and a solution can be developed. Very often businesses, developers and financiers think that new business activities and ideas are born like this. This is one of the biggest mistakes in our way of thinking and it has long roots (e.g. Sarasvathy 2004).

A second possibility is that either the goal is unknown but the initial situation is known, or that the initial situation is unknown but the goal is known (Sarasvathy et al., 2003). So, either there are no markets but the offering is ready, or there are markets and demand but there is no offering to serve them. (For example, on the Internet how one can charge for such minor use of computer programs that 20 cents could be charged. However there is no technology for this where the costs would be smaller than the revenue per instance of use. If more were to be charged, no one would use it, which is why e.g. demos are distributed for free.) This is the chance to invent an opportunity. It is strategic thinking where gradually through trial and error the "correct" ways of working are found.

The third possibility – genuine entrepreneurship – is the creation of opportunities where both the initial and end situation are unknown (Sarasvathy et al., 2003). Markets are created and supply is created. These are not things that just happen by creating a business plan in the beginning (as important as it is), instead the business plan is created as one goes along. It is known that with entrepreneurs and entrepreneurship that the goals constantly change as you go along. Decisions are quickly made and tried without great analyses or research because it cannot be known in advance whether things are being done, that could cause the whole business to crash, so they could be endured. Partners are quickly found with whom things can be pondered and done. So, commitments are created, potential customers are quickly gone to, even to sell products that do not exist yet, and to look and ask what the customers may need, because the customers either cannot perceive what they need and want in today's hectic world. That is the ability to see surprises as being part of normal life and even seeking surprises because they kick things into a new direction and rather than engrave things into stone, as changes always take

place. In the centre there is a quick commitment to activity with potential customers, so that mistakes can be endured, the quick finding of partners in order to create understanding and in order to take surprises.

Here I propose that entrepreneurship does not compose of a teleological view of life or processes. It is a creative activity where the route is created as you go along. Entrepreneurship is creative processing – entrepreneurship is the creation of impressiveness in that instance in which we live, and the prediction of the future and the setting of goals to be secondary. Entrepreneurship thus identifies with the opportunities of creating business, which consists of ideas, beliefs and needs that evolve along the journey to the goal (Sarasvathy et al., 2003).

Thus, entrepreneurship is at its strongest as its actors in a way, enter the ("entré") business condition, in which there is no clue what-so-ever about what is going on, what kind of trade is desired and what it is we are pursuing (see Hjorth 2003). It does not matter whether a new company is born from it, trade grows or a new market is conquered. It is about a problem-solving situation where the rules, solutions and goals have to be created as one progresses. In this kind of situation the right and best solution cannot be logically derived. In this situation the core content of actions is related to the possibility of creating and perceiving new opportunities, and the creativity of entrepreneur is a functional aid. This is the phenomenon that entrepreneurship is about and this phenomenon is what researchers should determine. Once this stage has gone beyond and one steps into the "prendre" stage which is about implementing, managing and marketing the new trade, it is not fundamentally any more about entrepreneurship, even though it is always there (see Hjorth 2003).

The original French term "entreprendre" reflects very well what entrepreneurship is fundamentally about (see Hjorth 2003). It is stepping into a space were it is known that new business is wanted, but what kind is not known and it is perceiving the character of new business as well as leaving with a business opportunity that is then implemented using moulds (e.g. leadership, marketing) by others. What happens inside this space is a very interesting phenomenon and this research will try to shed light on it. If we think of this space and creating an entrepreneurial opportunity in it, it is in not detached from its surroundings nor is it a closed internal process from which business ideas emerge. This space, which is being talked about, is a process where the mental creation and surroundings of the entrepreneur are in strong and continuous interaction with each other. Inside this entrepreneurial space something is happening that is absorbing influences from the present business activities and that is causing chaos and irregularity as a result. What an entrepreneurial opportunity is it that causes dynamics in the economy?

3. The core of an entrepreneurial opportunity

An entrepreneurial opportunity can be understood as an individual's or a group's schemata. Thus, in other words the intellectual and abstract interpretation of hints from reality (see Weick 1979). In this research I am interested in the individual; hence we will talk about the cognitive of the individual entrepreneur, remembering however that an

entrepreneurial opportunity can also be a collective cognition. A cognition of an entrepreneurial opportunity means that the opportunity is a mental outcome. It is the entrepreneur's intellectual product based on numerous internal and external information signals. An entrepreneur constructs an opportunity based on observations of his surroundings and previous experience. An opportunity is the product of creative-cognitive process where a new entirety is built from small fragments of information (e.g. Ardichvili, Cardozo and Ray 2003).

Vesper (1991) described an opportunity as a message from which the rules of interpretation are missing, a jigsaw puzzle or an untold story. In this way an opportunity is like an unsolved problem for which there are no rules or instructions. An entrepreneur's creative intelligence is needed to solve the cognitive puzzle. The solutions thereby cannot be found, they have to be created because there are no ready-made rules or answers. The game, rules and result have to be created in that situation, and that is why creating an opportunity is so difficult. There are no ready-made opportunities but they have to be created. In this sense an opportunity is a product of imagination. So, an opportunity is not a jigsaw, it is an entirely new game. Solving the problem – understanding and winning the game – creates a new opportunity.

However, an opportunity is also a vision of time. It is a vision of what kind of an opportunity will bring the best result. Some entrepreneurs see their visions in past light. They imagine that a possibility that has previously worked is still today a current vision. Visions from the past are simple, distinct and predictable. They merely strengthen previous activities and have very little novelty value. However there are also business visions that are present day oriented. An entrepreneur examines the present and creates business visions based on that. Present-day visions are more ambiguous and intricate because the present can be read in many ways. These visions work as a target for allocating resources and are relatively novelty. In addition to the previous, there are also visions that are directed to the future. They are based on a belief of future events. These future visions are by nature novel and abstract. Their purpose is to catalyze new and new-like business activities.

If we combine the thoughts of above, an opportunity is a creative schemata of the business situation and which is a current vision of the past, present and future. How then does this complex cognitive schemata then become concrete in an entrepreneur's mind? What this dynamic is like, has been left unclear. In the next chapter we will try to outline how creativity reflects into an individual's talent to create something new.

4. Creativity – an individual talent at creating something new

The core from an entrepreneur's standpoint can be pondered by asking what is creativity to an individual – or maybe even better; what is creativity in an individual. What is it that happens in an individual, when creativity is born? What forces, desires and intentions is one being pushed or pulled by? Or is it even about this? Maybe creativity is an everyday event in an individual and maybe it is human activity that just happens to create something new. Or is just creativity that is human activity – activity that sets us apart from purely biological organisms and the initial human situation between spirit and material that has been a cause

of arguments for hundreds of years. Or is creativity returnable back into a biological, chemical and/or electrical activity from which current neurologists would better understand it. An individual's creativity raises many questions and probably more than can be answered here. Still it is interesting and essential to this study that one can ponder what at the end of the day is creativity.

In this research self-fulfillment is chosen as a starting point when depicting what creativity is as an individual's personality. This basis was chosen because it best describes humans as a conscious being. An individual tries to consciously gain something for which an inner need is felt. A creative personality has inner ambitions that fulfill their personal dreams. Fulfilling one's self is the goal of a creative personality. Where are the "building blocks" drawn from to reach this goal? The presumption is that it is drawn from the inner structures of personality. Creative personality is able to cross the border between pre-awareness and awareness and even the border of unawareness and use this "symbol reservoir" as a source material for fulfilling one's self. So, a creative personality tries to consciously, within the control of consciousness, seek one's inner ambitions and is capable of utilizing pre-acknowledged and unconscious inner structures when seeking content for creativity.

However, a creative personality has also got to be able to make their thoughts concrete, express them and behave in their environment. That is why a creative personality has certain clearly distinctive characteristics to use as tools. He or she is amongst other things energetic, has a diverse interest, attracted to aesthetics and complexity, independent and self-reliant, independent at decision making, initiative, aware of relativity and understands that he or she is creative. With these features an individual works in their environment and fulfils themselves and their dreams as well as the potential creativity in their inner structures. Finally, it can be thought that an individual needs "tools" with which they can transfer the occurred creativity for the next use, partly as pre-acknowledged and unconscious symbolic structures. This tool is learning. A creative personality knows how to learn from itself and use it to its advantage the next time. If summarized, creativity is an individual's personality fulfilling one's self and where the contents for this are gathered from resources within an individual's inner structures. They are realized with concrete personal characters and which transfer to the next creative event as source material.

A creative personality reflects creative goals, sources, tools and transferability. But how does this happen and what kind of event is it? Creativity requires the potential active realization of personality. This activity is outlined next with a cognitive creative process. With a creative process an individual can seek to fulfill one's self. It is a process that realizes the possibility created by a creative personality. So, a creative personality in itself does not yet create anything. A creative personality creates a goal, something that fulfils an individual's inner needs, grants a source from which contents can be drawn, tools with which to work with and equipment with which experiences can be transferred to a source of creativity. But even after this, a concrete process, where an individual does something that is needed and where creativity is realized.

A creative process has usually been seen as a cognitive event. A creative process can be divided into process stages and process assumptions, based on previous research. The

process stages, or episodes, through which creativity gradually becomes concrete are: defining the problem, gathering information, creating a solution, making a choice, and the creative product. The method of how these stages are to be realized is essential. By definition it looks like a normal process, but for it to be creative it needs certain special features. Related to this process is the creative individual's way of thinking, which is fluent, flexible, original, complex and lateral. By essence a creative process is unexpected and unpredicted regardless of the fact that usually certain stages can be separated. It has been noticed that these stages have to be completed one way or another in order to reach a concrete result. In order for the result to be creative, the process must be by nature lateral. So an individual can make an irregular leap in thinking and divert from a logically concludable path. However the process is fluent and flexible. If a certain way of thinking doesn't seem to work, a creative individual changes their method of thinking and seeks a suitable solution. It is also essential that the process is original and complex which assures that the result is not conventional.

As a summary: Defining a problem, seeking information, creating a solution and choice, and creating a result, are parts of a creative process. These stages are however can be found in all human thought and which aren't directly involved with creativity. The essence of the process makes it creative, an essence which is fluent, flexible, original, complex and lateral. Due to this unpredictability and unexpectedness, an individual can process creative results through stages of logical process. With a creative process it isn't so much about stages because they can be thought to be common to all an individual's thought processes. The question is more about the quality of the process; what is it like.

Until now the following were noticeable in the descriptions of a creative essence: creativity is affected by a creative personality, which is an active factor that creates creativity. The creative goal of this factor is self-fulfillment. In order to fulfill it's self an individual has to seek material from its inner structures. On the other hand he or she exploits the characteristics of their personality to use as tools with which to create creativity. To he or she learning is a tool with which one can transfer what one has learned into building blocks. This however does not fulfill creativity; rather a creative process is needed. With a creative process an individual converts potential creativity into real creativity. This process in question includes stages where the problem is defined, information about the problem area is collected and the solution(s) as well as the final product is evaluated. Even this however is not enough to define the core of creativity because creativity does not happen in a vacuum. The creativity of an individual has an environment where it happens. This will be examined next.

A creative environment is a context where the phenomenon takes place and which affects a person and his or her processes. The environment also ranks what is creative and what not. Even if creativity is creative to the individual, it is not necessarily creative to the context. Only the environment decides the real quality of the creativity. As it was told earlier, the environment affects an individual. An individual's social relationships, contextual factors and their own personal history create an environment that affects what goal an individual sees self filling, what his inner structures are like, into what his characters have formed and what and how he learns and has learned, as well as what and how he processes. The environment thus affects everything in an individual.

A creative environment comprises of three partial environments: social, contextual and historic. It can be thought that the historical environment has the largest effect. It comprises of an individuals own experience of life and these directly affect on what the individual.

l is like and what he does. A social environment, in other words other people, has a great impact. A social environment affects as an evaluation, as anticipation, as a role model, and as a reward or punishment-system. Contextual factors have less of a direct influence. They create frameworks which if unsuccessful can inhibit creativity. These factors are culture, the physical environment, the atmosphere and limitations. Here creativity's core environment sort of ignites and extinguishes an individuals desire to act creatively. It doesn't realize creativity, but causes an individual to fulfill creativity. Creativity is a way for an environment to renew and stay vibrant. Through creativity the environment utilizes an individual's potential and develops through individuals' creativity.

So what is the core of creativity? There is no short and simple answer to this, or at least not in this research because this research tries to make a compilation of previous points view on creativity, which of course brings multi-dimensions to the core. This kind multidimensional heart for creativity is however justifiable, as creativity is clearly an elaborate phenomenon and so it cannot be understood from just one point of view. So, what is the heart of creativity? Firstly it comprises of three elements: a creative personality, a creative process and a creative environment. Of these elements a creative personality is built on an individuals need to fulfill one's self using the resources, the characteristics made possible by goal-oriented work, and a learning method that can transfer experience, all found in the psychological inner structures. A creative process on the other hand is made up of interconnected stages and quiddity which are: the defining the problem, the gathering of information, creating a solution, evaluating the solution and the creative product, and fluency, flexibility, originality, complexity and lateral nature. A creative environment is built on historic, social and contextual partial environments. Secondly, the heart of creativity works as a system by the environment igniting or extinguishing creative personality. It activates characteristics in a personality to pursue creativity. When an individual's personality has been awoken and gone to seek creativity, the creative process begins. So a creative personality activates a creative process. When a creative process has achieved a creative product, it shifts to be part of the creative environment at the same time as activating the creative environment to function either for or against creativity.

5. Developing the frame of reference

Above we presented that the heart of creativity is the entirety of a creative personality, process and environment. The idea was that a creative environment ignites a creative personality, which in return activates a creative process, the product of which transfers to be part of the creative environment and so further increasing the advancement of creativity. And so these elements make up a system. How does this system work, in other words how is creativity processed in an entrepreneur? What role does creativity have in an entrepreneur? These questions are to be examined next.

5.1 The environment ignites the personality

What causes an entrepreneur as an individual to create something new? Is someone pushing him or her foreword or is he or she completely self to blame. The idea here is that an environment that supports creativity, ignites a desire to behave creatively. An entrepreneur is presumed to be an intentional and self-guiding being, but only partly. He or she is in interaction with their environment, affecting, acting, perceiving, and seeking feelings, knowledge and impressions. So the environment doesn't directly cause an individual to become creative, rather the creativity of an individual is enabled by the interaction between environmental features and individual factors. Still there is something in the environment that ignites creativity.

The presumption here is that an individual despite their potential isn't roused into creativity if the environment doesn't inspire. So the idea is that an environment affects an individual. An individual's social relations with the environment, their own historic experiences and contextual factors, and above all culture, give an individual picture of their attitude towards creativity, and providing the individual has adequate personal features, these features can be enabled due to positive support from the environment. The presumption is then that an individual has features for creativity, which become active and begin to "control" in a suitable environment. The environment doesn't create creativity in an individual, but it devolves talent already present.

5.2 The personality ignites the process

What happens when an individual's personality starts seeking creativity? It starts to look for activity that could fulfill its personality caused need for creativity. A personality creates activities through which it can create something new. So personality in itself is not yet activity. It is being inspired or focusing on activity. A creative personality inspires to make creativity concrete when supported by a suitable environment. A creative personality is motivated to fulfill itself using inner structures, features and by learning, but this is only just wanting. The wanting process happens through a creative process, which only is born when the personality has been enabled to creativity. So a creative personality in turn ignites a creative process.

A creative process is an entrepreneur’s mental road to realize personality. In a creative process self-fulfillment is fulfilled. It can be thought that when a personality is extremely tuned to creativity, the process is very favorable for creativity, but when a personality for some reason or other doesn't tune into creativity, the process is anything but creative, rather mediocre. In order for a creative process to create concrete creativity, creative personality is needed, which is enabled for creativity, and which has sufficient characteristics needed for creativity. So a process doesn't work properly, if the personality hasn't got the necessary characteristics needed for creativity and if these characteristics haven't been enabled. A creative process is prevented by missing characteristics or their insufficient activation, which in turn is caused by the environment. A creative process also reflects back and affects personality. It is presumable that if an individual's process works, it further increases an individual’s personality to seek creativity, digging up even the deepest characteristics into action. At the same time the situation can be opposite. If an individual isn't capable of a creative process or if he or she isn't inspired, then the creative process fades even more.

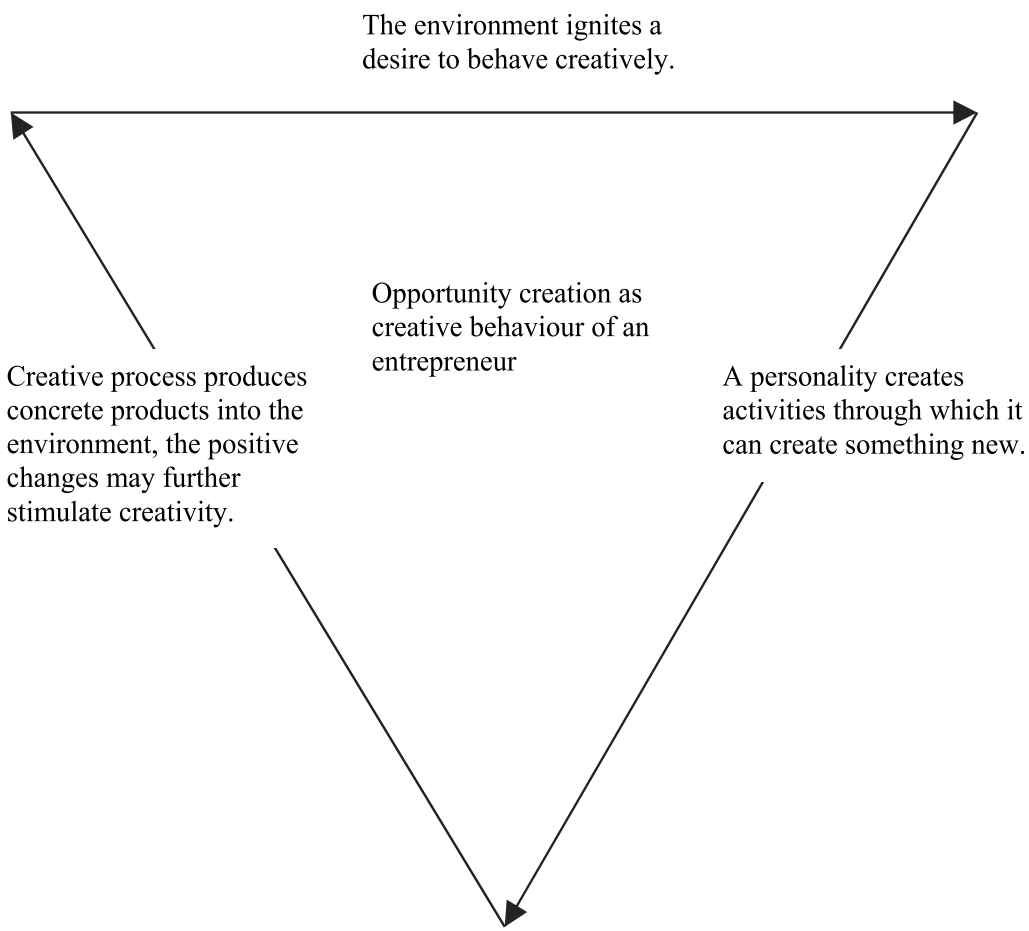

Fig. 1. A creativity-based model of opportunity creation.

5.3 The process ignites the environment

The environment also needs "fuel" in order to promote creativity. Providing an entrepreneur's creative process produces concrete creative products into the environment, the positive changes may further stimulate creativity. It is even possible that an environment's characteristics further improve and actually support creativity even better than before. So an environment's creative advancement is dependent on the entrepreneurs' action in that environment. If entrepreneurs don't actively bring creativity into the environment and demonstrate the importance of creativity, then the environment can't notice creativity to be so important, nor can it continue to support these activities.

Entrepreneurs also have to function actively themselves on behalf of their own creativity, so the environment can notice how best to support creativity. By functioning actively with one's own creative processes, an individual can affect how the environment relates to creativity, and so gradually change the creative environment. This of course doesn't happen quickly and one individual's contribution is small, but every individual's contribution is needed so that the environment can become and continue to be a supportive environment for creativity. Based on that, I conclude that an entrepreneur's creative process stimulates the environment to promote creativity, because the environment notices creativity to be beneficial to itself.

6. Discussion

In this research, the creative process is regarded as a system through which entrepreneurs, as members of their organizational environments, interpret the evolutionary potential offered by their environment's business dynamics and take action to create outcomes that the market values. A burning desire to pursue perceived business opportunities is either ignited or extinguished by the organizational community. In the former case, the entrepreneurial personality first channels its motivation and energy to understanding and interpreting the business situation and then focuses on giving a concrete shape to the opportunities.

Creating a business opportunity involves three different types of activity. Firstly, it includes social activity, because entrepreneurs are embedded in their own social communities, drawing from it influences, ideas, operational models, resources and encouragement. Moreover, this social community offers a forum for exchanging ideas on what kind of business is being conducted and what the current needs are and creating visions and dreams for business. Secondly, the creation of a venture opportunity involves cognitive activity with the entrepreneurs attempting to understand ideas about entrepreneurship and business in their organizational environment and cultural heritage. In effect, they are striving to control and manage complexity. The third type of activity intrinsic to the creation of business opportunities is entrepreneurial actions. Entrepreneurs perform pragmatic tasks in searching for and devising the best possible solution to their problem. In absolute terms, this solution, a business opportunity, may not be the most innovative or best, but for a particular entrepreneur in a particular situation and organizational setting, it is the most viable and valid option.

Entrepreneurship as creativity isn't simple and logical, because an opportunity needs creative insight and sensitivity on what combines all fragmented information. If it were only the arrangement of information, everyone would notice his or her opportunity. However, this is not the case. For example, with a jigsaw puzzle, we know we are putting together a jigsaw and that every piece has its own place. By diligently and systematically trying the pieces, the puzzle is solved. An entrepreneurial opportunity is not this kind of puzzle. Instead of a jigsaw, imagine a situation where you have some pieces of sorts, but have no concept of what you should do with them. You have to based on your own creativity, conceive what it is about, work out what the pieces are linked to, conceive a solution, conceive in what way the pieces bring about a solution, and understand what is the trick of it all is. An opportunity is more about creating a meaning based on scattered and ambiguous information, rather than deriving a decision within a limited decision space and being based on exact information.

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Part 2

New Business Models

3

Incubation of New Ideas: Extending Incubation Models to Less-Favored Regions

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1. Introduction

The search for models regarding the business incubation process is on a multifaceted road. Existing literature is crowded with a wide range of proposals emphasizing different foci: some of them focus on results, some address the importance of internal processes, some present a holistic perspective of incubation by dealing with both environmental forces and internal aspects, some use virtual approaches and some follow a more contingent approach in order to address specific issues such as those presented in rural, less endowed regions.

Considering that incubation models will definitively influence the life of both incubators and incubatees, it is important to envision the incubation environment. With progressively complex structures, these environments require an effective and efficient management that is ready to answer to vivid entrepreneurs, which demand qualified and committed teams tuned to the objectives defined by the incubator.

Departing from the premise that the "success" (successful management) of a business incubator is the consequence of the "success" of its incubated companies, the management business model of the incubator directly contributes to this "success". In this sense, the incubator macro business process (selection – incubation – graduation) must be organized and modeled to select good business plans, assess and evaluate the new business undertakings and graduate successful firms (Bergek & Norrman, 2008; Hannon, 2003).

The main objective of this chapter is to present a review of the literature regarding incubation services and models. Furthermore, it will extend incubation models in order to include the incubation of business ideas, specifically targeting less-favored regions.

This chapter is divided in six sections. The introduction covers the first section whereas the second section presents a revision of the literature regarding incubation and incubators. Section three covers the incubation process. Section four addresses business incubation models, in which the most important models are presented and analyzed. Section five introduces a new concept on virtual incubators. Section six introduces the concept of incubation of business ideas, which is developed from the specific needs of rural, less-favored regions. Final conclusions are drawn in section seven.

2. Incubation and incubators

2.1 Concepts

The globalization process, experienced by most economies in the last years, has unleashed the importance of the innovative capacity of firms, regions and countries in their search for competitive advantage and efficiency. In this way, the new technological dynamics imposed on business environments have generated new forms of organization and interaction among firms, and between companies and other institutions, thus, assisting in the search for stronger competitiveness and long term survival.

The role performed by business incubators, by underpinning the generation of new competitive firms, or by training future entrepreneurs, is of crucial importance. Business incubators are mechanisms that stimulate the creation and development of new micro and small companies (technology-based firms, manufacturing firms, service firms or agricultural firms). By providing the complementary training to young entrepreneurs, both in the technical and management aspects of the new firm, business incubators have facilitated and accelerated the process of innovation as well as economic and regional transformation.

Hannon (2003) considers that the business incubation process supports the identification and exploitation of a successful opportunity for the creation of a new business undertaking. According to Hannon (2003), the business incubation process should be faced, firstly, as the environment where new business ideas and undertakings can be developed according to a set of business support resources.

The business incubator's public image appears as a network of individuals and organizations. Included in this network are the incubator's manager and personnel, the pool of advisors, the incubatees and their staff members, the local universities, the local development associations, the industrial contacts and all the services provided by the incubator, such as lawyers, marketing consultants, accountants, investors and volunteers (Hackett & Dilts, 2004a).

Although reinforcing this idea, Bergek & Norrman (2008) also claim that the business incubator should have a network mediating role amongst the incubatees as well as between them and the environment that surrounds them. Considering that business incubators should be positioned for actively cooperating in the initial phase of new entrepreneurial undertakings, this mediating role may bring benefits for the incubatees by increasing their probability of succeeding in the business arena. According to Bergek & Norrman's (2008) position, it is possible to infer that it is the responsibility of the business incubator to make feasible cooperative relationships that provide incubatees with greater access to the information generated in the environment in which incubated firms are inserted, thus, nurturing the development of competences by means of learning processes. As a consequence, the final objective of the incubation process is to deploy among incubatees the capability to survive in the business arena and to transform a business idea in a successful business venture.

Finally, Bergek & Norrman (2008) claim that illustrating a nurturing awareness policy that contributes to the establishment of cooperative relations is the first step for a business incubator to establish and promote viable businesses.

Despite the prominent role of business incubators in the process of nurturing and underpinning the promotion of new firms, Hackett & Dilts (2004b) consider that they can be regarded as a resourceful technology that, by itself, is not presented as a tool that guarantees the new firms' success. The absence of entrepreneurial capabilities and the lack of marketing knowledge can lead to the failure of new ventures. Accordingly, they defend that the incubator must, in this sense, be understood as a means to an end.

If it is correct that the absence of potential/capacity of the incubatee can doom the new entrepreneurial undertaking to failure, it is not less true that the networking role of the incubator as a mediator between the incubatee and the external environment is also important. Nevertheless, we stress that during the initial phase the incubator's role is multifaceted. Consequently, we defend Hackett & Dilts' (2004b) conclusion that though the network based view of the incubator is important, the structural contingent theory is even more important to guarantee that there is a "proper fit" between the business incubator and the external environment faced by new firms.

This mixed concept of network support and structural contingency are confirmed by Hackett & Dilts (2004b) and Bergek & Norrman (2008) when they try to come up with the different forms to define an incubator. They define an incubator as a place where resources can be rationally and dynamically invested. The business incubator is seen as a dynamic community where selected incubatees can locate their emergent firms in an incubating environment. This includes routines, procedures, culture, working environment, learning experience and working costs, which incubatees can hardly obtain by themselves.

2.2 Typology

Many changes have occurred since the establishment of the first business incubators due to (a) the role they have had in the creation of new firms and (b) the mechanisms for achieving the technological development they have been using.

Initially, the majority of incubators was positioned, on the one hand, as a public tool for the creation of jobs, urban rehabilitation, commercialization of university innovations and, on the other hand, as private organizations for the incubation of new high-growth firms (Hackett & Dilts, 2004a).

Grandi & Grimaldi (2005) segment incubators in two different types: those with lucrative objectives, such as private incubators, and those with non-profit purposes, including university incubators and business innovation centers, such as those that appeared in Europe during the 1980s. According to Grandi & Grimaldi (2005) the initial objective of public incubators was to reduce the costs of doing business by offering a set of services, space, infrastructure, technical experience and assistance in the elaboration of the business plan. With the changes and evolution of markets, this type of positioning began to change due to the boom of private incubators. These have as main purposes the creation of new firms and the obtainment of profit from incubatees as a result of fees charged for new undertakings.

Through time incubators have been assuming the role of supporting the development of start-ups with a broad range of services. This has led to the detriment of the initial passive behavior of offering physical space, basic infrastructures and communication channels to tenant companies. For Bergek & Norrman, (2008) the services provided by an incubator

within a typology centered in the provision of physical space and administrative services resemble the concept of hotel and not of incubation. According to the demands of current markets and the growing need and sophistication of innovation, incubators should be prepared to assume themselves as the engines of that innovation, thus, supporting and nurturing potential entrepreneurs in order to strengthen their potential growth and to endow them with the business tools that they normally lack to achieve current or potential opportunities.

Our comprehension of the positioning of an incubator resembles that put forward by Bergek & Norrman (2008) as a large percentage of potential entrepreneurs are neither able to prepare their business plans nor start their own businesses as they lack managerial competences, business contacts and financial resources. They reveal need of a "mentor" able to support and guide the new firm towards the "right" position, in the "right" moment. Peters, Rice & Sundararajan (2004) reiterate this pattern as they defend that incubators must assume the role of organizational developers by contributing to the training, networking and assistance of incubatees in the initial phase.

It is imperative to fully comprehend the incubation process. However, we must have in mind that incubators can accelerate the learning process by training entrepreneurs, counseling them, and supporting their managerial know-how.

3. The incubation process

Following the inherent concepts of the incubators and the incubation process we will now focus our attention on the process itself. According to the analysis of the different concepts of the incubator, we can infer that the incubation process can include the support of business development including: the formulation of the business plan, the recognition of business potential, the planning of business activities, the preparation of the market study, the entrance in the market and the sustainable development of the business.

Carter & Jones-Evans (2000) propose a generic five-step incubation process, as shown in figure 1. One feature of the Carter & Jones-Evans' (2000) model is that the steps put forward are focused on the needs of the incubatee, which will be supported by the service provided by the incubators during the incubation process. Carayannis & Zedtwitz (2005) identify five services provided by incubators that are crucial for the incubatees:

1. access to physical resources;
2. administrative support;
3. access to financial resources;
4. business/organizational support in the start-up phase;
5. access the networking activities.

Despite the validity of the services provided and of the model proposed by Carter & Jones-Evans (2000) and Carayannis & Zedtwitz (2005), it is possible to question not only if all incubators perform the whole range of steps and services, but also if they are effectively carried out and properly assessed in the incubation process. One of the criticisms put forward regarding the model is that it does not answer *how* an in *what way* incubators provide their support. As most of the incubators were developed as a response to the challenge posed by technological pressures, namely university business incubators, business

innovation centers, science parks, etc. it is also questionable if the model is suitable in rural areas where pace technologies are rare and there is a scarcity of human capital.

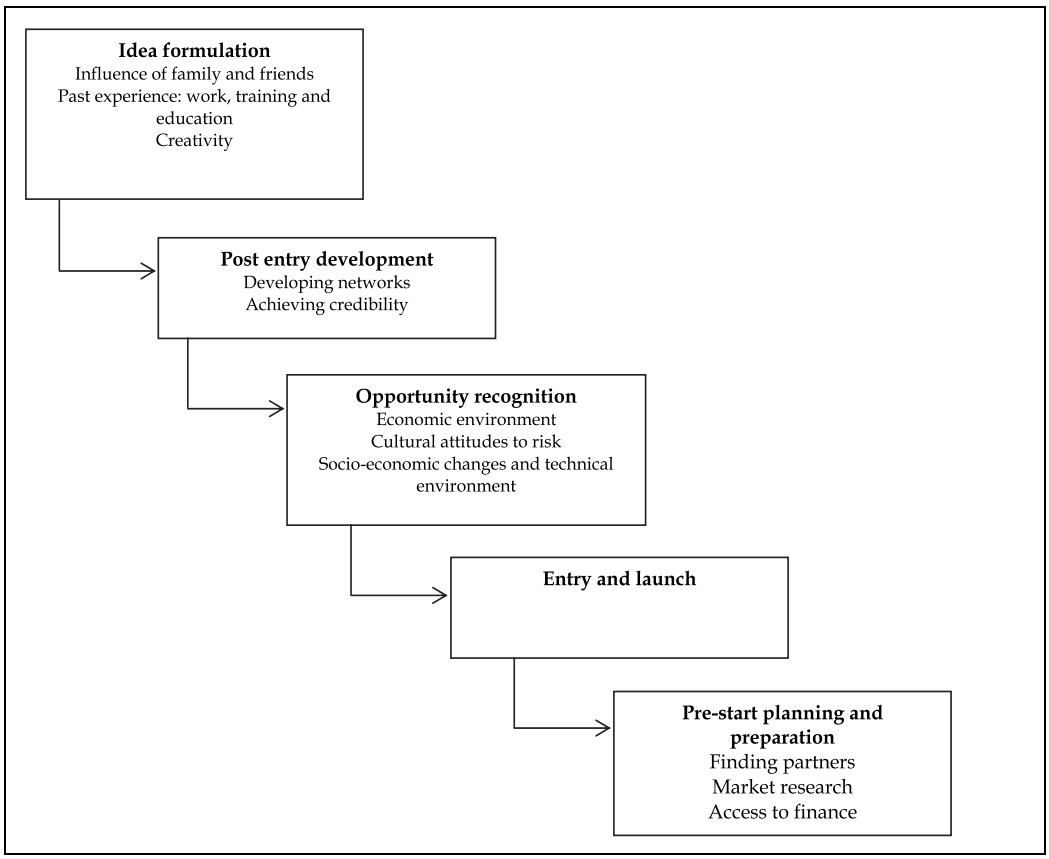

Fig. 1. Key steps in the incubation process

Given the importance of the incubation process, Hannon (2003) affirms that managerial capacities as well as the level of experience associated to the incubator are vital for the success of the assessment of the incubation process. The incubator will have to be capable of correctly managing the incubation environment, supporting the incubatee's new business creation during the incubation process, and, of reducing the probability of failure of the new undertaking and speeding up the process of business creation. In order to deal with these issues the incubator should have an adequate management profile that includes financial, analytic, interpersonal, entrepreneurial and bargaining capabilities.

Considering the importance and the relative complexity associated to the incubation process, we shall address the models and components related to this procedure.

4. Incubation models

Due to the incremental role of incubators in society and in the economy, the comprehension of the whole incubation process is of key importance. However, the studies and proposals

carried out throughout time do not present a holistic vision of the process. Bergek & Norrman (2008) consider that the majority of models are centered on results and do not intertwine the processes of selection and management of the incubator and its results.

Campbell, Kendrick, & Samuelson (1985) are amongst the first to propose a model that attempts to conceptualize the incubation process. They tried to explain, as shown in figure 2, how the different components and activities of an incubator can facilitate the transformation of a business proposal in a viable new firm.

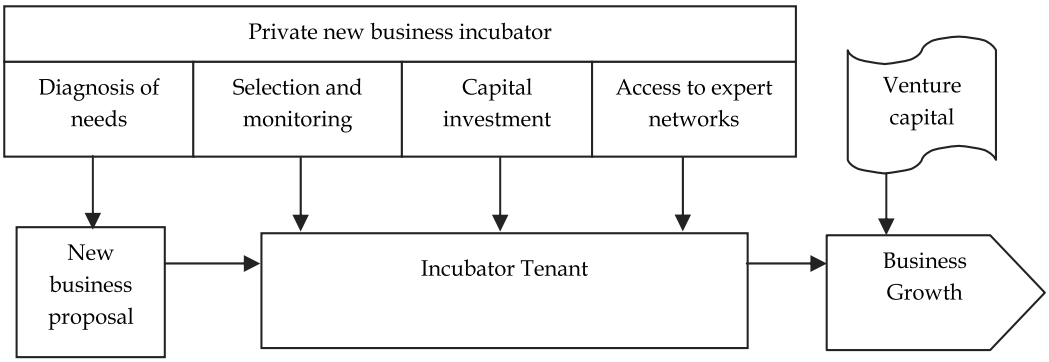

Fig. 2. Campbell, Kendrick & Samuelson's (1985) incubation model

The model proposed by Campbell et al. (1985) suggests four areas where the incubators create value: 1) the diagnosis of business needs, 2) the selection and monitoring of the services provided to the firms, 3) the investment of capital, and 4) the access to the working network of the incubator.

According to the process described and the components presented by the model, it would be possible to make a potential business into a viable firm. However, the model fails when considering that all businesses are potentially viable and does not take into account the lack of capabilities of potential entrepreneurs and, the environmental barriers that can arise during the process that might doom the new venture to failure. In addition, the model is not explicit in what criteria to adopt when selecting a business to support.

Would not a bad or incorrect selection process influence (negatively) the feasibility and future growth of a potential new business? Moreover, it is still visible that the model is basically centered on private incubators with little support in rural areas or social programs.

Having in mind the question raised about the selection criteria, Kuratko & LaFollette (1987) confirm that inconsistent selection of the incubatee can increase the probability of failure of both the incubator and incubatee. This arises from the probability that selection is not focused on the value proposition of the business proposal and on the competences of the potential entrepreneur.

Following this line of thinking, Merrifield (1987) created a selection proposal for potential incubatees. That approach consisted of three main questions being the first two based on the potential incubatee: 1) is this a good business in which anyone could be involved? 2) is this a business in which the (incubated) firm has resources and competences to successfully compete? With these two questions Merrifield (1987) intended to verify the attractiveness

and suitability of the new venture. In the case the answers were favorable the last question would be raised: 3) Which is the best approach for the firm to enter the business arena and grow?

Although Merrifield's (1987) approach looks solid, it can be considered as a very simplistic way of analyzing the potential of a new business undertaking. It is also possible to assert that the proposal is applicable in technology-based new ventures. However, it falls short of expectations in less endowed regions. This is the case in rural areas in which young entrepreneurs do not have the same qualifications and the incubators capabilities and resources are far from those found in universities or business and innovation centers.

As was previously referred, Campbell et al.'s (1985) model is open to refinement, and was addressed by Smilor (1987) who perceives incubators as a transformation mechanism in which industry, government and university are interrelated. Smilor (1987) categorizes the benefits that incubators provide to their incubatees through four dimensions: 1) credibility development, 2) the shortening of the learning curve, 3) faster troubleshooting, and 4) access to the network of entrepreneurs.

According to Smilor's (1987) model, there is a strong emphasis on the external perspective, neglecting the internal one, in which the entrepreneur plays an important role. However, as the model was developed and proposed having in mind typical innovation-based entrepreneurs, it seeks to identify the different components of the new business incubation process. It conceptualizes the incubator as a system that gives incubatees the structure and credibility for the creation of new firms while ensuring a set of immediate, key resources for the setting up of the new undertaking. For example, if we take into account the lack of entrepreneurial capabilities as well as the lack of economic resources in most rural areas, it is possible to conclude that this systemic approach, encompassing the internal and external environment, seems to be lacking in Smilor's (1987) model.

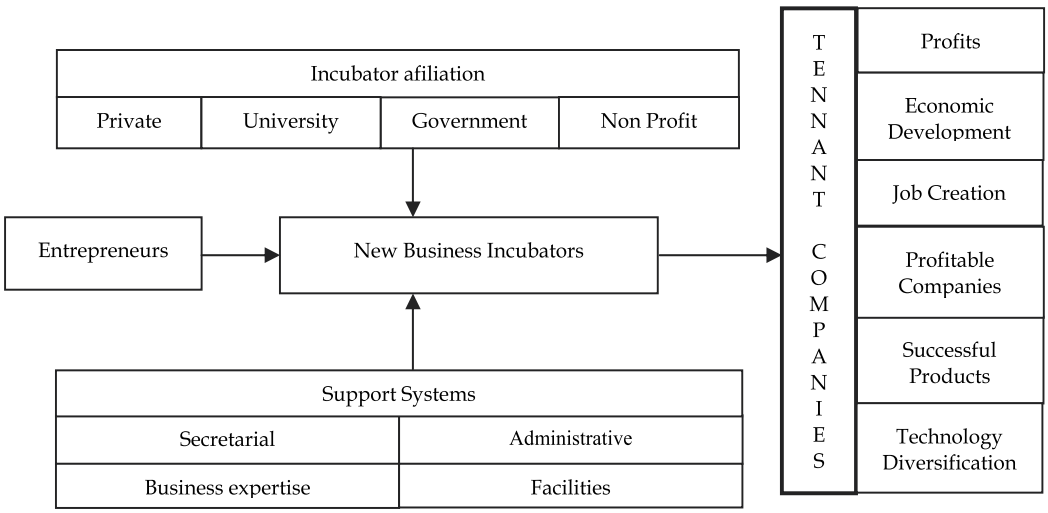

Fig. 3. Smilor's (1987) incubation model

In the search of a model that presents the different components of the incubation of a new firm (either internal or external), we find Bergek & Norrman's (2008) proposal. They reject the principle of a black box incubation model centered merely on results. They consider that it is only possible to evaluate the performance of a business incubator when taking into account the particular objectives of the incubator, i.e. confronting objectives and results. They identify a set of components that try to translate the incubation process according to the internal and external variables:

1. The selection of firms that should be accepted and the ones that must be rejected;
2. Infrastructures, regarding the physical facilities and administrative services to be provided;
3. Mediation, i.e. the way in which the incubator mediates the relationship between the incubatees and the external world;
4. Graduation, which concerns the policy defined by the incubator about the moment and circumstances of exit of the incubated firms.

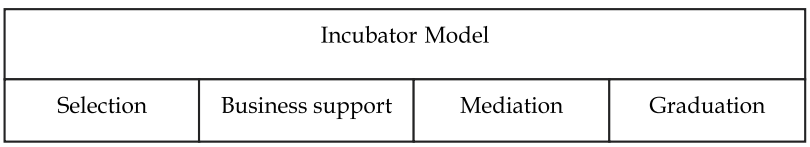

Fig. 4. Bergek & Norrman's (2008) incubation model

In regards the selection component, Bergek & Norrman's (2008) mention that it is one of the most important tasks. Consequently, the selection criteria must be adjusted to the characteristics and objectives of the incubator. However, they identify two different approaches: selection based on the business idea and selection based on the entrepreneur.

When the criterion is based on the idea, it requires that the incubator has the technological and business knowledge as well as the background necessary in order to evaluate the feasibility of the business idea. On the other hand, if the criterion is based on the entrepreneur, the incubator must have competencies to assess the entrepreneur's personality traits, personal skills, and capabilities related to the new venture.

The adoption of one or the other is a matter of option and flexibility. Nevertheless, it is arguable that the "picking the winners" policy is a successful approach. Accordingly, as Bergek & Norrman's (2008) suggest, in order to avoid possible evaluation errors it would be advisable to deploy a selection process that involves both approaches in order to assess pairs of ideas/entrepreneurs, and winners/survivors. The application of this selection strategy seems to be more complete, as it involves the two variables that are important for the new venture to succeed: the business idea and the entrepreneur.

In what concerns the business infrastructure, it is important to remark that beyond the need of a broad support, it is vital to intertwine that support with the way it is provided.

Concerning the incubator mediation capacity, Bergek & Norrman (2008) defend the importance of the role of the mediator among incubatees and between them and other actors. In this manner, mediation capacity is a way of projecting the incubatees in the market, creating opportunities for them as well as reducing uncertainties.

A closer look at the components presented by Bergek & Norrman (2008) leads us to consider the model as properly adjusted as it takes into account the demands of the incubator's internal dynamics as well as the external environment. Therefore, it leaves each incubator with the responsibility of applying the different components of the model and adapting the incubator to the intricacies of each particular reality. Nevertheless, Hackett & Dilts' model (2004b), shown in figure 5, based on Campbell et al.'s (1985) model, also proposed a holistic vision of the incubation model. Although focused on the results/performance (black box) approach, they developed a theory, based on the real options theory, as a way to maintain and complement the model.

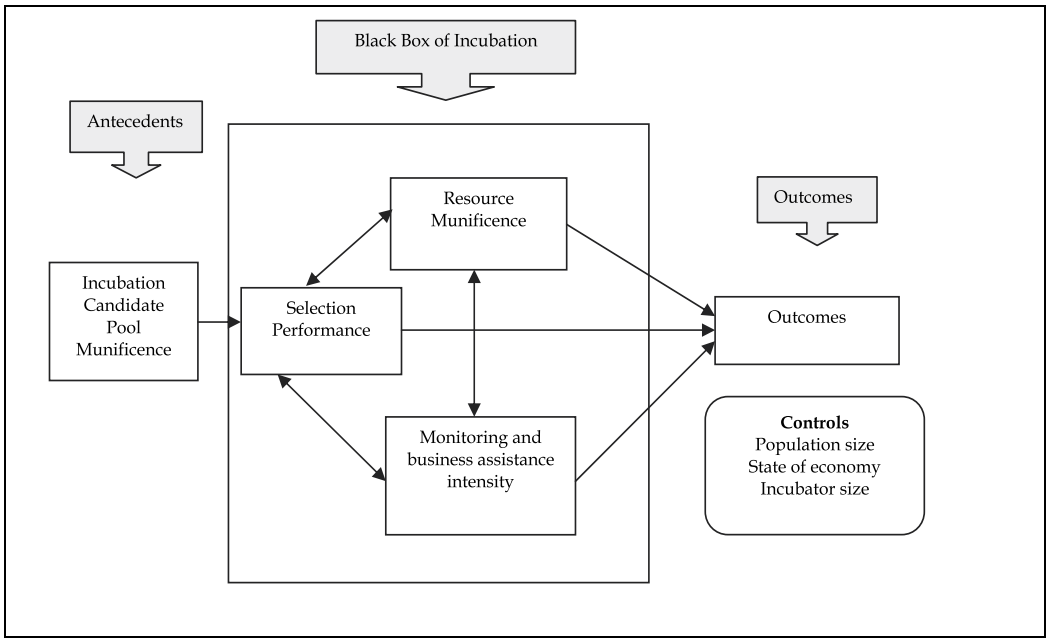

Fig. 5. Hackett & Dilts' (2004b) incubation process model

The incubation process proposed by Hackett & Dilts (2004b) suggests that incubatees are selected from a pool of candidates, being monitored and supported with resources while they go through their initial developmental phase. The results are referred to the survival or failure of the incubates at the moment he/she leaves the incubator.

By analyzing the model it would be possible to pose the following two questions: what criteria should be considered at the time of the selection of possible incubatees? Would the existence of predefined criteria contribute to the economic results of incubation?

The answers to these questions are found in the real options theory proposed by Hackett & Dilts (2004b). These authors seek to resolve *how* and *why* the variability in the measures of the components of the model can explain and forecast the probability of survival of new undertakings during the development phase. The theory presented by Hackett & Dilts (2004b) defends that: the performance of incubation depends on the incubator's ability to create options through which the selection of weak-but-promising intermediate potential

firms is interesting. However, it must be implemented with monitoring and counseling, and the infusion of resources.

The performance of incubation can be measured in terms of growth and financial performance at the time of incubator exit. As indicator of success Hackett & Dilts (2004b) identify the following mutually exclusive outcomes:

1. The incubatee is surviving and growing profitably;
2. The incubatee is surviving and growing and is on the road of profitably;
3. The incubatee is surviving but not growing and is not profitable or is marginally profitable.
4. The incubate operations were terminated while still on the incubator, but the losses are minimized;
5. The incubate operations were terminated while still on the incubator, and losses are very large.

In relation to the outcomes, Hackett & Dilts (2004b) consider the outcome number four as a success factor, according to the real options theory. However, it is possible to pose the following question: will it effectively be a success indicator or an indicator of a bad option upon selection of the incubatee? Well, it is indeed possible that the selection of the incubatee was right and the absence of "luck" played a crucial role. If Hackett & Dilts (2004b) affirm that according to the real option-driven theory the third indicator should be a failure outcome, then it looks that a mismatch exists when defending that the fourth outcome is a success outcome. The issue is simple: would not a "marginally profitable" business be better than a "dead" business? More importantly, if both are in the incubator, one should pose the following question: How would their performance be outside in the real world?

Hackett & Dilts (2004b) argue that selection performance is the capacity of the incubator to behave as a venture capitalist of the undertaking at the moment of selection and admission of the incubatee. Accordingly, it will be expected that incubators behaving as venture capitalists adopt selection criteria such as: managerial capacities of the enterprising team, market and product characteristics and potential, and the expected financial results. According to Hackett & Dilts (2004b), the existence of a selection mechanism makes potential candidates more demanding with themselves, leading them to self-corrective measures.

Regarding the selection performance, it is possible to argue that the model might not be pervasively used in all type of incubators, especially for those that are targeted for social minorities or rural areas in which social responsibility plays a crucial role. Accordingly, although the incubator might behave as a venture capitalist, it must consider what target groups it is serving. In addition, the incubator must ponder how those target groups can be served in developing managerial competences. However, this selection criterion is important as it also allows potential entrepreneurs to understand that they have to cope with the risks of the new venture. This factor was not considered by Bergek & Norrman (2008), as they regarded the selection criterion as being centered on the entrepreneur.

In what concerns the intensity of monitoring and business assistance, Hackett & Dilts (2004b) claim that the more intense the monitoring and the business assistance to the incubatees, the larger the probability of success of incubation process performance. Hackett

& Dilts (2004b) consider that the probability of obtaining positive results increases with the capacity for supporting the incubatees with a variety of resources.

According to the analysis of Hackett & Dilts' (2004b) model and the description of the real option-driven theory of business incubation, it is possible to defend that the model tries to explain business incubation performance. However, it is centered on the incubator perspective, without strong elements of reference or importance to the incubatee, who the incubator is supposed to serve.

Confronting the models, we recognize that Bergek & Norrman's (2008) model effectively translates a more holistic vision, not being centered on results or performance, and considering the incubation process as a whole including both the incubator and the incubatee.

Moreover, it is possible to notice that all the models referred above identify internal aspects of the incubator. Nevertheless, there is no agreement on what criteria can be assumed as relevant for the process of business incubation. On the other hand, the internal resources of incubators and the way they are used are extensively used and analyzed according to the business plan of the incubator. Of equal importance is the fact that incubators closely scrutinize the costs of all training, consultancy provided, partnerships/interactions the incubator holds with different agents and all infrastructural costs. In this manner, incubators are closely monitoring their own business.

Another important issue is that not all the models properly highlight external issues, such as location and partnerships maintained. The external environment can strongly influence the incubator, as it will depend on the partnerships gained and maintained with higher education institutions, technology centers and other research institutions. These partnerships support the incubator in the development of new firms, thus, fulfilling the incubator's own mission. If the location the incubator inhabits does not possess those institutions, the incubated companies can face some difficulties in reaching stability (graduating). The same is true if the location does not possess companies that can be clients of the new firms, which may hinder local development. This is certainly what happens in many rural areas in which the main markets are far away and technology oriented institutions are scarce, giving particular attention to rural incubators.

Components seem to be one of the main challenges incubators face in the incubation process. However, to better articulate the incubation process one must consider a wide array of criteria that can encompass the type of incubator, its area of influence, the services provided, and its geographical location, among others. Accordingly, although all incubation models are suitable, it seems that Bergek & Norrman's (2008) proposal is an open road that deserves further development.

Considering the growing tendency and accessibility of internet resources and information technologies, we have decided to approach new incubation models – virtual incubation – in order to face and readjust towards a changing reality.

5. Cyber incubation

The growth and pervasiveness of the Internet is amplifying creative processes and leading to new scientific and technological developments.

Firms both in developing and developed economies are increasingly hiring professionals using the Internet to expand research and development projects and to create new businesses in a networked sustainable development.

Nowadays, we are witnessing a stimulating and proactive participation in cyber work and cyber business creation. High levels of market competitiveness lead firms to be more active and competitive in Internet-based business (Ohmae, 2000; Turban et al., 2000). Accordingly, business incubation is being influenced by the development of new, emerging incubation models in which talented, skillful people can work at home or in innovative environments providing e-services or knowledge-based services.

This new concept of incubation will eradicate some of the items related to the components previously presented, such as physical space, equipment and relationship management between incubatees. Virtual incubators need to provide valuables resources and e-services to assist potential entrepreneurs in the creation of their new ventures.

Aernoudt (2004) states that incubation should be considered as an interactive and dynamic new firm creation process with the purpose of stimulating people to start their own business and supporting start up enterprises in the development of innovative products. A real incubator it is not an office space with a desk. It should offer management services, financial assistance, juridical support, operational know-how and access to new markets, which can be done both in a physical or virtual space.

Nowak and Grantham (2000) argue that in traditional business development entrepreneurs face a common challenge: the absence of capital, human resources, and management capabilities. This leads to the development of new models that facilitate the creation of new businesses. They propose the creation of a virtual incubation model, based on networked innovation. They consider that the combination of specialists and information technologies would assist in establishing strategic alliances between managers, marketing strategists and specialized engineers, thus, achieving better business opportunities. The components of this virtual model are shown in table1.

Human resources focus + capital focus = source of integrated resources
Focus on strategic alliance formation helps to underpin all key success ingredients as early as possible
Intellectual capital valuation and management expertise
Internet-based, distributed resources
Profitable solutions (specially for private incubators)
Private sector plays a leading role, while university and public sector paly supporting roles
Formalized management control systems (accounting, etc.) for generating stability
National and international business and market focus
Work in conjunction with physical incubators when needed

Table 1.

Nowak and Grantham's (2000) model shows a combination of successful elements applied to traditional incubation with a new focus on virtual channels and strategic alliances. Nevertheless, their contribution seems to be in a very embryonic state as it does not explain the whole cycle of virtual incubation.

It seems that new technologies will strengthen the proliferation of this new kind of incubation. However, we think that there are some important challenges to be overcome, in particular, an extensive application in the primary sector or in rural areas. Hackett and Dilts (2004a) state that virtual incubators should be regarded as business incubation programs, as these are much more a provision of services than incubation services. They also defend that the absence of interaction between incubatees might result in the absence of desired effects present the traditional incubation environment.

Virtual incubation may go through a dramatic change in the near future, especially with the provision of e-services for the development of business plans, virtual classrooms, virtual training and virtual mentoring. Portals may play a crucial role in the creation of a virtual facility for e-learning purposes. Nevertheless, the traditional roles are not yet set aside.

6. Incubation of business ideas

Rural entrepreneurship plays a crucial role in the economic development of rural and less-favored areas. These suffer from very particular characteristics that most technology-based firms do not go through: weak infrastructural facilities, relative remoteness to main markets, disadvantaged populations, relatively low income and a fragile economic fabric. Accordingly, new ventures are even more important in less-endowed areas in order to diversify the local economy and to increase welfare. Rural entrepreneurship can play an important role in creating new jobs, income and wealth and thus, fighting the main economic and environmental weaknesses of rural communities. Consequently, the creation of new ventures seems mandatory for an integrated development to happen.

Entrepreneurial activity is not the same in all countries, regions and cities. Entrepreneurship is conditioned by various factors settled in the behavior, motivations and knowledge of the individual. However, it is dependent on opportunities and available resources and on the conditions of the surrounding environment (Stathopoulous, Psaltopoulos, Skuras, 2004).

Although rurality may be defined using terms such as population density, rate of population outflows and inflows, settlement size, local economic structure and landscape (Skuras, 1998), it can also be addressed as a set of rules and resources existing in a certain space and drawn upon discursive and non-discursive actions (Halfacree, 1995).

Two realities are related to rurality: on the one hand, more developed rural areas, characterized by their relative proximity to main economic markets and, on the other hand, remoter areas, characterized by depopulation, infrastructural inadequacies, high dependence on farming and a weak industrial fabric. As a consequence, rurality has obstacles and opportunities for entrepreneurship to occur and alters both the entrepreneurial process and outcomes (Stathopoulous, Psaltopoulos, Skuras, 2004).

If launching new firms is a difficult issue in the entrepreneurial process, the problems are more specific to rural entrepreneurs due to three types of problems. Such problems are related to social and economic structures and to the physical environment (Lichtenstein and Lyons, 1996; Knack and Keefer, 1997). Low population size/density and remoteness make it difficult for rural entrepreneurs to achieve economies of scale or critical mass. Furthermore, the difficulties brought upon by the remoteness of rural areas impose a high transaction cost to rural businesses as it limits accessibility to suppliers, customers, new markets and social

capital of urban and sub-urban communities. Lastly, the lack of a social capital fabric, the qualitative characteristics of the civil society, and the activities of other more developed areas jeopardize the operation of businesses and their networking activities.

As seen above countless business incubation models were developed and used extensively in business incubation centers, university business incubators, independent private incubators, corporate private incubators, high-technology business incubators and technology parks. The particularity of those models is that they depart from technological backgrounds and specific characteristics that are not valid in most rural, less-endowed areas. Clearly, the ideal environment for entrepreneurship is where firms can take advantage of the agglomeration and proximity of sources of information, qualified labor, technology and capital. Classical incubation models thrive in those environments.

In rural areas, however, where the networks have yet to be developed, where innovation and technology do not belong to the local culture and economy, and where enterprises struggle to become more competitive (Keeble and Tyler, 1995), business incubation models must have the following key attributes:

- They are first centered on entrepreneurs and only then on the business activity;
- They build entrepreneurial support systems to help entrepreneurs develop business ideas, create viable enterprises and grow sustainable businesses within the rural community;
- They help build entrepreneurial environments with the support of public and private sectors;
- They are strategically focused in meeting the needs of rural entrepreneurs.

Moreira and Martins (2009) developed a methodology to support rural entrepreneurs in an integrative way throughout the following three phases:

- *Information and Nurturing* entrepreneurship and business creation
- *Maturation and Finalization* of a business plan
- *Test and Experimentation* of business ideas

Each phase involves different actions with several tasks. Each action has instruments and procedures in order to help potential entrepreneurs throughout the process.

In the *Information and Nurturing* phase, the potential entrepreneur is interviewed and her/his business ideas are assessed. A file is prepared with the personal entrepreneur motivations, his/her business ideas and an analysis of the entrepreneur's needs in terms of support and/or resources.

The objective of the interview is to analyze the entrepreneur's profile, his/her technical and personal competencies, the business idea, the business feasibility and the possibility of supporting the entrepreneur in the next phases. This action is the most important in the follow up process as it ends with a business check-up about the entrepreneur/idea/project concerning the type of support the prospective entrepreneur will be given (or not) during the following phases of the process.

Clearly, all entrepreneurs must go through this stage as the diagnosis will reveal the potential of the entrepreneur/idea/project.

In the *maturation and finalization phase* the elaboration of the business plan takes place. This phase begins with the establishment of a contract between the entrepreneur and the institution, therefore, defining the duration and terms of support and training. In this manner, the potential entrepreneur develops the skill to prepare the Business Plan.

There are training sessions so that the entrepreneur can prepare the business plan, undergo market research and collect the necessary information. A tutor provided by the institution helps the entrepreneur with the search and collection of information, and the training received by the entrepreneur is expected to help him/her with the preparation of the business plan.

By the end of this phase, the entrepreneur must have a business plan, an investment plan and a financial plan and must understand, explain and defend their contents to third parties.

The *experimentation and test* phase is the most innovative phase of the process. It allows the entrepreneur to test the business idea before the formal creation of the firm. This phase can be considered a radical innovation as it gives potential entrepreneurs the opportunity to incubate business ideas before formally beginning the business.

The entrepreneur has the support of the business incubation structure and his/her tutor in all main business areas: accounting, finance, marketing, communication, image, infrastructures, etc. Clearly, during the test and experimentation process, the entrepreneur has the opportunity to test his/her business without the formal creation of the firm, thus forming a business idea bed-test. In order for this to be possible, the entrepreneur will have administrative support from the business idea incubator, which will be responsible for the invoices and receipts during this phase. In this situation the business incubator is providing a brand new service in upstream activities of the value chain: the testing of the business ideas.

According to Moreira and Martins (2009), this type of business idea incubator is very innovative as it provides a hands-on approach to training prospective entrepreneurs. This action oriented methodology supports prospective entrepreneurs before the actual creation of the new business.

The combination of different actions overcomes the obstacles identified by potential rural entrepreneurs in the preparation of the project: poor access to capital; lack of institutional support; heavy administrative and bureaucratic burdens; lack of information about support and programs for business creation.

7. Conclusion

While incubators have been proliferating throughout the world as way of supporting the creation new start-ups, the way of understanding them is becoming more diverse due to the need of targeting them to specific situations.

There are several literature-based definitions for business incubators. Some conceptualize incubators as a place that hosts and shelters new business undertakings, some as the supporting base of the planning, creation and launching a new business in the market, and others include the concept of virtual incubation where e-business services are provided. The concept recently has been stretched to include business idea incubation, extending the

incubator value chain to upstream activities in order to support less-endowed firms in rural areas. However, in a general way, all of them aim to stimulate and support the creation of new firms. Nevertheless, the way they provide the service varies considerably according to the typology used: private or public incubators, technology or rural incubators, physical or virtual incubators.

In an attempt to understand all the inherent processes of incubation, it is clearly understandable that there is no unanimous opinion on how the process should be or how the model should provide this service to the potential entrepreneurs. The majority of business incubation models tend to describe the process by attempting to assess the incubator results, thus, leaving unaddressed several characteristics of the models and incubatees who they supposedly serve. However the applicability of a global model for all types of incubators might be very limiting considering that each type of incubator is targeted to very specific needs.

Bergek & Norrman's (2008) offer a general structured model in which each incubator can adjust its services to the three components (selection, support and mediation) it follows in the process of supporting new businesses. In such a way this model can also be applied to virtual incubators as well as to business ideas incubators as proposed by Moreira and Martins (2009).

One important aspect of the incubation models analyzed in this chapter is that classical models provide services based on the provision of physical facilities. On the other hand, virtual incubators are targeted to potential entrepreneurs who seek services as virtual classrooms, virtual set-by-step idea evaluation process, virtual business plan mentoring and an array of e-services that are very interesting for high-tech entrepreneurs.

Although business incubators, as shown by Bergek and Norrman (2008), tend to provide three basic functions, Moreira and Martins (2009) have extended incubators to business idea incubators, where a business idea is pre-tested before the formal creation of the new firm. This methodology has been of added value as it has underpinned the creation of brand new firms providing plentiful business skills to potential entrepreneurs during the testing phase.

Other important issues that deserve closer scrutiny are, on the one hand, how virtual incubators can be used (and of added value) for supporting the creation of new firms in rural areas and, on the other hand, how the incubation of business ideas can be used to support new business creation in more technology-driven environments.

In fact, there are several contributions found in the literature concerning incubation models. However, we have not performed an in depth analysis, which is the biggest limitation of the article.

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4

The Development and Implementation of Marketing Information System Within Innovation: The Increasing of Innovative Performance

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1. Introduction

In his work, a prominent Czech expert on innovations, (Valenta, 2001), reached the conclusion that current tougher and tougher competition, globalization of production and markets, as well as implementation of new technologies mean that the success of businesses is dependent on effectiveness and intensity of innovation activities. Innovation is a process that is created via interactions between various actors, e.g. (Dolourex, 2004) and represents an important element of a company's future success. Each innovation is unique and specific for every entrepreneurship. American authors warn that innovation is more than just an idea or thought. It is bringing an idea to life (Tidd & Bessant, 2009). Currently, innovation is considered a decisive condition of a competitive advantage in entrepreneurship. This is stressed by prominent Czech, as well as foreign experts; e.g. (Hamel & Green, 2007; Kislingerova, 2008; Kosturiak & Chal, 2008; Skarzynski & Gibson, 2008). The course of the fading economic crisis that negatively impacted operation of current business unambiguously supports the inevitability of innovations. A company that strives to maintain and strengthen its position on the market has to implement a suitable innovation policy that would enable it to achieve a more advantageous position, in comparison with the competition. (Dinis, 2004) declares that the success of any innovation (and consequently, the competitive advantage of companies) is dependent on the marketing method of management, through which companies strive to adjust or (even better) foresee market trends. (Synek, 2011) also supported the idea that marketing of innovations plays a considerable role in the success of innovations. In their work, they declare that a competitive advantage can have a differential character in the form of supply of more sophisticated or more varied products that better suit the needs and wishes of users, or it can rest in improvement and better productivity of used production processes or increased quality of products. At the same time, in his work, Professor Maciariello presents and relates to the economist Peter F. Drucker who is known because of his statement that the purpose of existence of a company rests in creation of customers, and its primary tasks are innovation and marketing (Maciariello, 2008). Only they produce results; the remainder produces only costs.

However, without putting innovations on the market, the implementation process is not complete and, therefore, innovation cannot be considered realized. Therefore, activities related to preparation of the market and relevant marketing activities for promotion of a new product have to take place in parallel with solution of technical problems. Even though a prepared product is technically perfect, there is no guarantee that people will accept it and utilize it in the long term. Therefore, if innovation should be successful, it has to be not only feasible, but also its result, the new product, has to be marketable. It has to catch the interest of customers and invoke their willingness to buy this product. Therefore, an important aspect affecting the perception of its output, e.g. behaviour of customers on target markets, cannot be forgotten in innovation activities. At the same time, in their work, the German authors declare that in their opinion, a large part of variations of success or failure is caused by factors that can be ranked with marketing in the broader sense of the word (Trommsdorff & Steinhoff, 2006). Among them, there are strategic, as well as operative decisions and information from market research, from which such decisions are derived. In every case, such factors are linked to behaviour of target customers and competition. It is precisely the target market that decides if an innovation is accepted and, therefore, an innovation process successfully completed, e.g. (Tidd & Bessant, 2009).

Overall, marketing has the task of understanding and managing innovations within companies and markets where the primary objective of an innovation rests in development of new or modification of old products, in order to improve profitability. The inevitable component of profitability is income and its amount depending on whether a company is able to satisfy customers' needs better than its competitors, e.g. (Hauser et al., 2006). In today's knowledge-based society, correct information can help a company to act against its competition, especially if such company has built a strong marketing information system that is able to quickly convert knowledge into values for a customer, e.g. (Allak, 2010). For its importance in competition effort, information ranks among very important assets of every company. Marketing decisions also have to be supported by information that helps marketing managers to decide what to produce, when to produce it, and for how much, e.g. (Chatzipanagioton et al., 2008). Such necessary information is provided by the marketing information system.

The objective of the article rests in summary and presentation of results of two primary research studies whose tasks rested in acquiring knowledge on the current state of management of innovations in companies of the South Moravian Region of the Czech Republic and formulate proposals for entrepreneurs leading to improvement of information support of effective management of marketing of innovations.

2. Definition

First, the terms “innovation”, “innovative performance” and “marketing informational system” will be defined, as well as their properties and dimensions.

2.1 Innovation

There are numerous definitions of the concept of “innovation” existing in economic and business literature. The significance of innovation was highlighted as early as the beginning of the twentieth century by Schumpeter. He proposed a list of five types of innovations (Schumpeter, 1912):

- Introduction of new products.
- Introduction of new methods of production.
- Opening of new markets.
- Development of new sources of supply for raw materials or other inputs.
- Creation of new market structures in an industry.

Based on Schumpeter's theory Oslo Manual (OECD, 2005) defines innovation as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.

The minimum requirement for an innovation is that the product, process, marketing method or organisational method must be new (or significantly improved) to the company. This includes products, processes and methods that companies are the first to develop and those that have been adopted from other companies or organisations. A company can make many types of changes in its methods of work, its use of factors of production and the types of output that improve its productivity and/or commercial performance. The Oslo Manual defines four types of innovations that encompass a wide range of changes in firms' activities:

- *Product innovations* involve significant changes in the capabilities of goods or services. Both entirely new goods and services and significant improvements to existing products are included.
- *Process innovations* represent significant changes in production and delivery methods.
- *Organisational innovations* refer to the implementation of new organisational methods. These can be changes in business practices, in workplace organisation or in the firm's external relations.
- *Marketing innovations* involve the implementation of new marketing methods. These can include changes in product design and packaging, in product promotion and placement, and in methods for pricing goods and services (OECD, 2005).

2.2 Innovative performance

Performance is a level of reached results by individuals, groups, organizations and their processes (European Foundation for Quality Management).

The innovative performance can be understood as the ability to transform innovation inputs into outputs, thus the ability to transform innovation potential into market implementation. Result of innovative performance is the (innovation) market success (Zizlavsky, 2009).

The innovative performance overarches the measurement of all stages from R&D to patenting and new product introduction. In other words, this definition of innovative performance in the broad sense focuses on both the technical aspects of innovation and the introduction of new products into the market, but it excludes the possible economic success of innovations as such (see also Ahuja and Katila, 2001; Ernst, 2001; Stuart, 2000).

2.3 Marketing information system

Marketing information system is the structure of people, equipment and procedures used to gather, analyse and distribute information needed by an organization. These are the data to be used as a basis for decision-making (Reid & Bojanic, 2009).

Full definition of marketing information system and its concept can be found in Chapter 6.

3. Material and methods

For the research process, the following hypotheses were defined:

H1: *The majority of innovation activities are undertaken by large and medium-sized companies that have sufficient funds for it.*

H2: *Direct expression of effects of innovation activities strongly depends on market development prognoses, and marketing information systems have to help with their predictions.*

With regards to the identified objective of research projects – learn and study the current state of issues of management of innovation activities and their information support as these areas are currently being solved in Czech, as well as foreign expert literature and practice in Czech companies – and the method of their fulfilment, when processing the research, the system approach and the following scientific work methods were utilized:

- Analysis is used as a method of acquiring new knowledge and its interpretation. When processing secondary data, a method of secondary analysis was utilized. A source of secondary data was professional literature, especially foreign – books, magazines, articles from scientific and professional databases (Emerald, Science Direct, etc.) or proceedings from scientific conferences, with respect to their professional level and relevance.
- Questionnaire (see below).
- Comparison was utilized for mutual comparison of results of the questionnaire inquiry of individual companies. This basic benchmarking approach selected more innovative companies for further personal interviews with the company's management.
- Inquiry with the objective to acquire the particular data and following discussion about acquired results and verification of their implementation and realization in practice was carried out in the form of personal interviews with companies' managements, i.e. especially with members of the top management, executive agents, or owners of production facilities.
- Content analysis was applied to study of texts processed and acquired in the course of interviews with managers of selected companies (interview transcriptions, personal supporting documents acquired from respondents).
- Synthesis is used especially when results are pronounced and during production of a methodical proposal for correct development of information support of innovation activities and, thereby, improved competitiveness of a company.
- Induction was utilized especially when generalizing all the findings achieved in the questionnaire inquiry. Verification of found dependencies was verified by application of deduction.
- Statistical methods were utilized when analysing primary data and their results are presented in tables in this report.

A questionnaire inquiry was carried out for the purpose of determination of the real state of solved issues of management and support of innovation activities. Before the research was commenced, the circle of respondents was duly considered. Research could have been limited based on a company's size, a field, and distribution of companies in the Czech

Republic. After careful consideration, it was decided to carry out the research via a random selection between various-sized companies in the South Moravian Region of the Czech Republic (see Figure 1). The purpose of limitation to only the South Moravian Region rests in provision of larger predicative abilities of the questionnaire inquiry. Therefore, the executed research has much higher quality because we succeeded in (despite frequent unwillingness to fill out the questionnaire and provide cooperation) in collection of data from a relatively large number of companies within the whole region, which would not necessary happen within the whole Czech Republic, and individual data would be too scattered.

Fig. 1. South-Moravian Region of the Czech Republic

Within two consecutive research projects[1] carried out in 2009 and 2010 under the sponsorship of the Internal Grant Agency of the Faculty of Business and Management Brno University of Technology, various approaches to management of the innovation process and creation of innovation strategy were examined in companies operating in the South Moravian Region of the Czech Republic. A total of 53, mostly production, companies participated in the first research project called *Research of a level of development of innovation potential, creation, and evaluation of the innovation strategy of medium-sized and large machine-industry companies in the South Moravian Region in the Czech Republic.* This project uncovered several unfavourable findings on the state of management of innovation activities. Therefore, this area was examined in detail in the second related research project called *Development of knowledge for improvement of information support of the economic management of company development, in accordance with development of the business environment* undertaken in

[1] 2009: Internal grant No. AD 179001M5 *Research of the level of development of innovation potential, creation, and evaluation of the innovation strategy of medium and large-sized machine-industry companies in the South Moravian Region in the Czech Republic.*
2010: Internal grant No. FP-S-10-17 *Development of knowledge for improvement of information support of the economic management of company development, in accordance with development of the business environment*.

2010. This related and more extensive research took place from February to June 2010. The key was to approach as many respondents as possible and, therefore, to acquire a sufficiently large data scale factor for evaluation of the primary research. The inquiry itself provided quantitative, as well as qualitative data on the current state of the issue in question. Simplicity and relative briefness of the questionnaire, affecting a respondent's willingness to fill it out, was an important factor when creating the questionnaire. There were the following types of questions:

- With selectable answers and the option to select just one.
- With selectable answers and the option to select several answers at once.
- With pre-defined answers with an evaluation scale.
- Some questions had the option to fill in answers freely.

The questionnaire inquiry itself was carried out in two manners: By electronic questionnaire sent via e-mails. This form of inquiring is very advantageous from the aspect of filling in the questionnaire and, most of all, its evaluation. Absence of personal contact between the interviewer and the interviewee and, therefore, a possibility to provide supplemental data or explain a question, represents a slight disadvantage here. This insufficiency was eliminated by the subsequent phone or e-mail contact. Furthermore, by a personal contact with top management members, executive agents, or company owners in the South Moravian Region. This method of inquiring enables an interviewee to fully grasp the researched issue, and it also allows discussion of the topic in question, in which other valuable findings related to the researched issue are often involuntarily acquired. The disadvantage of this method rests in the big time demand of inquiring.

Two hundred and fifty questionnaires were mailed during the 2009 questionnaire survey. Companies contacted in the survey were selected from the Technological Profile of the Czech Republic (www.techprofil.cz), a database containing over 2,000 Czech companies engaged in business innovation. Author received a total of 53 correctly completed questionnaires, which represents a 21.2% return rate. That return rate can be considered as very good because return rates of mail-back questionnaires are usually less than 10%. Even so it is necessary to determine the reasons why more than 71% of companies did not respond to the questionnaire. They can include negative experience with similar questionnaires, reluctance to participate because of a spate of similar questionnaires, and also because managers are much too busy. Detailed statistics of the 2009 questionnaire survey is in Table 1.

Number of addressed companies a) By e-mail b) By personal visit	250 230 30
Number of undelivered e-mails	13
Number of partially filled questionnaires	4
Number of completely filled questionnaires	53
Real return	21.2%

Table 1. Overall statistics of the questionnaire survey 2009

Within the questionnaire inquiry in 2010, a total of 800 respondents were addressed; of those, 750 in electronic form and 50 with printed questionnaires during a personal visit.

Companies for the electronic research were selected from the database of contacts called the Technological Profile of CR (www.techprofil.cz) containing more than 2,000 Czech companies operating in the innovation business. The world-wide database, Kompass (cz.kompass.com), which contains more than 34,000 Czech companies, was further utilized. Search based on individual parameters as selected by a user is the guarantee of a required selection of innovating companies. Selection of companies for a personal visit was done based on contacts from the previous solution of the project. That represented a guarantee that companies that are actively involved in innovations and have something to say regarding this topic were included in the inquiry. A total of 139 correctly filled in questionnaires were returned, which represents a 17.4% rate of return. The aforementioned rate of return of the questionnaires can be considered very good because, for questionnaire inquiries, the expected rate of return is usually up to 10%. Despite that, it is necessary to determine the causes of more than 82% of companies not reacting to the questionnaire. Among them could be bad experience with similar questionnaires or unwillingness to participate because of a clutter of similar questionnaires, as well as managers being very busy. The detailed statistics of the questionnaire inquiry is shown in Table 2.

Number of addressed companies	800
a) By e-mail	750
b) By personal visit	50
Number of undelivered e-mails	35
Number of partially filled questionnaires	9
Number of completely filled questionnaires	139
Real return	17.4%

Table 2. Overall statistics of the questionnaire survey 2010

Results of the questionnaire inquiry and interviews with top managers or executive agents enabled identification of significant insufficiencies when managing innovation processes in companies. They include, for example:

- In most cases, innovation is not a company's key process, and more often than not it is based on technology transfer rather than the company's internal research and development.
- Research and development activities start late, take too long and are expensive. This causes time loss and delays in marketing innovations. That in turn negatively impacts profits.
- Indifference and unwillingness of owners and top-level managers to take risks even in the case of promising innovations is manifest, and the prioritizing of certainty prevails.
- In companies, insufficient innovation culture predominates, which can of course be traced back to the lack of top management's interest.
- An unsuitable model of innovation process management is employed. There is no clearly defined problem description, innovation project management, coordination of activities, communication or cooperation. Vague objectives cause changes in the stages of the innovation process, missed deadlines and increased costs.
- There is no marketing information system in place for the modelling of future markets or the analysis of customers, their behaviour and unexpressed needs. Such insufficient knowledge of market requirements is a reason for excessively high innovation costs.

Methods of solution of such insufficiencies were examined by researching professional literature of prominent Czech, as well as foreign authors and other sources, with the objective to contribute to a flawless, if possible, realization of innovation activities of a company. Such solution is already seen in the opening stage of the process where it is necessary to clearly define the customers' needs. Managers first have to utilize results of the market research for determination of its size, nature, customers' preferences, and supporting information for determination of prices of the target products and services. Once companies develop their internal processes towards satisfaction of particular customers' needs, availability of the correct information on the market size and customers' preferences represents the main road to success. In addition to determination of needs of existing and potential customers, this segment can be a source of information on completely new opportunities and markets for products and services, which the company can supply. Information on markets and customers serves the purpose of entry for the second step of the innovation process; i.e. the process of proposal and development of the current product or service. The aforementioned task represents a necessity of marketing development and implementation of the marketing information system.

4. Research results

Information acquired from the questionnaire inquiry in 2010 were evaluated in the following areas:

- Basic data on companies.
- Strategy and planning of the innovation process.
- Marketing.
- Cooperation.
- Evaluation of realized innovation activities and innovation barriers.
- Financing.

With regard to the scope of the chapter, thematic focus, and objective, only selected areas of the primary research will be presented here.

Questions from the first part of the questionnaire were related to the basic characteristic data of the company, such as the company's size, origin, market of operation, etc. Of the total of 139 respondents, the most participating companies in innovations in the South Moravian Region are micro companies (1-9 employees, with a turnover of up to 2 mil. EUR) – 43% of respondents, small companies (10-49 employees, with a turnover from 2 mil. EUR to 10 mil. EUR) – 32% of respondents, medium-sized companies (50-249 employees, with a turnover from 10 mil. EUR to 50 mil. EUR) – 13% of respondents and the least participating in innovations are large companies (more than 250 employees, with a turnover exceeding 50 mil. EUR) – 12% of respondents. This result is probably caused by the fact that the larger the company is, the more demanding organization of any innovation changes in it is and, therefore, smaller companies with more flexible organization structures innovate more. Such finding refuted the original hypothesis that said that the majority of innovation activities are undertaken by large and medium-sized companies that have sufficient resources for it. The results of the answer about the size of the company are shown in more detail on Figure. 2.

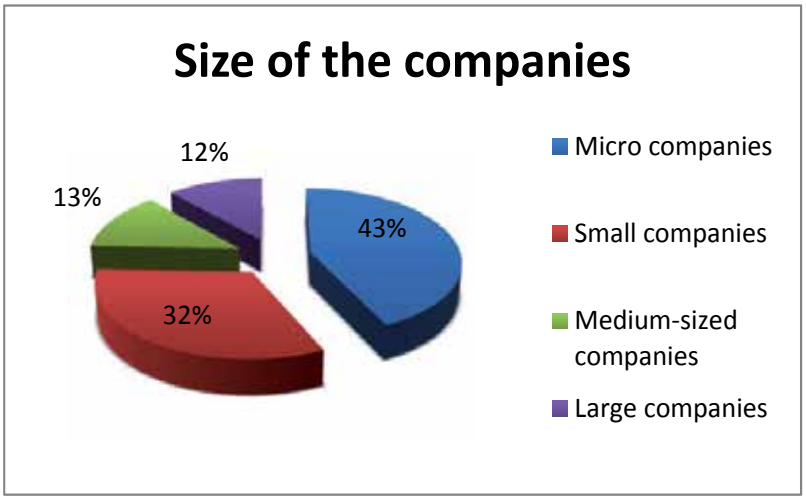

Fig. 2. Distribution of companies by size

The vast majority of addressed companies (83% of respondents) have Czech owners, 10% of companies have foreign participation, and only 7% have foreign owners. Here, 65% of inquired companies are doing business within the Czech Republic; of it, 38% operate on the domestic market within the whole CR, 27% of those questioned operate on regional markets only within the CR regions, 23% are doing business in the EU member and candidate countries, and the remaining 12% are doing business around the world. These facts are graphically shown on Figure 3 and Figure 4.

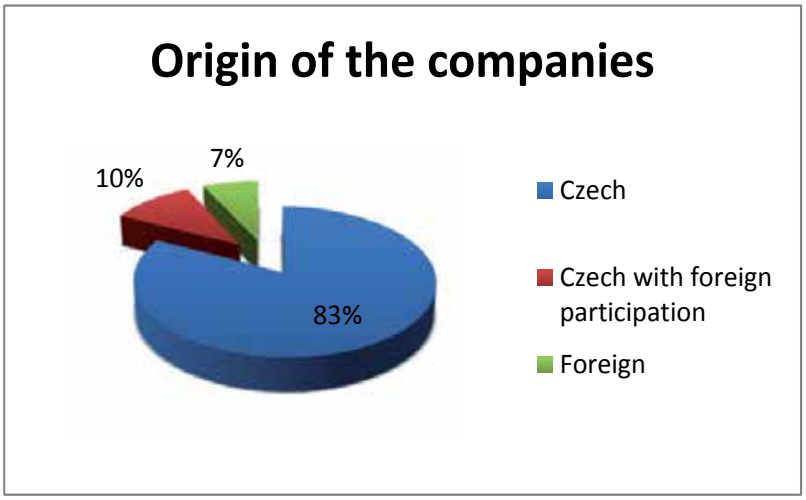

Fig. 3. Origin of the companies

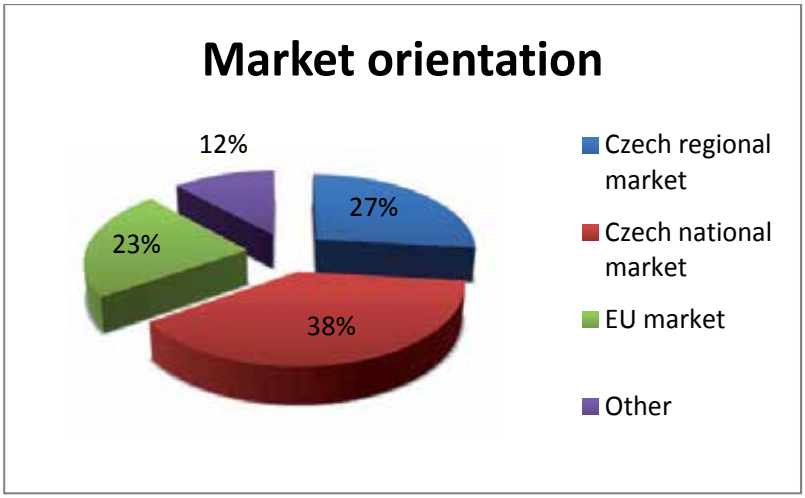

Fig. 4. Market orientation

4.1 Strategy and planning area

The strategy and planning area, in which respondents answered the question about what innovations were implemented by the company during the last three years and what importance they carry for the company, represented another part of the research. They could select from five predefined answers. Since respondents were able to select more answers for this question, a recalculation had to be carried out where a relative frequency was determined as a percentage of a number of selected answers to the total amount of respondents in the group. The following finding was derived from it:

- Product innovation: 28% occurrence of this answer.
- Process innovation: 25% occurrence of this answer.
- Organization innovation: 22% occurrence of this answer.
- Marketing innovation: 23% occurrence of this answer.
- None innovation: 2% occurrence of this answer.

These balanced results highlight the fact that product innovations often require process innovations, e.g. in the form of acquiring new production technology, and in order for these product innovations to be successful on the market and bring the company a higher value, it is often necessary to seek new distribution channels via marketing innovations.

Respondents also evaluated the importance of such innovations for the company based on the following scale: 1 – very important, 2 – important, 3 – neutral, 4 – not important, 5 – completely unimportant. In the summary of the percentage ration of positive answers, i.e. values 1 (very important) and 2 (important), the order of individual possibilities was determined. Therefore, results show that respondents see the importance of innovations for their company in the following order: innovation of products, processes, organization, and marketing. Companies that have not implemented any innovations evaluate their importance as almost zero because the field or market in which the company participates or on which it operates, does not require an innovative approach and, therefore, they maintain

the existing amount and quality of their output. Evaluation of the importance of individual types of innovations for companies in the South Moravian Region is shown in Table 3.

	Average	Standard deviation	Modus	Evaluating 1–5 (%)					Σ 1+2 (%)
				1	2	3	4	5	
Product innovation	2.2857	1.0302	2	18	29	14	12	27	47
Process innovation	2.2419	0.9619	2	18	28	16	10	28	46
Organizational innovation	2.3485	0.9127	2	15	28	26	8	23	43
Marketing innovation	2.3226	0.9801	2	16	27	19	10	28	43
None innovation	2.3125	0.8455	3	4	7	7	1	81	11

Table 3. Importance of particular innovation types for companies

The main motives leading to commencement of such innovation activities are growth of revenues/profits, reaction to demand, increased quality, increased market share, and last but not least, inspiration by competitors. A review of the main motives for commencement of innovations and their importance is summarized in Table 4.

	Average	Standard deviation	Modus	Evaluating 1–5 (%)					Σ 1+2 (%)
				1	2	3	4	5	
Revenue/profit growth	1.5556	0.7027	1	53	33	8	1	5	86
Demand reaction	1.8750	0.8120	2	34	41	15	4	6	75
Product/service quality increase	1.7595	0.8600	1	45	28	15	4	8	73
Market share increase	1.8182	0.9220	1	42	28	14	6	10	71
Inspiration by competitors	2.4133	0.7676	2	7	46	27	8	12	53
Education Challenge	2.2714	0.9699	2	19	34	17	12	18	53
Product line extension	2.5000	0.9528	2	12	38	21	18	11	51
Employee satisfaction	2.3784	0.8495	3	14	33	33	7	13	47
Legislation limits	2.3143	1.1025	1	26	20	21	15	18	46
Exigency of production decrease	2.3134	0.9337	3	19	24	29	7	21	42
Environmental legislation	2.3750	1.1110	1	22	18	20	15	25	40
New technology development	2.6984	1.0486	3	13	16	25	20	26	29
Production capacity expansion	2.8392	0.9407	3	7	14	27	18	34	21
Other	2.000	1.000	-	1	0	1	0	98	1

Table 4. Main motives for innovation activities and their importance

Results were derived from evaluation of respondents, again, based on the scale: 1 – very important, 2 – important, 3 – neutral, 4 – not important, 5 – completely unimportant.

Inspiration by competitors represented an important motive as well. Therefore, it is possible to find so-called imitating companies among companies that implemented innovations, which created new innovations only for their own company, but not from the aspect of the market; i.e. they implemented new products or services already provided by competitors. A similar situation applies to process innovations where sources of innovations were modified or assumed technologies developed by competitors. As for inquired companies, innovators who assume and modify already known technologies unambiguously prevail.

Motives of innovation activities represent a starting point for innovation strategies. Strategic marketing and research, with a nomination by top management, participates in strategy proposal and formulation. The objective of every innovation strategy rests in achieving a competitive advantage leading to the company's improved position on the market (other objectives are derived). When creating a competitive advantage, first of all, companies have to be aware of their competitors' strategies, as well as their own competitive advantage.

Almost all inquired companies (93% of respondents) are aware of their competitive advantage, which they have in comparison with their competitors. Only 7% are not aware of such advantage.

The process of formulating strategy results in production of an innovation plan that serves as the base for creation of other partial plans. When evaluating how much importance a company gives to production of innovation plans, the majority of companies replied that the biggest consideration goes to short-term plans, plans up to 1 year, and plans up to 2-3 years. Then, 8% of respondents do not compile any innovation plans and 1% of respondents compile plans that have different deadlines than defined (see Table 5).

	Average	Standard deviation	Modus	Evaluating 1–5 (%)					Σ 1+2 (%)
				1	2	3	4	5	
Short-term plans	2.1618	0.9642	2	23	28	20	8	21	51
1 year plan	2.4783	0.8095	2	8	34	30	8	20	42
2–3 years plan	2.5714	0.9974	3	12	17	23	13	35	29
None plan	2.7500	0.8874	3	2	6	10	5	77	8
Other	2.7500	0.4330	3	0	1	4	0	95	1

Table 5. Innovation plans development

4.2 Marketing area

If we wish to seek sources of innovation ideas, it is necessary to verify if companies are able to identify, grab, and further process innovation impulses and ideas. Impulses for innovations in a company's vicinity come most often from external customers. That is closely followed by generation of impulses based on competitors. Utilization of impulses from professional literature, conferences, trade fairs, and exhibitions comes next. Innovation impulses inside a company come the most often from employees or as a result of a need to change technology and processes, via which products are produced or services offered. A list and evaluation of innovation impulses are shown in Table 6.

In-house collection of innovation ideas from employees is an interesting area. The brainstorming system is very often utilized during staff meetings on all the levels. Here,

some companies also apply a motivation element in the form of a one-time bonus paid to an employee who solves a problem in question. On the other hand, other companies have a system based on collection points where employees may leave their impulses that are further evaluated during staff meetings. Based on realized interviews, it is possible to state that individual systems of communication with one's own employees when collecting innovative ideas differ from company to company. The bonus system represents a unifying element.

	Average	Standard deviation	Modus	Evaluating 1–5 (%)					Σ 1+2 (%)
				1	2	3	4	5	
Customer	1.3855	0.6555	1	66	26	2	2	2	92
Internet	2.0988	0.8549	2	24	42	22	6	6	66
Competitors	2.2561	0.8087	2	15	48	26	7	4	63
Employee	2.1538	0.8332	2	21	39	26	5	9	60
Partners	2.1842	0.8692	2	20	40	21	7	12	60
Own research into customers	2.2836	0.9433	2	16	34	17	11	22	50
Suppliers	2.4595	1.0804	2	19	30	17	21	13	49
Service	2.4079	0.7809	3	12	34	38	5	11	46
Exhibitions	2.4478	1.0116	3	17	21	27	13	22	38
Conferences	2.7581	0.9278	2	4	28	20	20	28	32
Professional literature	2.7727	0.8841	2	5	27	27	18	23	32
Public sector	2.6379	1.0618	3	13	16	21	17	33	29
Management consultants	2.9434	0.8559	3	4	14	27	17	38	18

Table 6. Innovation incitation and its importance

When determining in which manner market information is shared in a company, it was discovered that 32% of companies are utilizing a high-quality information system (hereinafter the "IS") that is used by competent workers. That is a status in which a company has correctly implemented IS with correctly defined access possibilities for competent workers. That creates prerequisites for effective creation of strategic plans in a company and for sharing innovation impulses within individual company departments and between them. Unfortunately, only approx. 1/3 of inquired companies operate like this. For the other 32% of companies, there is practical knowledge that is sufficient and known to all the competent workers and, therefore, there is no need to engage in collecting and processing additional information. Such companies are utilizing know-how of their workers. When such worker leaves, a problem occurs. Non-sharing of information leads to growth of such worker's value and creation of pseudo-key positions in the company. For 29% of inquired companies, information on the market, contracts, and competitors is usually taken by competitive workers; however, they are not systematically shared for further utilization in the company. Such companies have IS, but only on the level of local stations, and mutual interconnection of information flow across a company is not utilized. Slow-down of flow of marketing information then expresses itself in delay in production of strategic plans or their frequent changes and corrections. The remaining

7% of inquired companies record information about the market by means of the company's information system, but workers do not optimally utilize it. Such companies do not pay enough attention to transfer of marketing information. Such companies are usually based on routine and practical experience and adjust their planning accordingly. Results of answers of inquiries companies to the transfer of market information issue are shown on Figure 5.

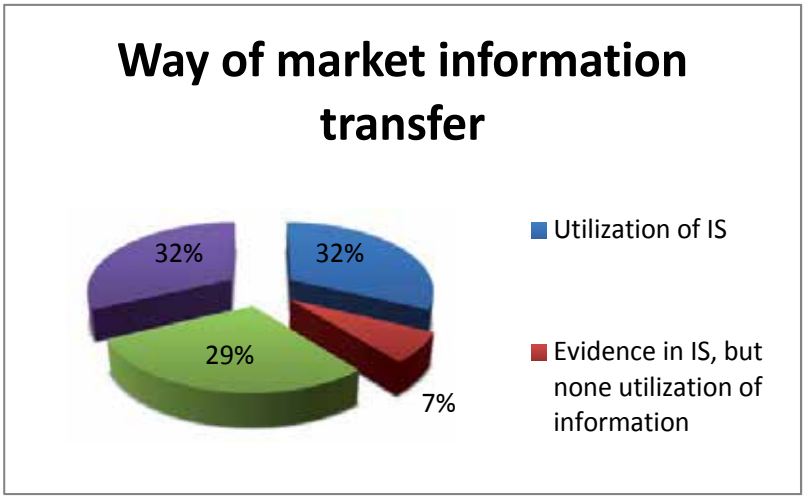

Fig. 5. Way of marketing information transfer

In addition to internal communication, external communication with the company's partners is important for a company as well, and in the majority of cases, it takes place via competent workers who register suggestions and comments (64% of respondents). Informal communication with partners via marketing staff is the basis. They are responsible for transfer of information to the company and for ensuring that it is undistorted. A quarter of companies communicate with partners via the company's information system (25% of respondents). 6% of companies do not have the scope to react to partners' suggestions. Such companies behave as closed units and consider all the information related to their internal environment their know-how and, therefore, they usually are not too willing to communicate with their partners. The remaining 5% of companies communicate with partners only in the case of serious problems. Figure 6 presents results of communication with partners.

Next aim of a questionnaire research was to find out whether companies do evaluate the realized innovations activities and whether they utilize marketing information system for the evaluation of predictions of future markets. For that purpose the hypothesis H2 *Direct expression of innovation activities effects significantly depends on market development forecasts. Marketing information systems have to support their predictions* and following questions from the questionnaire will be used: *Does your company evaluate the realized innovation projects?* and *Is there implemented and utilized marketing information system for future markets modelling in your company?*

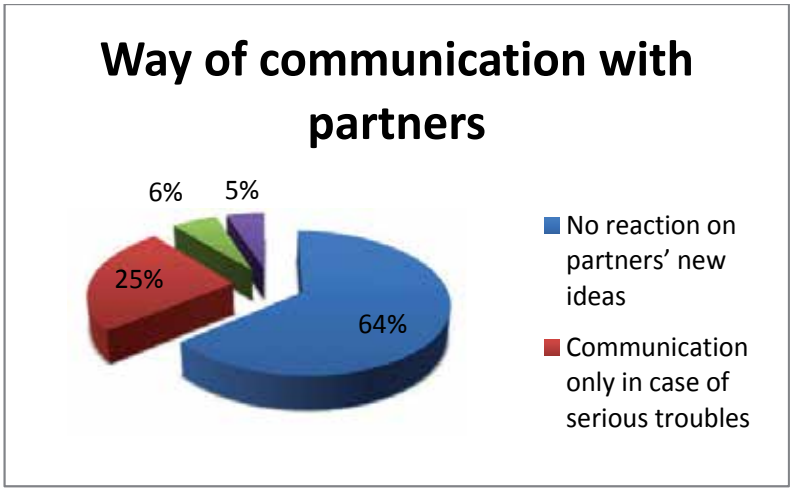

Fig. 6. Way of communication with partners

innovation activities evaluation / markets forecasts	**No**	**Yes**	$\mathbf{n_i}$
No	26	8	34
Yes	37	68	105
$\mathbf{n_j}$	63	76	139

Table 7. Relations research of innovation activities evaluation and markets forecasts

Independency statistic test of two qualitative characters will be carried out for statistic dependency verification. Null fragmental hypothesis DH_0 is going to be tested that random values are not depended in comparison with alternative fragmental hypothesis DH_1.

DH_0: *Expression of innovation effects and modeling future markets are not relate to each other.*

DH_1: *Expression of innovation effects and modeling future markets are related to each other.*

Calculated test criterion $\chi 2 = 6{,}959$ for selected significance level $\alpha = 0{,}05$ is determined a quantile $\chi^2_{0,95}(1)$ of Pearson distribution $\chi^2_{0,95}(1) = 3{,}841$. Because the value of test criterion was realized in critical field (6,959 > 3,841), fragmental null hypothesis DH_0 is refused on five percentage level signification and alternative fragmental hypothesis DH_1 is accepted. Random values are dependent and relationship between direct expression of innovation activities effects and market progress forecasts by marketing information system was demonstrated.

Based on primary research results and statistic independency test it is possible to consider the research hypothesis as confirmed.

5. Discussions

In SMR, those most engaged in innovations are micro companies (43%) and small companies (33%) that have a Czech owner (82%); of those, 39% operate on the domestic market within the whole Czech Republic and 27% operate only on the regional market.

During the last three years, the majority of innovations executed by companies were organization and marketing innovations; however, companies perceive product and process innovations as more important. It generally applies that almost every product innovation should invoke at least one process innovation. When, for example, a company begins to produce a new product, a need for necessary technology that is needed for production of a new product can arise. Such a need can be fulfilled by purchase of new machinery. This is innovation of a production process. In other cases, companies maybe do not even perceive changes executed in relation to product innovations as process innovations. When a company, e.g. as a result of a new product supply, modifies activities of its sales department, in reality it is a process innovation invoked by the initial product innovation. In some cases, even product innovation of a lower intensity invokes subsequent process innovation of a higher intensity. (Theodor, 2008) singles out the beginning of the Ford car factory, as an example. Even though its first mass-produced car, the Model T, meant an important product innovation, production organization through standardization, flow production, and Taylor principles of scientific management brought a lot of much more fundamental innovations. The Model T was designed in such a way that it prompted a need to completely innovate the process of its production. Without such process innovations, Henry Ford would not be able to achieve his plans for production of a standardized cheap car in large series.

The result of a significant innovation activity is logical because, in general, if organizations are not prepared to continually renew their products and processes, their chances of survival are significantly jeopardized.

The main motives leading to commencement of such innovation activities are especially factors of growth of revenues and, therefore, operation profits, reaction to demand, increased quality of products or services, and increased market share. The aforementioned motives are derived from innovation needs prompted by a customer, and they serve as a starting point for creation of innovation strategy.

The structure and intensity of competition and its more or less aggressive behaviour affects competition and innovation pressure. According to (Trommsdorff & Steinhoff, 2006), when identifying competitors, it is necessary to include, in addition to publicly acting competitors, also the potential ones, i.e. those who are not in the market yet or who do not engage in public tenders of the field in question, but have potential and strategy available. The majority of enquired companies (87%) monitor and know the competitors' strategy and, at the same time, 93% of respondents are therefore aware of their competitive advantage.

The process of formulating strategy results in production of an innovation plan that serves as the base for creation of other partial plans. Almost all inquired companies emphasize processing of short-term plans and plans for 1 year.

The conclusion derived from the aforementioned facts is that if a company wants to receive impulses for its further development and maintain its position on the top, it is necessary to always focus on a customer who should be perceived as a driving force for progress. High-quality relations have to be built between companies and their customers. Primary research results showed that an innovation impulse primarily arises from a customer.

Individual innovation impulses are then target-collected by a company. During the collection, in-house networks are utilized, as well as networks of external co-workers; for example, authorized dealers, etc. In practice, collection that is rather informal is more often proven good; for example, via discussions with service technicians during assemblies. A customer does not feel so bound and is willing to handle matters that he would not even mention otherwise. With regards to their own potential, companies try to convert received impulses to innovation ideas that can be utilized during the following work. The main source of innovation ideas are then employees or management of companies. With regard to the fact that companies engage their employees in seeking innovation ideas, they are also trying to motivate them.

In personal interviews, managers of some companies admitted that they do not pay enough attention to transfer of marketing information, despite the existence of some information system. At the same time, marketing management within the innovation process is usually left out, especially in the case of small and medium-sized companies. Therefore, a company management loses its insight into environment and new trends, which can cause problems with distribution, downturn of revenues, decreased profit, and it can even lead to existential problems in the future.

These days, everybody is probably aware of the importance of high-quality and timely information for correct decision making. It is also considered a matter of fact that a company has to reflect the wishes of its customers and very closely monitor development on markets, otherwise it would not be able to react accordingly and maintain its position on markets. Therefore, companies should have marketing information systems (hereinafter the "MIS") implemented. Their necessity was ultimately highlighted by results of the primary research as well. In smaller companies, such system can even have a completely informal process when all the interested parties meet and discuss a problem. It is apparent that from a certain size of a company, such "system" is completely unsuitable, and a marketing information system has to be formalized and systemically built.

Unfortunately, as shown by the primary research, the majority of companies lack a sophisticated marketing information system, modeling and analysis of the future market, analyses of customers, their behavior and unsaid needs, definition of price strategies, and analysis of new expansion areas.

Information necessary for effective functioning of a marketing information system that is necessary for acquiring innovation impulses from the market and management of the whole innovation process with the objective of increases competitiveness of a company as a whole can originate from different sources. Information received from contacts between companies' employees and customers, competitors, and suppliers within business meetings, exhibitions and trade fairs, professional seminars, execution of maintenance and repairs, etc. are considered very important.

In the ideal situation, MIS serves the purpose of:

- Collection and transfer of information – thanks to computers and other communication means, collection and transfer of information is significantly faster and, also, costs of data collection decreased.

- Information processing – when data is saved, it has to be processed, which can sometimes be difficult without utilization of an information system, especially in a large volume of various data.
- Data interpretation and modeling – information is useful only if it has a value for a user. Collected information has to be put into context and interpreted.
- Information utilization – thanks to an information system that integrates data processing techniques with data modeling and with analytical tools supporting strategic decisions, it is possible to utilize acquired information for marketing decision making on various levels.

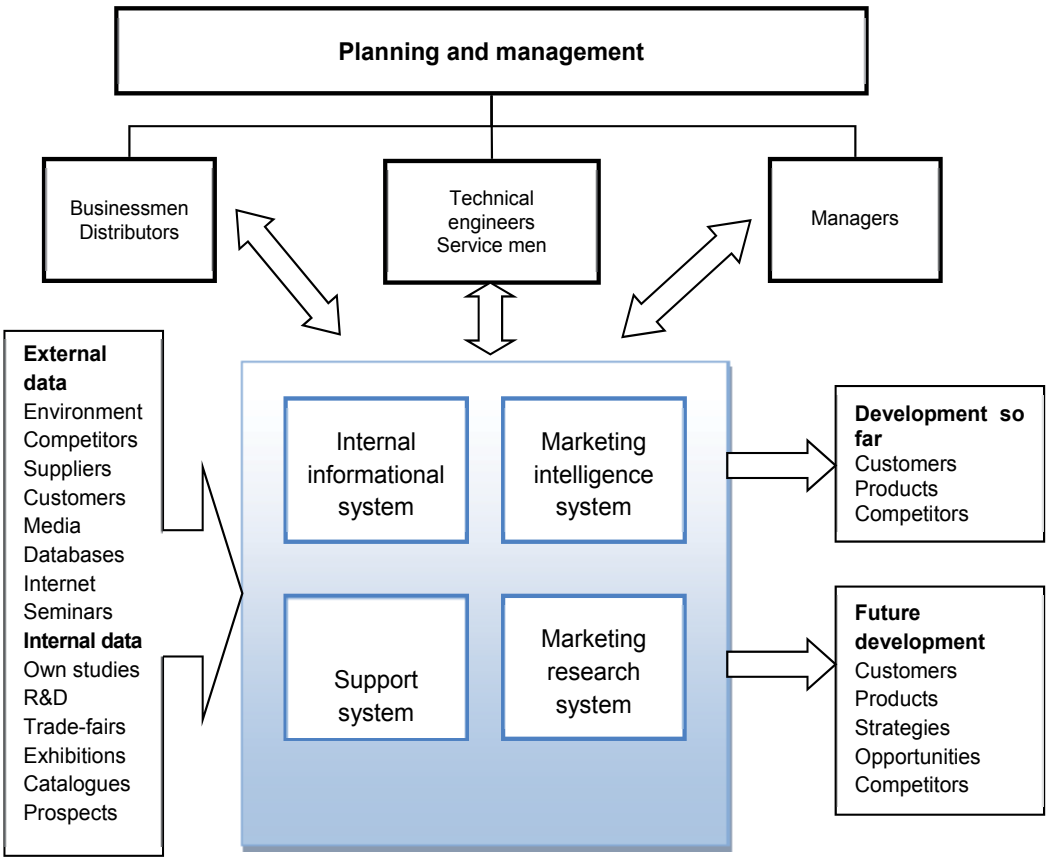

Fig. 7. Scheme of MIS

The majority of renowned companies thoroughly monitor all their employees' contacts and information received about them. Such information is very important and, in principle, it is a company's asset because staff handles all dealing at its costs. It is a problem of effect of a company's culture and due verification of evaluation and a bonus system to make sure that staff members accept organization rules and enter information into MIS via standard forms. Especially for small and medium-sized companies, such a system is irreplaceable, but its accessibility is not easy. That is, employees consider acquired information their personal know-how and intend to utilize it for strengthening of their own positions only. However,

we know from experience of foreign companies that enforcement of a company's interests is possible, but it requires long-term influence on a company's culture and, sometimes, slight "breach" of human rights of employees (Solar, 2006).

Limited funds of small and medium-sized companies significantly limit possibilities of utilization of external information sources for MIS whose level keeps increasing, but prices of the services are high. Therefore, it is necessary to carefully consider every utilization of their services. Organizational provision of collection of free external data from the Internet and other external sources is also problematic for small and medium-sized companies. However, it applies to them as well, that even small and medium-sized companies have to collect, save, and utilize information so that they can improve their decision making, communication with customers, suppliers, and consumers so that they are able to maintain their competitive advantage.

Solution of marketing and MIS problems that are available in professional literature, e.g. (Ranchhod & Gurau, 2007), are very complex and systemic, but practically useless for small, as well as a lot of medium-sized companies. If we examine their organization structure, we will find out that marketing is often provided by one staff member who is organizationally placed either in the sales department, or the department of the company's CEO. There is the same staffing for controlling of small companies whose performance is again provided (in the optimistic variant) by one staff member usually placed in the financial department where such person is usually also assigned a lot of other functions.

The authors of the article see a possible solution in nomination of a team consisting of more professions that will ensure motivation and evaluation of results of collection of external and internal information for MIS by all the company's employees, solution of problems related to authorization of access to the information stored in MIS, evaluation of information from MIS from the aspect of comparison of the company's performance with its main competitors, and proposing measures within strategy updating. Such team should be led by a CFO, and it should consist of professions necessary for evaluation of products, technologies, customers, suppliers, and markets, i.e. representatives of all main functions in a company. Selection of particular team members would be carried out by a company CEO, in cooperation with a team leader. MIS would represent the technical provision of work of the team, and a designated worker also carrying out collection of internal and external information would be responsible for its operation.

The proposed access would simplify realization of a necessary change of a style of work with information, regular saving of critical data to the system, and enable its sharing by other staff members. It is a complicated problem in the area of a company culture, and the proposed system of team management could contribute to its solution. It is necessary to realize that to acquire information is one thing, but to process it, interpret it, and subsequently use it is an entirely different thing. Therefore, it is necessary to think about an information system, create certain rules, procedures, and processes so that everybody in a company would know what to do.

A complex marketing information system has a wide range of use in a company. It is able to inform on the current market development and performance of its own company, as well as competitors. The basic information structure of MIS is as follows:

- Information on market subjects (suppliers, customers, competitors).
- Information on market objects (products and services purchased, as well as produced).
- Information on business cases (data transfer from customers' and suppliers' invoices).
- Information on contacts (evaluation of contacts, planning of contacts).
- Information on demands (filling, performance evaluation).

In addition to the basic structure, MIS can also contain software tools for execution of analyses (SWOT, Pareto, Portfolio, etc.), management of projects, administrative activities, and various supporting tasks. By utilizing information from MIS, it is possible to decrease risks of strategic decisions, prepare to a high standard for dealing with partners, increase purchase effectiveness, or improve the marketing mix for a certain product.

Necessary condition for developments in marketing and innovation activities is working MIS. MIS should be an indivisible part of the Executive Information System (hereinafter the "EIS"). Currently there are many Enterprise Resource Planning (hereinafter the "ERP") systems to choose from. These ERP systems can be enhanced when connected to Supply Chain Management (hereinafter the "SCM") and Customer Relationship Management (hereinafter the "CRM") systems. In the Czech Republic the EISs which support decision making are not used very frequently. An array of large Czech companies therefore implements the MIS as a way to improve their existing ERP system. Some ERP systems partially serve as SCM and CRM with obvious limitations. The philosophy of integration of the MIS into the existing IS is demonstrated in Figure 8.

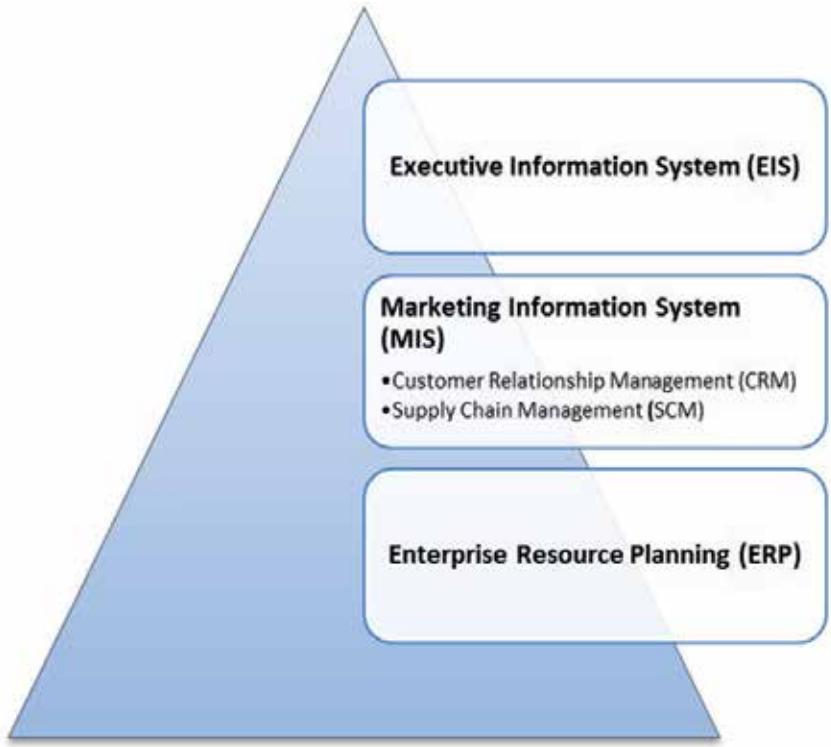

Fig. 8. Scheme of the integration of the MIS into the existing IS structure

MIS implementation itself, from preparation, over installation, to verification lasts several months; however, significant contributions for management can be expected only after databases are filled, i.e. within 1 to 2 years. The authors also perceive utilization of the newest versions of MIS in small companies as problematic. Here, upon agreement with a supplier, it will be necessary to accede to implementation of simplified versions because the newest versions – very extensive ones – could not be filled and it would not even make sense to fill them because of significantly simplified process, as well as the organization structure of small companies. These requirements are logical, and the system supplier should be able to flexibly react to them. The ability of a supplier to ensure interconnection between MIS and the existing basic ERP system is also a limiting factor.

6. Conclusion

The article summarizes the issue of management of innovation activities and findings of empirical research. It strives to show the importance of information provision of innovation activities linked to the overall effectiveness and competitiveness of an entrepreneurship. As the research proved, information support for modeling of future markets, analyses of customers, their behavior, and needs is extremely important in innovation marketing and, therefore, innovation activities should be supported by a successfully implemented and functioning marketing information system. Only then, is it possible to recognize and process potential innovation signals, acquire necessary information, and carry out decisions as for which innovations a company would focus and spend resources on.

Several hypotheses were declared before the research was commenced. In the area of potential predetermining more or less innovative companies, a company's size used to be considered the key factor when innovation activities are usually undertaken by large and medium-sized companies that have sufficient resources for it. However, this hypothesis was not confirmed because in the South Moravian Region, the majority of innovations are undertaken by micro companies and small companies (these groups form a total of 75% respondents).

In the marketing area, it was assumed that direct expression of effects of innovation activities strongly depends on market development prognoses, and marketing information systems have to help with their predictions. Based on the found facts and statistic independency test, it is possible to declare this hypothesis confirmed.

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5

Brazilian Entrepreneurship Reality: A Trilogy of Imitation, Invention and Innovation

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1. Introduction

There are a lot of discussions on the characteristics of the successful businessman, who contributes to development of the economy through wealth creation. There are many authors who talk about such businessman as someone innovative, creator of differences, creative in services or business, or else. For theses reasons it is intended to study the entrepreneurial and innovative dimensions, more precisely in a Brazilian context, discussing innovation from the inside in a business perspective. From this discussion, it is our objective to demonstrate that Brazilian people are either entrepreneurs or inventors but not so innovative. On one hand, there is a clear perception related to new business opportunities but most of them are in an imitation process of existing businesses. On the other hand, Brazil is offering an extensive network of incubators that create inventors instead of entrepreneurs.

This chapter shows an extended bibliographic research about different concepts that various authors have related to entrepreneurship and innovation in order to consequently, discuss such concepts, comparing them to data from researches on Brazilian entrepreneurs about innovativeness of their business.

Pirich et al. (2001) mentions that observing innovation jointly with entrepreneurship are consequent on three key elements: economical conditions and encouraging incentive of business behavior; sophistication and efficiency in generating and spreading knowledge and the proper capability of companies, employees, and individuals.

The ANPROTEC (2006) literature demonstrates that entrepreneurship and innovation refer to a stimulus or support in the creation process of new ventures; it also refers to the preparation of people to act in new market shares, proposition of new ways to take profit of regional potentialities as well as local qualities to create new products and services, involving a community to discuss forms of economical empowerment for its region and create a favorable environment to emerge creative ideas that may generate in new businesses.

Schumpeter (1934) mentions that entrepreneurship behavior is a configuration of competitiveness in search of combinations of elements that generate innovation. For

Drucker (1985), innovation is a specific instrument for entrepreneurs in a way to explore changes as an opportunity for a different business or services. Entrepreneurs must deliberatively look for innovation sources, changes and their symptoms, which indicate opportunities so that innovation can happen and be successful.

Throughout times, Schumpeter's (1934) point of view became predominant: the entrepreneur is the engine to move the economy forward, the agent of innovation and changes, able to trigger economical growth. This is very important, because it means that communities, through their entrepreneurial activity, may have the initiative to lead and coordinate efforts for their own economical growth. There is a possibility to change economical and social stagnation curve by inducing innovative activities, capable of joining economical and social values (Dolabela, 1999:54).

The entrepreneur is the agent of creative destruction process. It is a fundamental impulse to start and keep on going the capitalist engine, constantly creating new products, new markets, and, implacably, overcoming old methods less efficient and more expensive (Schumpeter, 1934).

Innovation emerges to entrepreneurs as advantages from the point of view of economical prosperity. It allows developing new products or services for the market as well as it stimulates interest in investing in newborn businesses.

This chapter initially presents various concepts throughout time related to entrepreneurship and innovation. Then it discusses imitation as a form of entrepreneurship from many authors' points of view and afterwards, it presents the challenges for entrepreneurship in Brazil. It shows figures related to new businesses, their importance for the economy in this country and after that presents some data related to innovation in the industry.

It has the objective to confront the profile of the most common behavior in Brazilian industry. As a result of various researches realized, it is possible to demonstrate that Brazilian entrepreneurs are either, in most cases, in a deliberate imitation process of existing businesses, or engaged in an incubating process based on product invention, still with a poor innovative profile. These conclusions allow discussing entrepreneurship concepts presented by several authors that mostly tend to characterize the entrepreneur as someone who is primarily active but not necessarily very creative, innovative.

2. Theoretical thoughts of entrepreneurship thru time

The Word "entrepreneurship" means to deliberate about practices, to propose them and put them into execution, to try it on. The first definition of an entrepreneur as a broker is Marco Polo, who tried to establish commercial routes to the Far East (Hisrich & Peters, 2001).

In the XII century, an entrepreneur was someone who used to incite fights. Later in the XVII century, it meant someone who was responsible for and coordinator of a military action. Only by the end of the XVII century and beginning of the XVIII century, the word referred to someone who created or ruled enterprises. The following Table shows the evolution of the theory of entrepreneurship and of the entrepreneur.

Evolution of the theories on entrepreneurship and on the entrepreneur	
Middle Age	Person in charge of projects for large scale production
XVII Century	Person who would take risks for profit (or loss) in a contract of fixed value with the government
1725	Richard Cantillon – a person who takes risks is different from the one who offers capital
1803	Jean Baptiste Say – enterpriser's profits are separate from the capital profits
1876	Francis Walker – he distinguished between the ones who would support founds and receive from taxes and the ones who would gain from management abilities
1934	Joseph Schumpeter – the entrepreneur is an innovative person and develops technology that has not been tested yet
1961	David McClelland – the entrepreneur is someone dynamic who takes moderate risks
1964	Peter Drucker – the entrepreneur maximizes opportunities
1975	Albert Shapero – the entrepreneur has initiative, organizes some social and economical mechanisms and takes risks
1980	Karl Vesper – the entrepreneur is differently perceived from the point of view of economists, psychologists, businessmen or politicians
1983	Gifford Pinchot – the intra entrepreneur is an entrepreneur who acts inside an organization
1985	Robert Hisrich – entrepreneurship is the process of creating something different and with value, spending time and necessary efforts to do so, assuming corresponding financial, psychological, and social risks, and receiving the consequent rewards of economical and personal satisfaction

Source: Hisrich & Peters (2001)

Table 1. Development of the theory of entrepreneurship and of the entrepreneur

The economists understand entrepreneurship is motivated in the comprehension of its interlink to the economical system. Thus, they understand entrepreneurs are responsible for detecting and making a good use of opportunities; foreseeing profit and (re) acting to some risks (Filion, 1991; Paiva Jr. & Cordeiro, 2002). Schumpeter believes the entrepreneur is responsible for a process he called creative destruction, the fundamental impulse to trigger and keep on working in the capitalist economy. This person, according to the author, should constantly create new products, new production methods, new markets, implacably overcoming old methods that are less efficient and more expensive.

The function of the entrepreneur is to reform or to revolutionize the production pattern by exploring an invention or, more generically, a technological possibility not tested yet, in order to produce new goods or to find another way of producing something that already exists. It may happen through the discovery of new supply sources or new distribution for products, or through the organization of a new industry (live translation from Schumpeter, 1934).

Behaviorists' school refers to psychologists, psychiatrists, sociologists, and others who are specialists in human behavior (Filion, 1991). For them, entrepreneurship is more than increasing production or the *per capita* income because it involves starting and building changes in the structure of the business and of the society. This transformation happens while production increases and there is more wealth to be shared among participants. Entrepreneurship is an efficient method that links science to the market economy, creating new companies and bringing new products or services to the world of business (Hisrich & Peters, 2001).

The modern definition of entrepreneurship described by Filion (2001) covers essential elements of its specific characteristics: An entrepreneur is a person who imagines, develops, and executes visions.

Hisrich & Peters (2001) indicates that even if there is some divergence among concepts related to entrepreneur, there is a common understanding for a specific behavior that includes having initiative, to organize and reorganize social and economical mechanisms to transform resources and situations to take a practical profit and accept risk or failure. Table 2 is a matrix of quotations of these characteristics throughout time.

Date	Author	Characteristics
1848	Mill	Tolerance to risk
1917	Weber	Origin of formal authority
1934	Schumpeter	Innovation, initiative
1954	Sutton	Search for responsibility
1959	Hartman	Search for formal authority
1961	McClelland	Risk taker and need for realization
1963	Davids	Ambition, desire for independence, responsibility, self-confidence
1964	Pickle	Human relationship, communication ability, knowledge of the technique
1971	Palmer	Risk evaluator
1971	Hornaday & Aboud	Need for realization, autonomy, aggressiveness, power, recognition, innovation, independence
1973	Winter	Need for power
1974	Borland	Internal control
1974	Liles	Need for realization
1977	Gasse	Guided by personal values
1978	Timmons	Self-confidence, target guided, moderate-risk taker, control center, creativity, innovation
1980	Sexton	Energetic, ambitious, positive reverse
1981	Welsh & White	Need for control, responsibility aimer, self-confidence, moderate-risk taker
1982	Dunkelberg & Cooper	Growth guided, be professional, independence

Source: Elaborated by the authors.

Table 2. Matrix of quotations of entrepreneur's characteristics throughout time

GEM (2000) determines entrepreneurship as any tentative of creating a new business or a new enterprise; for example, autonomous activities, a new company or expanding an existing business. These initiatives may come from an individual, from groups of people or from companies that are already established.

Concluding, we may understand that entrepreneurship has various perspective of study, including economical, political, social, cultural and compartmental issues. To Hisrich & Peters (2001), entrepreneurship is a dynamic process of creating more wealth to a region, for the benefit of its own community.

3. Concept of innovation in an academic perspective

Despite a strong consensus in conceptualizing innovation as "something new", there also is a great disagreement about what may be considered "new". Once newness is a situational quality, it is possible to presume innovation is situational as well. If something is new for some sort of environment, it may be seen as innovation, even if it is well known by others (Moreira & Queiroz, 2007).

One of the pioneers and still up to now the most distinguished author in the innovation area, Chris Freeman used to point that one of the problems in managing innovation is the great range of understandings people have of this word, frequently confusing its meaning to invention. Innovation is the process of making new ideas from opportunities and putting them into practice of an extensive use (Plonski, 2005).

For Plonski (2005), confusion happens because of three misunderstandings: *reductionism* (considering innovation only as a technological basis), *enchantment* (considering technological innovation as spectacular), and *mischaracterization* (relaxing on the technological change requisite for the innovation).

By the end of the XIX century and beginning of the XX century, entrepreneurs and managers were not distinguished. So, in order to make a difference between those who never invented anything, but would adapt a new technology in creating products to reach an economical vitality, it was established the notion of entrepreneur as an innovative person (Hisrich & Peters, 2001).

Schumpeter (1934) points out this way: "The function of the entrepreneur is to rebuild or to revolutionize the production pattern by exploring an invention or, more generally, a non-experimented method, in order to produce a new good or a new commercialization for goods, organizing a new sector".

Entrepreneurship, for the economists, is the engine of the economical system. According to Schumpeter, taking profit from new opportunities is connected to innovation.

Entrepreneurs are agents of changes; they make things new and different. One can only call a person entrepreneur if he contributes with something new (Filion, 2001). Schumpeter, Hoselitz, Cole, Gartner, and Dollinger (Paiva Jr & Cordeiro, 2002) conceptualize the practice of entrepreneurship as the act of creating an economical and innovative organization for the purpose of getting profit or increasing under conditions of risks and uncertainty.

The difference between the entrepreneur and the inventor is that the first one uses his creativity connected to his management abilities and business knowledge to identify opportunities to innovate. The inventor does not have the commitment of creating something with economical objectives; his motivation is the creation itself, the discovery, and nothing else (Dornelas, 2003).

4. Innovation profile and its relation with entrepreneurship

With respect to innovation profile, it is known of a strong consensus on understanding its concept as "something new". Nevertheless, there is great disagreement on what can be considered as "new". Since "newness" is a situational quality, it can be presumed that innovation is situational, if something is new for environmental data, it can be considered as innovation. One of the problems in managing innovation comes from the variety of understandings that researchers have on this term, frequently confusing it with the concept of invention. For Plonski (2005), this confusion happens for three reasons: reductionism (to only consider innovation as a technological matter), enchantment (to consider technological innovation spectacular) and un-characterization (to ease the requirement of technological change in an innovation).

Throughout history, more specifically in the XVIIIth century, Adam Smith relates the accumulation of capital with manufacturing technology; studying the concepts related to technological change, to division of work and, to growth of production and competitiveness. In the XIXth century, List was considered a pioneer to introduce the concept of intangible investment. For him, the condition of a country is the result of the set of all the discoveries, inventions, improvements, up-grades and efforts of all the generations that had lived before us: this forms the intellectual capital of the human race. Marx and Schumpeter analyzed the concept of technology under the perspective of economic development. For Schumpeter (1934), it is necessary to develop ways to combine material and knowledge in order to promote economic development; consequently, it is necessary to introduce new combinations, which are known as innovative processes. At the beginning of the XXth century, there still was no research that distinguished the characteristics of an entrepreneur from the ones of a manager. To differentiate the characteristics of the ones who did not invent from the ones who used new technologies for the creation and the development of new products, to reach economic vitality, it was established the notion of the entrepreneur as innovative (Hisrich & Peters, 2001).

The function of the entrepreneur is to remodel or to revolutionize the production standard exploring an invention or, in a more general way, a non experimented method, to produce a new good or for the commercialization of products, in a new sector (Schumpeter 1934).

For Schumpeter, the proper advantage of new opportunities is associated to innovation. For Drucker (1985), innovation is an act that contemplates the resources with a new capacity to create wealth. "Entrepreneur is an agent of change; it makes new and different things. It can only be called an entrepreneur if it contributes to something new." (Filion, 1992).

Schumpeter, Hoselitz, Cole, Gartner e Dollinger appraise the practice of entrepreneurship as an act of creation of an economic and innovative organization with the intention to get profitability or growth under risk conditions and uncertainty. However, there are some

entrepreneurs who open similar business, whether with the same product or processes, or either in the same region.

Consequently, it can be considered that there is the individual who is, in fact, either an agent of change, as suggested by (Filion, 1992), or there is this other individual who does not opt for change, but more for copying what is already available in the market, without producing something new for its community. Both types can be considered equally as an entrepreneur, considering that both have some of the characteristics of the entrepreneur.

According to Schumpeter (1934), it is proposed three basic phases to define the process of innovation: (i) invention, as a result of a discovery process, new technical principles, potentially opened for commercial exploration but not necessarily carried through; (ii) innovation, as a process of development of an invention for commercial purpose and; (iii) diffusion, as the expansion of an innovation of commercial use, new products and processes.

Pinchot (1985) also indicates the distinction between innovation and invention. Invention consists in the creation of a new concept; but innovation not only demands invention, but the transformation of the invention into a commercial success.

For Schumpeter (1934), inventions are economically irrelevant; considering that innovations are conversions of suitable inventions into consumer's habits and contribute, therefore, to economic development.

The difference between the entrepreneur and the inventor is that the entrepreneur uses his creativity combined with his management abilities and his knowledge of the businesses to identify opportunities to innovate. The inventor does not have any commitment to create something with economic results; his motivation is the creation, the discovery and nothing more (Dornelas, 2003, p. 18).

It is obvious that in joining the attributes of entrepreneurship and innovation to one individual constitutes the best combination for economic growth, because it creates an ideal mix which results in the opening of new enterprises focused on innovation, which creates exclusive and new market demands. Innovation constitutes one constant challenge for the organizations, considering the inherent risks and the advantages that it can generate. The risks are the consequences of the consumption of resources without getting returns, or even worse, not to spend and not to be prepared duly for the future challenges (Dorion et al., 2008).

In this sense, Paiva Jr. & Cordeiro (2002) defines the entrepreneur as being a person who initiates a business or a person who operates and develops it. For them, the entrepreneur is the person who destroys the economic order already existing thru the introduction, in the market, of new products/services, with the creation of new forms of management or thru the exploration of new resources, materials and technologies.

When there is a surplus of information in a specific process, imitation becomes a convenient heuristic resource. Considering the epistemological sense of the concept of imitation, imitation itself does not consist in a worthless resource; to the contrary, it represents the fundaments of learning and language, contributing to social cohesion and is the natural mechanism for both inspiration and aspiration. It can also be considered a rational economic option (Bonabeau, 2004).

In a research carried through in one hundred of the 500 companies who demonstrated the most important growths in the United States, in 1989, it points out that 71% of the ideas of the entrepreneurs refer to current modifications from their previous work environment. On the other hand, only 4% of the entrepreneurs discover, through systematic research, opportunities (Bhide, 1994).

Then, innovation constitutes an effort to produce an intentional and focused change in the economic or social potential of the enterprise (Drucker, 1985). It consists in the creation and the lucrative use of new technologies, new products, new services, new systems and new forms of operation (Pinchot &Pellman, 2000). As mention Simantob & Lippi (2003), to innovate is to have an idea that its competitors do not have yet and to implant it successfully. Innovation is part of the strategy of the companies: its focus is the economic performance and the creation of value.

The Organization for Economic Co-operation and Development (OECD), in Becker & Cunha (2006), differentiates technological innovation from innovative activity. The first one refers to new products and processes launched in the market or existing product or process significant improvements. The second one consists in organizational policies and practices directed (i) to research activities and development (it refers to creative and systematic activities which aims at increasing knowledge supply); (ii) to industrial engineering (with the objective of acquiring or modifying equipment, tools, quality control, methods and standards, and produce new products or to adopt new process); (iii) to production (modifications of product and process); (iv) to marketing of new products (launching of these products in the market, its adaptation and commercialization); (v) to acquisition of intangible technology (register of patents, licenses, know-how and services of technological content and also the acquisition of equipment and machines of technological content introduced thru the innovations of the company); and (vi) design activities (definition of procedures, operational and technical specifications and production of new product or adoption of new processes, and the activities of design related to new product or process).

Simantob and Lippi (2003) mention that technological innovation consists in the development or in the improvement of a process or a service that already exists. It differs from the concept of invention, which refers to the creation of inexistent intellectual capital that may not have still any economic consequence. According to Moreira & Queiroz (2007), "in more recent studies, technological innovation is defined by the introduction in the market of a product (good or service) technologically new or substantially improved or by the introduction in a company of a productive process technologically improved or new". Technological innovation may result from new technological developments, new combinations of existing technologies or the proper use of knowledge acquired in a company.

In respect to the innovation profile of a manager, authors mention that this professional is associated with the following characteristics: (i) he attracts, stimulates and give autonomy to the decision process of the team; (ii) he has sense of urgency to resolve problems with high degree of uncertainty; (iii) he has tolerance to risk, but he always measures the return on investment; (iv) he knows how to take risk with responsibility and persistence; (v) he creates an experimentation culture; (vi) he enhances commitment with any learning process, inside

and outside the company; and (vii) he understands that as part of his work to convince other people to bare a new and good idea to be implemented (Simantob &Lippi, 2003)

The innovation profile of an enterprise shows that up to 30% of its billing comes from products or services launched less than five years. The result of a stimuli for innovation can be seen as a learning aspect (the produced knowledge is stored and shared with the other areas of the enterprise); as content (a new good, service or product); as value (financial and economic profits thru innovation); as behaviour (incorporation of capacities that changes the forms to act and to think of the people); and as entrepreneurial spirit (incentive for innovation projects without raising a concern for immediate success) (Simantob & Lippi, 2003).

Thus, it cannot automatically be attributed to the entrepreneur the practice of innovation, since many entrepreneurs launch their business in the market with some products already in use or, a lot of times, with some ideas identical to unedited management models, as a practice of entrepreneurship and wealth creation. The habit of copying success models is a common practice in Brazilian companies, considering the data on the initial amount of royalties and licenses of US$ 200 million paid in 1992, passed to US$ 3,5 billion in 2001 (Simantob & Lippi, 2003). Drucker (1985), positioning himself as a partisan of the attribute of innovation to the entrepreneur, agrees with the importance of the imitation process of the entrepreneur, meaning that the entrepreneur can make or do something that somebody else has already made. However, the author considers that such imitation process is, in fact, innovative when applied to his development strategy because the entrepreneur understands better what the imitation represents and what can be aggregated from it.

5. Imitations as an entrepreneurship action

It is not possible to necessarily insert to entrepreneurship the practice of innovation, once many entrepreneurs come to the market with similar ideas, or many time these ideas are identical to the inedited model; this way, they do not only undertake action but they also create wealth, despite of not innovating.

The habit of copying successful models is a practice in Brazilian companies. This fact can be demonstrated just facing the amount of royalties and licenses paid: US$ 200 million in 1992 and US$ 3.5 billion in 2001 (Simantob & Lippi, 2003).

Drucker (2002), still considering innovation as an attribute to entrepreneurship, recognizes entrepreneur's imitation as a deliberate strategy. He believes that aggregating the entrepreneur with an innovative profile gives attributes to the same person and constitute the best combination for economical growth. It allies inherent disposition to start new enterprise thru innovations, creating openings in the consuming market fore new demands. Paiva Jr. & Cordeiro, 2002 defines the entrepreneur as a person who starts a business or a person who operates or develops it. To him still, the entrepreneur is a person who destroys the existing economic order for the insertion of new products or services in the market, to the creation of new management patterns, or to exploring new resources, substances, and technologies.

Imitation becomes a convenient heuristic resource when there is too much information to be processed. Imitation is not a despicable resource; for example, it is fundamental to learning

processes, it promotes social cohesion, and it is a natural mechanism to breath in and breath out. Besides, it may also be a rational economical option (Bonabeau, 2004).

In a research held in 100 of 500 companies that a major growth in the United States in 1989, it was pointed that 71% of entrepreneur's ideas were modifications of ideas identified in their former working environment, and only 4% of theses managers discovered new opportunities through a systematic research (Bhide, 1994).

Innovation is an effort to produce an intentional change, focused in the economical or social potential of entrepreneurship (DRUCKER, 1985). Innovation consists in creating and profitably using new technologies, new products, new services, new systems, and new operation forms (Pinchot & Pellman, 2000). It does constitute a central matter for businesses expecting to become more competitive, desiring to develop new knowledge based management strategies about cooperation/alliance for technology products (Dorion et al., 2008).

The Organization for Economic Co-operation and Development (OECD) (Becker & Cunha, 2006) makes a difference between technological innovation and innovative activity. The first means new products and processes inserted in the market or a significant improvement in these same products or processes. The second refers to policies and organizational practices focused on research actions and development (they refer to creative and systematic work that aims to increase the knowledge stock); industrial engineering (acquiring or changing equipment, tools, quality control, methods and patterns, with the objective of manufacturing a new product or adopting a new process); production (changes in product and process); marketing of new products (launching these products into the market, their adaptation and commercialization); acquisition of intangible technology (patent office, licenses, know-how, and services of technological content, as well as acquiring equipment and machines of technological characteristic related to innovations started by the company); and drawing activities (definition of proceedings, technical and operational specifications, for the production of a new product or for the adoption of a new process, and artistic drawing activities related to the new product or process.

According to Moreira & Queiroz (2007), the most recent studies define technological innovation as introducing in the market a product (a good or a service) technologically new or substantially improved, or as introducing in the company a productive process technologically improved or new. Technological innovation may result from new technological development, from new combinations of the existing technology, or from the use of other knowledge acquired by the company.

6. Do Brazilian entrepreneurs imitate or innovate?

Historical factors of the Brazilian industrialization process have contributed to the dominant perception among national companies and businessmen of treating technology as something finished and ready to be applied. This "alienation" ended up in developing a feeling of suspicion related to technological development that has prejudiced the companies and excluded them from world tendency of taking part in international networks of strategic alliances. The protectionist character of the Brazilian industrialization model in substituting importations has de-motivated national sectors that would be beneficiated in being part of technological competition with potential international opponents, once they had a domestic market of great proportions.

There are some indexes on the importance of technological innovation on economical growth and business competitiveness (IBGE, 2003):

a. Technological innovation has been responsible for about 70% of economical growth, and perhaps for 80% to 90% of productiveness gain;
b. Private taxes of return on investments in R&D are around 20% and 30%, while social taxes of these same investments are over 50%.

On the other hand, investments are slow in Brazil. In 1994, Brazil invested 0.7% of its GNP in science and technology; from this sum, 75% are still supported by the government (Guedes & Bermúdez, 2006).

What blocks creativity, according to Filion (2001), is:

a. The belief that there always is a correct answer to a certain problem;
b. The fallacy that the resolution for any problem must be logical;
c. The practical sense limits creativity;
d. Breaking up rules, beliefs or paradigms is innovation in many cases;
e. Observing only one perspective for the problem;
f. Not seeing a connection between mistake and innovation;
g. Think of solutions only on the activities of a certain sector of the company;
h. Non-conventional thought criticized by the colleagues;
i. To be a person who believes to be without any talent or creative intelligence.

To Simantob & Lippi (2003), inhibitor factors for innovation are critics and punishment. Thus, there is a block for the capacity to dare, to risk. The innovator, as well as the entrepreneur, needs to be tolerant with unsuccessful ideas. The companies themselves define their innovative profile. They can see 30% of their income comes from products or services launched less than five years ago (Simantob & Lippi, 2003).

A Mintzberg & Quinn (1992) state that in innovative configuration is the environment what precedes? An innovative environment, according to Simantob & Lippi (2003), is composed of qualified and continuously trained people, clear and transparent communication, without any filter, a good environment for exchanging information, for daring, and for collective recognition. In Table 3 below, it is possible to analyze the nine dimensions of innovative environment proposed by Simantob & Lippi (2003):

Once there are these necessary characteristics so that companies may have an innovative environment, in Brazil it seems that challenges are even greater. A research carried out by IBGE/CEMPRE (SEBRAE, 2006), surveyed that the number of micro companies in the country, between 1996 and 2002, has increased from 2,956,749 to 4,605,607. The accumulated growth of 55.8% passed to a participation in the total number of companies from 93.2%, in 1996, to 93.6%, in 2002. The total number of people occupied in micro companies has gone from 6,878,964 to 9,967,201. With a growth of 44.9% in this period, it increased its participation in total occupation in companies from 31.8% to 36.2%. The number of companies with activities for the same period has increased from 181,115 to 274,009, a growth of 51.3%. The total of people increased from 4,054,635 to 5,789,875, with a growth of 42.8%, showing an evolution from 18.8% to 21.0%. According to this research, micro and small companies corresponded, in 2002, for 99.2% of the total number of formal companies, 57.2% of total jobs, and 26.0% of salary mass. Because of the expressive increase of the

number of jobs generated in in both segments, salary mass presented a real improvement of 57.3% in micro companies and of 37.9% in small companies. Data from this research demonstrates that there are in Brazil a great number of entrepreneurs and they have a major participation in the economical activity of the country.

Challenge and involvement	They come out when people make what let them happy. The natural consequence is a strong complicity to the activity.
Freedom	It conquers autonomy to execute and develop ideas and projects.
Time to create	There is a greater and greater demand for time in the agenda and physical environment proper to have ideas.
Support to create	There is not so much one can do without resources, support or patronage from leaderships, either for investing in uncertain experiment or to recognize a group merit.
Conflict	Sometimes, organizations stimulate good competition. As athletes of a same team, people compete among themselves to look for a better result, but respecting team spirit.
Debates	They are basic ingredient to share ideas and knowledge, respecting opposed points of view.
Humor and joy	They are more natural in informal environments and with few behavior rules.
Trust and sincerity	They are perhaps the most important stimuli to assure the freedom of speech and the consciousness that punishment is something to be avoided.
Tolerance to risk	It expresses clear understanding in accepting mistakes as part of the learning process.

Source: Simantob & Lippi (2003)

Table 3. Nine dimensions to innovative environment

Another research, carried out by the Institute of Economical Applied Research (Ipead), presents, in Table 4 below, that 1.7% of Brazilian industrial companies innovate. Furthermore, the results demonstrate that an innovative company has 16% more chances to be an exporter than the other ones and represents 25.9% of the whole Brazilian industrial income, occupy 13.2% of all jobs generated in the activity, and pay salaries that are 23% higher that the other ones.

The effort of these companies to innovate corresponds to 3.06% of expenses with internal R&D; however, as they represent a minority among Brazilian companies, the total spending by industries with R&D falls to 0.7%, while the average of other countries like Germany and France corresponds to 2.7% and 2.5%, respectively (Arbix et al., 2005).

It is possible to observe from data presented in both Sebrae and Ipead research that although there are a great number of micro and small companies, there also is a practically insignificant percentage of companies which formally innovate in Brazil. It proves these new companies are merely imitator's entities of already existing businesses.

Other researches indicate a correlation between expenses with innovation and R&D and wealth. While England, the United States, Japan, South Korea, France, and Germany invest

around 3% of their GNP in science and technology, Brazil invests around 1%. According to a research realized by *Human Development Report* (UNDP), that established the index of technological development, Brazil, in 2001, occupied the 41st place in the ranking that was headed by Finland, the United States and Sweden. While Brazil has patented 125 technological innovations in 2003, the United States registered 98,663 (Simantob & Lippi, 2003).

Competitive strategy	Number of companies	Participation (%)	
		Profit	Employment
Innovation and product difference	1,199 1,7%	25.9	13.2
Specialization in pattern products	15,311 21.3%	62.6	48.7
Non differentiation for product and smaller productiveness	55,495 77.1%	11.5	38.2
Total	72,005	100	100

Source: Institute of Economical Applied Research (Arbix et al., 2005)

Table 4. Competitive strategy and innovations in companies

According to IBGE (2003), 50% of investment in innovations refers to the acquisition of machines and equipment; only 20% are destined to research and development. In Brazil, only 177 companies made some worldwide innovation in 2003.

In Table 5 below, it is possible to observe the index of Brazilian innovations throughout time, divided in classes of number of people occupied by them.

People occupied with innovations	Innovation index 1998-2000 (%)	Innovation index 2001-2003 (%)
Total	31.5	33.3
From 10 to 29	25.3	30.4
From 30 to 49	33.3	34.2
From 50 to 99	43.0	34.9
From 100 to 249	49.3	43.8
From 250 to 499	56.8	48.0
From 500 on	75.7	72.5

Source: IBGE, PINTEC (2003).

Table 5. Indexes of innovation in companies 1998-2000 and 2001-2003

The smaller the company is, the smaller is the index of innovativeness of this same company. It proves once again that Brazilian entrepreneurs do not have an innovative profile, in disagreement with the concept of entrepreneur of most authors mentioned that relate the entrepreneur to a creative and innovative person.

In a research carried out by FAPESP agency, despite of the number of innovative companies in Brazil increased from 22,698, in 2000, to 28,036, in 2003, this increase has not reflected in

the creation of new products or new technological processes yet. A study of technological innovation in Brazilian industry, carried out by the National Association of Research, Development and Engineering of Innovative Companies (Anpei) and presented in the 6th Annual Conference of this organization, shows: "The index of innovative products focused on the internal market has fallen drastically, from 4.1% to 2.7% [of the total products in the analyzed period]", says Roberto Vermulm, professor at Faculty of Economics, Management, and Accounting (FEA) at São Paulo University (USP). According to Vermulm, in Germany or in Italy this index is around 22%. "To be few innovative is still a structural characteristic of Brazilian company", he stated. Innovative processes focused on the internal market also decreased, from 2.8% in 2000 to 1.2% of total processes in 2003.

The Federação das Indústrias do Estado do Rio de Janeiro (FIRJAN) system (2007), using the methodology of Business Week, also presents indexes of innovation for Brazil. It shows that the country dominates important top technologies. That is the case, for example, of petroleum exploration in deep water, aero-spatial technology, and agro-industry. The comparative analysis shows the expense in Brazil with R&D is close to the ones carried out by Russia, India, and China. However, it is worth to point out that it represents only one-third of the amount of investment in South Korea.

While analyzing professional formation in Exact Sciences and Engineering, in absolute terms, in the FIRJAN system Brazil has 56,000 graduate professionals, ahead of Singapore (5,600), of Israel (14,000), and of Taiwan (49,000). In relative terms, that is, considering demographic density of these countries, Brazil graduates less capable professionals to work on essential activities to innovation than any other country, except for China.

Of the three indexes considered by Business Week, the patent office in the United States is the index of technological development in which Brazil has its worse performance, with an increasing close to the one reached by Russia and quite below the performance of India and China. In absolute terms, in 2003, Brazil was the country with the smallest number of patents in the USA. Even worse, considering the index of evolution in the patent office in the period 1993-2003, Brazil has more registers than Israel only, remembering that Israel has an absolute number of registered patents greater that Brazil does.

It is observed that, despite the environment was not favorable to innovation in the last two decades; Brazilian industry could improve and get results in areas with significant investment, such as energy, agriculture and stock growth, and aero-spatial research.

7. Clue on Brazilian business incubation entrepreneurs

The process of transformation of an idea into a sustainable company is sufficiently complex. It evolves from the preparation and qualification of the titular of the idea, the planning of this new company and the determination of the choices through the necessary decisions for its continuity up to the articulation of the environment where the company is involved, in order to provide the necessary resources for the implementation of the practice of an imaginative conception. Furthermore, the appearance of an idea from repeated experiences may be reached as long as there is in the incubator a common and continuous effort to understand the nature of lived processes and to identify opportunities to improve these processes (Dorion et al., 2008). According to data, it is favourable to associate intelligence generation from a manager's of incubator point of view.

Evaluating the profile of the managers of the incubators, under the optics of the entrepreneurship and innovation, there are great similarities with the managers of the incubated companies, which must facilitate the tuning and the harmony in communication, in the establishment of projects and the flow of discussions.

Intra-entrepreneurship constitutes a strong and important characteristic for the managers of incubators. However, by having only one citation referring to this characteristic, this does not mean that the managers do not have it, since, in the elapsing of the interviews, it was asked to the participants to cite entrepreneur's characteristics and knowing that the answers were open and represented the most noticeable and remembered characteristics from the participants.

In respect to the evaluation of the incubated companies and its collaborators, the profile is, in its majority, of technicians, which are constituted of researchers of specific areas that develop studies on ideas for the construction of innovative solutions. The most present citations consisted in the expressions: "to look for new", "to search other alternatives", "to create new solutions for old problems". This indicates the direct link with characteristics related to innovation. This way, the incoming ones to the incubator have innovative characteristics, understanding that business incubators are disseminators of these practices, but will not develop innovative profiles.

The characteristics that have been perceived are innovation, search of opportunities, disposal to take risks, creativity, initiative, knowledge of the product, the necessity of achievement and pro-activity. Among the cited characteristics, were observed the attitude of independence, the ability to lead with situations and the capacity of learning, as mentioned by Filion (1992); determination and devotion pointed out as characteristics of the entrepreneur by Dornelas (2003) and the proper business commitment and the adaptability, cited by Timmons & Spinelli (2007).

Amongst the entrepreneur's characteristics, leadership of the actors could not be identified. Also, market knowledge was not in accordance with the behaviour of the participants, since many had only an ideal of a product and perceived thru being incubated the possibility of transforming it into reality, not possessing knowledge, and not having an interaction with the segment that they were to participate in.

Moreover, Filion (1992) detaches that the entrepreneurs are involved on a long term basis. From data collection, it was possible to perceive that a vision of the future is mainly linked to the product itself to be developed, showing that there is no indication from the participants of any constructed vision of the future for their business. In some cases, it was demonstrated that the companies were basically a vehicle to create a product, fruit of an idea, or an invention, known in the market; considering the fact that the benefits of entrepreneurship only reinforced the initial idea, but did not enhance the proper action.

It is recognized that entrepreneurs are excellent planners; a fact that could not be identified in the research on the profile of the managers of the incubators. To the opposite, it was possible to perceive that the majority of the interviewed, thru their technical profile, did not have any planning established, with a definite plan of actions and when it had, it was the fruit of a business plan, which constitutes a requirement to enter and benefit from the business incubator.

In compensation, the characteristic of innovation of the participants is very high, considering that the sense of urgency to resolve problems with high degree of uncertainty, tolerance to risk and culture of experimentation can easily be identified; but, the profile of the participants does not show relevant characteristics of entrepreneurship, since the designated attitudes as entrepreneur are not necessarily similar to innovation profile. For this reason, the encountering of a profile oriented toward the one of an inventor demonstrate the lack of commitment to create something with economic outputs, understanding that their motivation resides in the creation and in the discovery, nothing more.

8. Conclusion

The study of these concepts allows observing that, on one hand, despite possessing an excellent perception in relation to new business opportunities, the Brazilian entrepreneur does not present, in its essence, an innovative character. This can be confirmed by the statistics who point out the fact that smaller is the company, minor is the probability to be innovative, considering the fact that in Brazil, the representation of micro and small companies reaches 99%.

It is important to mention that, without having still a consensus between the authors of the area, there is a trend in the literature showing that entrepreneurship is related to innovation, creativity and change. In this perspective and by observing the Brazilian context, it is encountered the existence of an entrepreneur who characterizes himself against such theory based proposal, due to the fact that his link with innovative activities is very weak or inexistent.

However, it is possible to perceive in the profile of the Brazilian entrepreneur a high capacity to perceive business opportunities but as imitation of existing enterprises. This can be confirmed, from one hand, by data showing a growth of 50% of the numbers of micro and small companies established in the country between 1996 and 2002 and, on the other hand, by the lecture of an index of only 1.7% of the companies which innovate in its businesses.

In this sense, although the imitation may consist as the most common business alternative for Brazilians wishing to create a new venture, an existing entrepreneurial potential in the country would justify a greater investment in innovation within these organizations. This initiative would make possible the creation of new markets and new offers and would minimize the vulnerability of these companies in front of global competitiveness effects. This context enhance the urgent necessity of these companies to invest in research and development for new products and services, which can occur, for example, through the creation of more structured and active R& D activities.

Finally, this brief analysis of the entrepreneurial and innovative realities of the Brazilian context shows a lack of presence and use of the entrepreneurial potential and its competitiveness on a national scale. Moreover, the existing concepts in the literature which characterize the entrepreneur as somebody who possesses creativity, is innovative and is an agent for change, mischaracterize the Brazilian entrepreneur, since his act mainly relates to imitation business-oriented, having few characteristics related to innovation.

On the other hand, it can be observed that the profile of the managers of the incubators do have entrepreneurship and innovation characteristics, while the profile of the managers of

the incubated companies only possess innovation characteristics. The evaluation of the profile of the managers indicates a distortion between the theoretical and the practical orientations of the incubation process. This occurs because business incubators do focus on ideas that, many times, are deriving from scientific research or inventions that, if transformed into companies, do result in innovations.

As of how innovation can impact on such transition process, the results demonstrate that the managers of the incubators and the director of the incubated companies present a highly innovative profile, but it does not necessarily an entrepreneurial profile. The identification of characteristics, such as the perception of change as a normal phenomenon, the lack of discomfort with new situations, creativity and brainstorming, constitute characteristics which describe the profile of an inventor. But, from the results of this study, they can also demonstrate the ones of a good technician who resolved to commercialize a great idea.

Consequently, as of the identification of the profiles of entrepreneurship and innovation, it can be stipulated that business incubators do focus on the development of the missing entrepreneurial and innovation characteristics identified in this analysis; but in very distinct manners. One aspect to be valued from this research refers to qualification, training, management support, posture to interact with the academic sphere; which will generate results and benefits for both the worlds of business and science; because both professors and researchers from the academic world constitute a good source of learning and development for relevant business management practices. Thru such strategy, it would be possible to develop better managerial abilities and entrepreneurial attitude with the managers of the incubated companies. Such action would allow the conciliation of entrepreneurship and innovation characteristics, from the vision of the actors up to their systemic interaction pattern, generating a dynamic disequilibrium, rule of a healthy economy and reality of the economic theory.

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6

New Service Ventures – Struggling for Survival

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1. Introduction

While the tertiary sector of the economy is, in most countries, the dominating one, the entrepreneurial activity of this sector accounts for about 83% of the total entrepreneurial activity (KfW, 2011). Facing this fact little has been said about the peculiarities and challenges new service ventures have to face in general, i.e. beyond the particular issues of certain service industries. This paper intends to fill this gap. It is argued that there are in fact general peculiarities of service ventures that make a difference to other modes of venturing. More, due to the very nature of services, ventures of this realm face particular problems of achieving a state of sustaining establishment in the target market. To address these challenges in more detail, we introduce the 'liabilities of serviceness' as another category of liabilities young firms typically face beside the well-known liabilities of newness, adolescence, and smallness (King, 2006). As a consequence, the drop-out rate in many service industries is very high. Accordingly, we consider the struggling for survival of new service ventures an appropriate sub-title of this chapter. To better understand this process and to focus our analysis we raise the guiding question which factors particularly make a difference at the cross-road of survival and failure.

Since we do not conduct primary empirical research, we consider it useful to ground our analysis on a sound theoretical framework that frames our analysis. In this connection, particularly approaches from economic theory address issues of failure and survival. As the dominating frame of reference in management studies competence research allows for a solid understanding of the issues relevant to this chapter. Thus, we employ competence-based theory (Teece et al., 1997; Sanchez & Heene, 1996; Freiling et al., 2008) and adapt competence-based reasoning to the service peculiarities by referring to the so-called 'service-dominant logic' of Vargo and Lusch (2004). The service-dominant logic (henceforth: SDL) addresses the transition and transformation of value-added processes from a goods orientation to a service orientation. Service orientation does not primarily and exclusively mean the provision of services but rather implies thinking in terms of serving the customer and implementing a value co-production by both the supplier and the customer.

The chapter proceeds as follows: In section 2 we portray briefly the very nature of services and the particular situation of service ventures to the end of a first understanding what 'liabilities of serviceness' might be about. Subsequently, in section 3 we mirror these liabilities against competence-based theory. To this end, we refer to the open system view of the firm and develop Sanchez and Heene's (1996) framework to better respond to

peculiarities of service ventures. With this newly developed framework we can specify the challenges in case of service ventures struggling for survival. The chosen causalities are transformed into propositions that may guide future research. In section 4 we portray the managerial conclusions of the debate. The aim is responding to the question what service ventures can do to overcome critical liabilities of venturing and to achieve a state of sustaining establishment in the market. Finally, in section 5 the chapter concludes with a brief outlook.

2. New service ventures, peculiarities of services, and liabilities of serviceness

2.1 On the nature of services

What is different in case of services in general and in case of service ventures in particular? Services are different from other goods in numerous ways (Lovelock & Wirtz, 2007; Bruhn & Georgi, 2006; Desmet et al., 2003). Most often, researchers point to the intangible nature of services. Indeed, services are predominantly of intangible nature. However, we need to be careful when contrasting goods and services. Neither it is correct that all goods are purely tangible nor can we say that every service is solely intangible. In case of goods it is mandatory that a tangible core offering is accompanied by services, sometimes as pre-sales services, sometimes as after-sales services, and sometimes as sales-related services. It is simply impossible to market goods without any kind of service provision. Services, instead, can be provided without any tangible add-on. Nevertheless, in most instances this is simply not the case. E.g., in case of business consulting, a typical service with a high level of intangibility, elements of the final result are tangible (final report, documentation, etc.). Insofar, intangibility is an important, but not pervasive feature of services. Against this background we challenge the typical notion of the intangibility of services (Lovelock & Wright, 2002) and specify them in the above mentioned manner. However, in case of intangible solutions customers face a problem to evaluate the quality items. This restricted and sometimes lacking transparency increases the likelihood that customers do not make a purchasing decision simply because of the fact that the transaction-related risk might get out of control. For service ventures, the intangibility of their solutions is thus a first core challenge they have to cope with in their long and uncertain process of getting established in the market. It is worth noting that the (predominant) *intangibility* is an *output peculiarity* of services.

What else characterizes services? Apart from this output feature there are other criteria that refer to the input or *throughput dimension*. Serviceness is particularly characterized by the process of service provision (throughput peculiarity). This motivates scholars to stress that services are processes (Bruhn & Georgi, 2006). In this context, services always require the participation of the single customer in the value-added process (Grönroos, 1990; Marion, 1996; Lovelock & Wright, 2002). Sometimes this phenomenon of *customer participation* is also called 'customer integration' (Bruhn & Georgi, 2006). The term indicates that the customer and/or information and/or objects of the customer are integrated in the sphere of the supplier - at least temporarily. Thus, the customer participates via providing information, objects of his own sphere (e.g. machines to be repaired), and/or people. This integration of external factors is mandatory to trigger the final value-added process with the end to supply a customized solution. The simple fact that the customer is directly or indirectly involved in

the process of service provision reveals the decisive service encounter of the supplier and the customer. Due to the interaction between the two parties, the service encounter is relevant to the customer's evaluation of the supplier and the solution to be provided. More than that, the encounter itself is relevant to the quality of the service, for customer and supplier agree on the service design and the related specifications. Moreover, they make first steps of co-producing the service - and oftentimes of co-developing a tailored solution (Toffler, 1980; Vargo & Lusch, 2004). Therefore, customer participation is inseparable from the phenomenon of value co-production (Cowell, 1984; Rodie & Schultz, 2000). As for newly founded service companies, customer integration is a challenge. Those firms have neither sufficient customer-related experience available, nor a sound database at hand, nor are they fully aware of the implications of customer participation. Thanks to their newness they often had no chance to build routines of customer integration and hence face problems related to the service encounter. This leads to disadvantaged situations compared to established companies.

So far, customer integration is an integral part of the very nature of services. As for the process dimension of services, the debate on the so-called 'service-dominant logic' (Vargo & Lusch, 2004) sheds light on another service peculiarity: it is simply not enough to view the value-added process of the supplier the customer is involved in. Oppositely, the customer/supplier interaction does not finish when the solution is provided. Different from that, the supplier is in many instances welcome to support the utilization process of the customer. In order to make the most of the solution provided, customer and supplier continue their joint operations, but now also containing *supplier integration* in the customer's sphere. E.g., business consultancies do not leave their clients alone when they provided their solution. Instead, they are usually open for any kind of feedback or requests from their client(s). This supplier integration in case of services is, compared to customer integration, not mandatory but often takes place. The reason for this is that the supplier comes with considerable use-related know-how that may leverage the customer's benefit considerably. Once again, new service ventures are forced to develop skills of supplier integration that require empathy to better understand what the customer really needs and expects.

Next, we analyze service peculiarities before the value-added process starts so that we consider the *input dimension* as well. In this respect, services are, in fact, very different from other goods. In the moment of the sales-act, services may simply be referred to as non-finished goods. The supplier provides services always after an agreement with the customer on the specifications and terms of trade. Insofar the supplier promises future performance but does not sell something finished 'right from shelf'. The typical run of events of production followed by the sales-act is inverted. With the agreement, the customer buys a 'promise'; this promise triggers follow-up value-added processes - independent from the possible situation that the supplier might be prepared for service transactions to some extent. Alchian and Woodward (1988) differentiated in this sense between contracts and exchanges, the first one being relevant to services. Contracts promise future performance. Thus, customers have to believe in the quality of the service and the competence and willingness of the supplier. In case of new service ventures the customer is often unaware of the skills and competences of the supplier due to newness reasons. For new service ventures this may be a serious obstacle of the establishment process since it is very hard to convince customers with an organizational competence that is just developing.

There are many more items of services presented in literature (Lovelock & Wright, 2002; Desmet et al., 2003; Bruhn & Georgi, 2006; Lovelock et al., 2009): variability of inputs and outputs, people as part of the product, perishability, lacking inventories for services, etc. We state that all these items are derived from the one we listed above. Moreover, there are features mentioned in literature (Desmet et al., 2003), that simply do not reflect the service nature. One example is the argument of simultaneity of production, selling, and consumption. As outlined above, the value-added process of services follows the final agreement and thus the contract and the sales-act. Furthermore, using the provided solution might last much longer than production. In this vein, we differentiate between customer integration in the value-added process and supplier integration in the usage process. Thus, *services are predominantly (but not necessarily entirely) intangible solutions (output) that rest on mandatory processes of customer integration (with people, information, and/or objects of the customer as external factors to be integrated in the supplier's sphere at least temporarily). Services are contract goods with an agreement between customer and supplier prior to the final value-added process*.

These peculiarities challenge newly founded service firms considerable. Most of the problems are connected with quality evaluation by the customer and quality assurance by the supplier. The next sub-section portrays these challenges in more detail.

2.2 Liabilities of service ventures and liabilities of serviceness

Population ecology of organizations (Hannan & Freeman, 1977; 1984) tells us that organizational evolution goes along with different problems and challenges depending on the phase of evolution. Older firms face other problems than younger firms. Among the most prominent problems of young firms, entrepreneurship research usually deals with 'liabilities of newness', 'liabilities of adolescence', and 'liabilities of smallness'. We briefly tie in this discussion. Our main point, however, is to portray another category of liabilities that we termed 'liabilities of serviceness'. The latter directly refers to the issues we raised in the preceding sub-section.

Hannan and Freeman (1984) point to the particular situation of newly founded firms (liabilities of newness). From the outset, their embeddedness in markets and society is rather low and they are forced to build business relationships fast. Firms with higher levels of reliability have much better chances to survive. The same holds true for other factors such as reputation as well. Young firms are disadvantaged in this respect. This makes them prone to crises. Liabilities of newness occur right from the beginning of the venturing process, so that already in the seed-phase the first problems appear, followed by challenges in the start-up phase. Population ecologists (Hannan & Freeman, 1984) argue that liabilities in later steps of the organizational evolution appear as well. Similar to human life, the liabilities of adolescence refer to the phenomenon that in earlier stages of organizational development processes do not run in the smooth manner that is typical for well-established firms. Instead, due to an under-developed resource endowment, the younger firms face different resource bottlenecks they have to deal with. In financial regards, young firms need to manage stage financings (in particular seed, start-up, expansion, and bridge financing, cf. Volkmann et al., 2010; Freiling, 2006) several times which is in most cases an open and uncertain process. Another issue is coping with barriers to growth. Since growth challenges the given structures, restructuring is necessary every once in a while.

Whereas the two above-mentioned liabilities directly refer to the age of the firm, the liabilities of smallness focus the problems connected to the size of the organization (Amburgey et al., 1994). These liabilities decrease the likelihood of survival in particular due to the following reasons: limited access to capital markets, limited cost efficiencies and economies of scale, and limited access to high-potentials. The entire resource endowment is limited and bottlenecks are more likely to appear.

As for service ventures we can state that all the mentioned liabilities might appear. How far they might affect the organizational evolution of these ventures depends on the situation. In fact, there are service industries and service businesses, where corporate size does not matter or at least is of less interest. Nevertheless, we should not under-estimate these factors and analyze them in connection with the debate on potential '*liabilities of serviceness*'.

What are the liabilities of serviceness? We can answer this question by directly referring to the considerations above. A first liability is the problem to demonstrate the quality of the output. Nelson (1970) and Darby and Karni (1973) differentiated three different categories of quality perceptibility of products. Search qualities, as obvious items (e.g. color, material), are easy to assess prior to purchase (ex ante) by simply inspecting a finished good. We learned that due to the contract character of services the solution is not finished, yet, but has to be provided. Search qualities of the solution are thus simply non-existent. Experience qualities are those attributes of a solution that cannot be immediately assessed. The solution has to be used in the utilization process of the customer so that experience-based learning paves the way to customer's quality evaluation (ex post). Many items that are typical for services belong to this category, such as reliability, fitness for use etc. Many service items are experience qualities so that quality assessments are possible (only after the transaction has taken place) but at the same time require some costs as well. The third category refers to the so-called 'credence qualities'. Customers are at no time able to assess the quality of these items. If a guru of a religious sect promises eternal life, then we can speak of real credence qualities. Different from the view in literature (e.g. Desmet et al. 2003), there are only a few attributes that belong to this category. In most cases it is possible to assess the quality at least by third-party support (e.g. experts). However, customers do not take this chance due to cost and/or convenience reasons. In those instances, when quality judgment is possible but de facto does not happen, the situation changes. Figure 1 portrays that in those cases we can speak of so-called 'calculus credence quality' (Welling, 2006; Sohn & Freiling, 2011). Following Welling's (2006) train of thoughts, service transactions take place in constellations that can be called 'Akerlof situations' (according to Akerlof, 1970).

Against this background, services go along with considerable problems of the customer to evaluate the quality of the solution to be provided. Oftentimes, the customer makes use of surrogates that might indicate whether the quality of the solution will conform to requirements or not. In particular, the supplier can be such a surrogate. The customer figures out the skills and motivations, asks for references and testimonial letters to reduce his personal risks. In case of service ventures, this liability of serviceness comes to a serious issue. The supplier is completely new in the market. There is simply no reliable information on the supplier available that can fill the information gap of the customer. Insofar, liabilities of serviceness and liabilities of newness or adolescence form a *liaison dangereuse* from the supplier's point of view. The intangibility of the output as well as the contract character of services play a pivotal role in this respect.

		Possibility of quality judgment by the customer		
		Before exchange	Only after exchange	Neither before nor after exchange
De facto judgement	Before exchange	**Search quality**	-	-
	After exchange	**Calculus experience quality**	**Experience quality**	-
	Neither before nor after exchange	**Calculus Credence Quality**	**Calculus Credence Quality**	**Credence quality**
		Nelson situations	**Akerlof situations**	**Arrow situations**

Source: Welling, 2006: 168; Sohn & Freiling, 2011: 13

Fig. 1. Quality Judgment in Case of Services

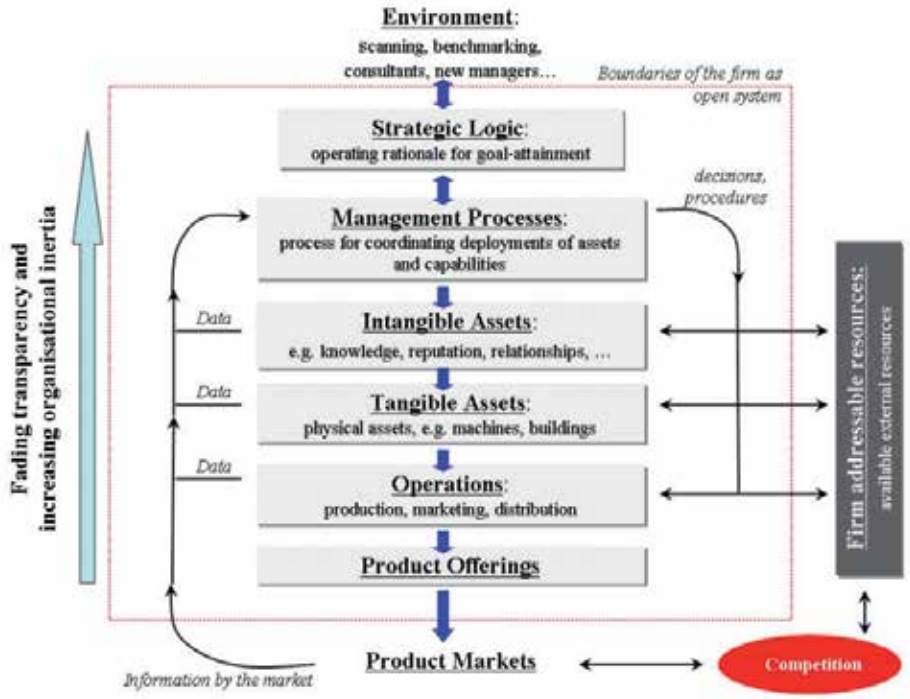
Another liability of serviceness rests on the phenomenon of customer integration. Taken seriously, customer participation in the value-added process implies that the quality of the solution is not solely dependent on the supplier and his operations. Instead, by providing external factors of the customer to be integrated in the value-added process of the supplier (Bruhn & Georgi, 2006), the customer contributes considerably to the quality of the solution. In this respect, quality is a function that depends on the quality of customer's and supplier's production factors and operations. Business consultancy illustrates the problem. Following the logic of 'garbage in, garbage out' in case of misleading information on the customer's basic problem, a consultant is simply unable to deliver a solution that fixes the customer's problem. Service quality is therefore not perfectly manageable by the supplier alone. Consequently, he is forced to manage the entire customer integration process as well. In many cases, this is only possible in case of bilateral adaptations. This liability of serviceness is accompanied and reinforced by the liabilities of newness (no considerable adaptations took place so far) and the liabilities of smallness (absolute lack of inputs and resources). Once again, we have a dilemma in case of service ventures. Service firms can replace lacking control of the quality management process by available routines and capabilities. This, however, is often impossible in case of service ventures.

We can conclude that liabilities of serviceness do exist. However, what is more important is the fact that they interact with other liabilities. The oftentimes self-reinforcing effects might threaten the survivability of the new service ventures. Next, we employ theory to better understand the background.

3. Establishing service ventures in competition - a competence-based perspective

3.1 An open system view on service value-added processes

Organizational competences are repeatable, non-random abilities to render competitive output that are based on knowledge and experience and channeled by rules and patterns (Sanchez et al., 1996; Teece et al., 1997; Freiling, 2004; Freiling et al., 2008). Research on organizational competences suggests that the availability and utilization of organizational competences is vital to firm's competitiveness and survival in competition (Freiling et al. 2008). Insofar, also new service ventures are well-advised to build and leverage organizational competences. Once developed, they stabilize the often under-developed process structures of young service companies. This may lead to more predictable and reliable output. Moreover, existing competences that are perceptible by customers or business partners work as surrogates in the above-mentioned sense. Since services have no search qualities on the product/output level, competences at hand might be a search or experience quality - not of the product but of the supplier. In this respect, customers are able to reduce their transaction-related risk when organizational competences of the supplier are available and evident. More generally, competences are a response to all the liabilities of serviceness mentioned above besides (or in addition to) the liabilities of young and small-sized firms. This is the reason why we employ a theoretical approach that directly addresses the role of competences in competition and the issues of competence building and leveraging.



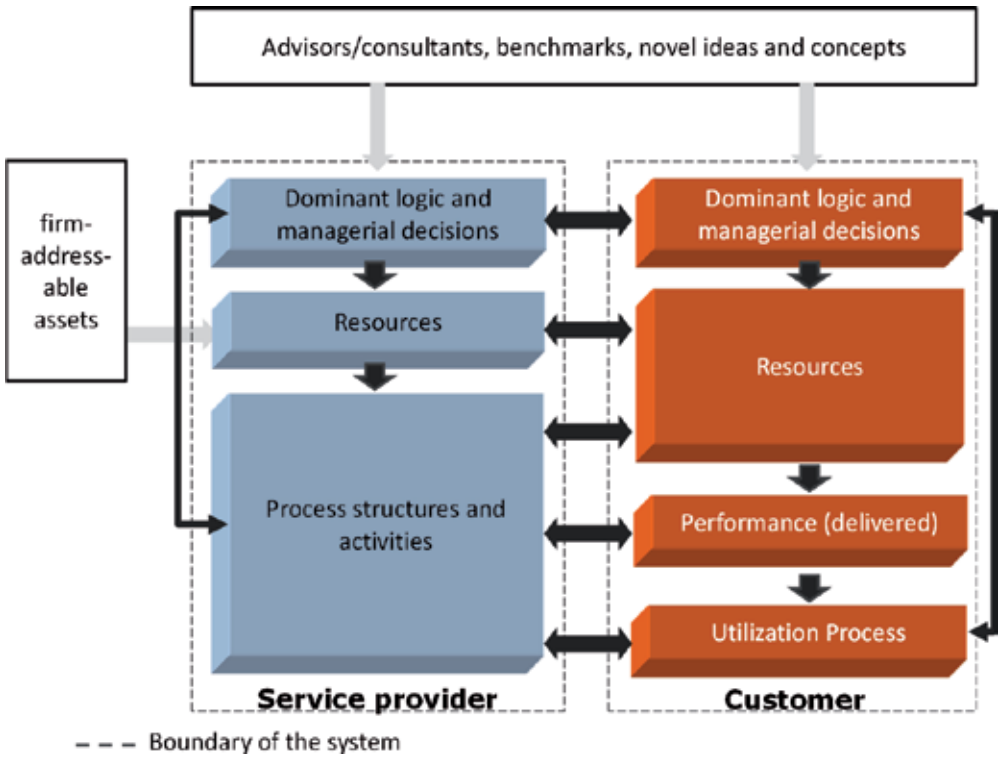
Source: Sanchez & Heene 1996: 41.

Fig. 2. The Open System View of the Firm

Within the competence-based theory of the firm we focus our attention on the model of the firm as an open system, following the initial proposal by Sanchez and Heene (1996) which is displayed in figure 2. Sanchez and Heene argue that the firm consists of different system elements that closely interact with each other. Among the system elements, the strategic logic is in a certain way the driving force of all processes. The reason for this is that the strategic logic consists of the decision-making rules and patterns of the entrepreneurs and the other managing workforce that drive the whole value-added architecture of the firm. As such, the strategic logic rests on previously learned knowledge and experience. This logic steers the process of information selection and processing as well as the application of available interpretation schemes. In Sanchez and Heene's (1996) model the strategic logic permanently interacts with the management processes. In fact, no management process can evolve without an impulse of the strategic logic. Oppositely, every management process will be, to some extent, reflected by the decision-makers. Insofar, we clearly see the link between these two phenomena. For the sake of parsimonious model building and simplification, we question the independent state as two autonomous system elements because they are inseparably linked. In this vein, we model the strategic logic and the related management processes as only one system element henceforth. Subsequently, Sanchez and Heene (1996) model the intangible assets, the tangible assets, the operations, and the product offerings as separate system elements. Once again, we question this variety of system elements in the light of the service peculiarities and make some modifications we explain in more detail below. First, there is no convincing proof why a differentiation between tangible and intangible assets is meaningful and, thus, necessary. Despite some minor differences such as limited imitability of intangibles (Hall, 1991; 1992), there is no reason for fundamental differences. Later on, within the debate on the service-dominant logic (Vargo & Lusch, 2004) we come back to the need of distinguishing between different resource categories. However, at this point of reasoning we simply model the resources at hand without any further differentiation. We follow Sanchez and Heene (1996) insofar as we consider the value-added processes and activities an independent and meaningful system element of service provision. Here, the resources represent the input dimension of services and the value-added processes the throughput dimension. Notwithstanding, facing the service peculiarities we must be careful when considering the output dimension. As outlined above, the output is co-produced. Moreover, services involve in most cases no transfer of property rights to products, although we might think of certain ways to define them. Facing the fact that the customer is deeply involved in developing the solution and considering that thereafter the customer makes use of it, we believe that it is better to assign the performance delivered to the customer - and not to the supplier. The logic that a supplier produces goods to be marketed belongs to the goods-related paradigm. Services are different, as we pointed out above. Consequently we depart from the Sanchez and Heene (1996) model once again - and this time considerably, for we do not only model the supplier but, as shown in figure 3, the customer as well - be it a consumer (b-to-c) or an organization (b-to-b or b-to-a). We do so for reasons we explain in more detail in the follow-up sub-section below.

Before, we clarify two more basic principles of the open system view of the firm. First, the role of competences in this system view is still open. One can argue that competences are nothing else but (intangible) resources so that they are already considered within the system element 'resources'. This would be less than a half-truth. The reason for this is the simple fact that the interplay of the internal system elements is to be managed and mastered.

Insofar, every firm needs capabilities that translate between the system elements and that 'keep the wheels on rolling'. A competence thus resides in managing the dynamic interplay between the system elements. This does not exclude that the firm's competences might reside in other system elements as well. However, the basic 'top-down' and 'bottom-up' processes in this system rest on capabilities in use.



Source: Own Illustration

Fig. 3. The Modified Open System View of Service Firms

Second, the firm is an *open* system. The firm, young or old, small or big, is embedded in a business and social environment. To better understand the drivers of survivability in particular of young and small firms, the open system view deals with the external system element called the 'firm-addressable assets'. When service ventures are challenged by scarce resources and bottlenecks, access to firm-addressable assets mitigates the problems and might keep the organization alive. This reasoning is fully in line with the resource-dependence view with Pfeffer and Salancik (1978) as the main protagonists (cf. Freiling, 2008, for the relationship between resource-dependence theory and the resource-based and competence-based view). Anyway, accessing firm-addressable assets is an endeavor that rests on the availability of capacities as well, since the young firm needs to identify promising assets, find a way to assimilate them, and to integrate them in its own value-added system. The debate on the absorptive capacity (Cohen & Levinthal, 1990) provides us with a basic understanding how this may proceed - with the absorptive capacity as a cumulative capability to access external knowledge.

Figure 3 displays two more links of the firm as an open system to the environment. One is the link to the market, the other the link to external advisors. Firms, in particular new service ventures, are well advised not only to participate in market processes for the sake of sales but to learn in the market. In particular, they need to know how far their value-added architecture is ready to pass the market test. In many cases adaptations are strongly required and major as well as minor changes almost unavoidable. What differentiates service firms from other companies is the fact that market interactions are very much more located on a one-to-one level. This implies that service ventures receive direct feedback from their business relationships to customers, not primarily from anonymous market structures. To this end and different from the Sanchez and Heene (1996) model, there are feedback processes between the customer and supplier related to every system element.

The link between the firm and external advisors is decisive as well, particularly from a viewpoint of a new service start-up. The young entrepreneurs typically have a certain sense of direction how to position the company, how to access the market, and how to do the business. These considerations are mirrored in the strategic logic and the management processes as well. The open system view tells us that a strategic logic is usually prone to organizational rigidities. This is not surprising at all for a strategic logic is grounded in basic beliefs and attitudes. Planned change of these phenomena is often impossible. If change happens then the change emerges over a rather long time. These rigidities might threaten the survivability of the young service firm because in unfavorable situations the entrepreneurs might get disoriented and lose their open-mindedness. In those cases it is vital to have access to external advisors they can trust. Insofar, the problem of 'mental rigidities' can be circumvented as long as the entrepreneurs are open-minded as well as willing and able to integrate external advice.

Finally, we condense our considerations by formulating research propositions that may guide future empirical work on this issue. Against the background of this sub-section and keeping in mind service ventures struggling for survival, we propose:

Proposition 1.1. Rigid strategic logics of service ventures decrease the likelihood of survival.

Proposition 1.2. Absorbing external advice decreases rigidities of the strategic logic and increases the likelihood of corporate survival.

Proposition 2.1. Limited access to firm-addressable assets decreases the likelihood of survival.

Proposition 2.2. Absorptive capacities as for all kinds of assets fill critical resource gaps and increase the likelihood of corporate survival.

Proposition 3.1. Lacking capabilities of managing the value-added architecture prevent the service ventures from smoothly running operations and hence decrease the likelihood of survival.

Proposition 3.2. Permanent competence building and leveraging in the realm of the value-added architecture increase the likelihood of corporate survival.

We already addressed learning in the market process. However, within the scope of our next sub-section we can specify the considerations so that the respective propositions are developed below.

3.2 The survival of service ventures in the light of the service-dominant logic

When comparing the original and the modified open system view in the light of service ventures, the most striking difference is that there are two open systems with the customer and the supplier. What is this differentiation good for? The answer can easily be given by pointing to the basic understanding and intent of the service-dominant logic (henceforth: SDL), developed by Vargo and Lusch (2004). SDL departs from the value-added principle of 'make and sell' to 'sense and respond'. Customer and supplier interact, co-develop, and/or co-produce what the customer needs. This requires a mutual openness and often intense bilateral adaptations so that the metaphor of a temporary unit of both parties well fits the basic character of cooperation (Vargo & Lusch, 2004; Lusch & Vargo, 2006). Whereas Vargo and Lusch (2004) suspect that the SDL implies a shift from a single transaction to a long-term business relationship of a customer and a supplier, surrounded by a number of different service transactions, we do not need to go so far. More important is the notion that a temporary collaboration of the close kind develops. This implies a different kind of governance. Whereas in many anonymous markets many suppliers stand *vis-à-vis* many customers, service markets are personalized to an extent that relational governance replaces market governance. If this holds true, it does not make sense any longer to model markets as the centerpiece of feedback from the other side of the market. Instead, learning in the market is nothing else but learning from a single customer and transferring the insights internally to all system elements of the supplier according to figure 3. A key facilitator of these learning processes is customer integration in the value-added process on the one hand and supplier integration in the utilization process on the other. This viewpoint reveals that it is too myopic focusing only on the value-added process and the related transaction between customer and supplier. The utilization process enhances our view as usage is particularly relevant to a sound understanding of the service nature. Again, we propose:

Proposition 4.1. New service ventures with a low intensity of learning from the customer and in the market are more likely to fail.

Proposition 4.2. With developed capabilities of both customer integration and supplier integration new service ventures decrease the likelihood of corporate failure.

We already raised the question which resources might be of utmost importance to corporate survival. SDL tells us that two different kinds of resources exist, both with completely different roles within the corporate value-added architecture: operant resources and operand resources (Constantin & Lusch, 1994; Vargo & Lusch, 2004). *Operant resources* are those that act upon other resources to create value. They are deeply embedded in the firm's resource endowment, enable a smooth run of activities, and are virtually not affected by depreciation. Instead, in most cases their value increases in use. Knowledge, skills, capabilities are prominent examples of this category. *Operand resources*, however, are those which must be acted on to create value. The typical production factors (materials, energy, machines etc.) belong to this category. Having said this, our next propositions are:

Proposition 5.1. Resource gaps decrease the likelihood of the survival of new service ventures.

Proposition 5.2. Among the resources, the availability and development of operant resources allow for an increasing likelihood of the survival of new service ventures.

So far, we addressed all the system elements modeled in the modified open system view of new service ventures, some of them directly, others indirectly. The research propositions are intentionally formulated in a more general fashion. It is up to on-going research to specify or modify the propositions in the light of empirical research. Next, we introduce some selected managerial consequences and discuss our findings.

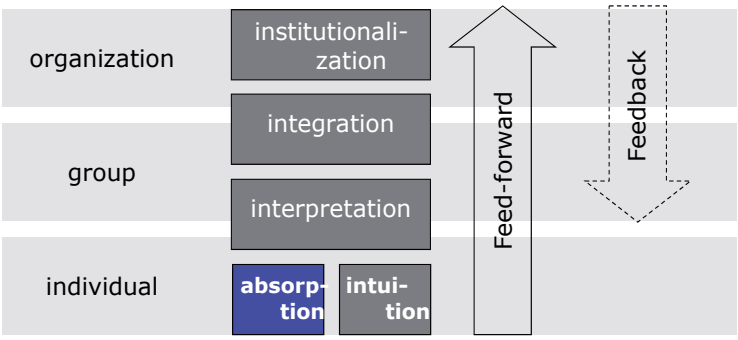
4. Managerial implications and discussion

New service ventures find themselves confronted with different liabilities when running a new business. These liabilities are in most cases highly interrelated. The aim of this chapter was to highlight managerial challenges and to locate ways to circumvent the above-mentioned liabilities. To this end, we developed, one by one, propositions as for corporate failure as well as for ways how to cope with these challenges. This section is to translate the theoretically founded findings into a more application-oriented format. The question is: what do entrepreneurs and/or managers in new service ventures have to do to make survival in competition more likely?

A first basic insight is that new service ventures need to care for an entire quality management system. We learned that quality challenges appear coevally at the input, throughput, and output level. Moreover, we are aware that not only the supplier produces service quality but the customer as co-developer and/or co-producer as well. This challenge is demanding, for it is not enough to establish a system of company-wide quality control but a system that crosses firm's boundaries. Facing the liabilities of newness, adolescence, and smallness, new service ventures need to find solutions that save scarce resources while providing a high degree of efficacy. In this dilemma-like situation, new service ventures are not left alone. In fact, there are proven techniques of service quality management that allow for escaping from trade-offs. In this realm, service blueprinting (Shostack, 1984; 1987; Kingman-Brundage et al., 1995) is a technique that supports process management while considering input and output issues as well. The technique was developed for service value-added processes and thus carefully considers all activities connected to customer and supplier integration including all processes in the 'back-stage' area of the supplier. Blueprinting is a technique that can be supported by modern software solutions. Practiced in a more informal manner, young and small companies find sound opportunities to employ this method.

Practicing techniques, such as service blueprinting, is already a first step into the direction of fostering capability maturity. We know the capability maturity models and systems from other discussions (e.g. quality and reliability of software systems, cf. April & Abran, 2008) and, particularly, from bigger companies longing for professionalizing their activities. In this vein, new service ventures are forced to improve the stability of all operations. To this end, it is useful to develop organizational routines (Pentland & Feldmann, 2008). Mastering a service blueprint already implies the development of routines. People become aware of and familiar with a planned run of events. The more they practice it, the more the routine becomes internalized and hence deeply embedded in the cognitive structures of people. Routines themselves are elements of organizational competences. It is up to service ventures to control this process and to transcend practices from the micro level of the individual to the macro level of the firm. These processes rest to a large extent on organizational learning. Figure 4 describes the process from individual intuition to develop something new, patterns

or routines included. The model developed by Crossan et al. (1999) indicates how this momentum, created by intuition or, as Freiling and Fichtner (2010) extend, by absorption of external impulses, translates into action sequences beyond the individual by processes of interpretation, integration and, finally, institutionalization in the feed-forward manner. The feedback way of learning allows for refreshing and deepening what was previously learned. From a managerial viewpoint it is up to entrepreneurs and/or managers in service start-ups to keep these feed forward and feedback processes alive that spread between different ontological levels (individual, group, organization). If these processes work, it is most likely that organizational competences develop.



Source: Freiling & Fichtner 2010: 161.

Fig. 4. The Modified Crossan et al. (1999) Organizational Learning Model

Competence-based research suggests that competences are the main reason why firms are able to withstand the competitive pressure. However, having and utilizing competences is not enough, in particular in the service business. When new service ventures find themselves struggling for survival, they need to ensure that available competences can be communicated so that also customers get aware of them. This is by no means an easy endeavor for competences are rather implicit and equipped with a high degree of opacity and causal ambiguity (Dierickx & Cool, 1989). Customers will not get aware of the supplier's competences easily. Nevertheless, without demonstrating this potential of the supplier to fix problems in a predictable and reliable manner, customers cannot reduce the uncertainty as for a particular supplier. Without a minimum reputation in this regard, service transactions will not take place. Thus, signaling available competences becomes an issue for new service ventures as well. Although this might not be easy at first glance, service start-ups should be aware of the oftentimes hidden chances in this respect. With every process of customer and supplier integration the two parties work together closely. It is useful to take the chances of these 'moments of truth' to clarify the competence at hand. In this sense, customer interaction management comes to an issue.

5. Outlook

This chapter intends to advance our understanding of service ventures in particular as for the so-called 'liabilities of serviceness'. We coined this term to pinpoint the challenging situation most of the service ventures are in. What we need to know is how far these liabilities cause higher failure rates of service start-ups or whether service ventures develop

particular skills to cope with this issue. It is up to on-going empirical surveys to research on that.

We modeled the system elements of the supplier - and the customer as well. As for these system elements we need to know more about the relevance of particular types of resources. Maybe the differentiation of operant and operand resources is already useful in this regard. However, we need more empirical research to make a precise statement on that.

Finally, we need to know more about the peculiarities of competence development in service ventures. Is it so that service start-ups can overcome obstacles to competence development? And if so: what are the most important levers?

Insofar, the chapter raised follow-up questions that can fuel more research activities on this relevant but highly neglected field of research.

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7

Interfirm Alliances: A Collaborative Entrepreneurship Perspective

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1. Introduction

For several years, competing meant reducing costs, as this concept was closely linked to scale economies, and the same strategies were systematically applied. The term of competitiveness was used to characterise firms' greater or lesser capacity to face the competition. Nowadays, the European Union forces firms to adopt stronger competitive positions, so as to respond to market changes, and to some extent, to be able to survive in their sphere of operation. The continuing need for improvement and constantly increased productivity is an important challenge faced by firms today. For this reason, it can be stated that firms have difficulty in competing individually supported exclusively by its own resources. In fact, at present, and even more so in the future, competitiveness appears in firms' relationships and networks. Therefore, to compete in a highly complex market, firms must establish cooperations as a business strategy to face difficulties that may emerge.

In this context, entrepreneurship appears to be a suitable approach, as it aims at discovering, evaluating and exploiting new business opportunities (Kirzner, 1973; Shane & Venkataraman, 2000; Venkataraman, 1997). This includes activities such as scanning the external environment for new markets, unmet needs, existing problems in work processes and new product ideas (Sandberg, 1991; Sayles & Stewart, 1995). Entrepreneurship is a concept that began to be important at the end of the eighties (Miller & Friesen, 1983; Stevenson & Jarillo, 1990). Since then, a growing amount of literature has helped firms to understand the organisational process that facilitates business behaviour.

However, despite all the efforts to study this behaviour and although the business context offers an excellent reference to carry out investigations, entrepreneurship still requires more study in order to establish its legitimacy and specific contribution. Examination of business initiative involves distinction between two types of research: one based on the function of the business-person and the other analysing the business behaviour of existing firms. Older studies focus on the first category, i.e., they focus on the characteristics and behaviour of business-people and analyse the creation of new organisations (e.g. Aldrich, 1990). This paper, however, will come under the second category, i.e., concentrating on business initiative at the corporative level (Stevenson & Jarillo, 1990).

According to this perspective, Miller (1983) set the first cornerstone by introducing the concept of entrepreneurial orientation, characterised by innovation, pro-activeness and risk-taking. Although there is no single term and notion of entrepreneurial orientation, these dimensions were adopted by many subsequent studies (e.g. Lumpkin & Dess, 1996; Kreiser et al., 2002; Tarabishy et al., 2005). In this context, Middel (2008) concluded that entrepreneurial capability is an important requisite for a firm to collaborate effectively with external partners and therefore be able to absorb the beneficial competences of other firms, increasing its level of knowledge and improving its innovative characteristics. According to Antoncic (2007), firms are considered entrepreneurial if they form interfirm relationships and show themselves to be innovative, pro-active and with a capacity for constant self-renewal. As noted by Gundry and Kickul (2007), entrepreneurship tends to require cooperation and collaboration among many parties.

In this sense, interfirm alliances can help large and small firms be more entrepreneurial (Ireland et al., 2006; Montoro-Sánchez et al., 2009). In this paper, an interfirm alliance is defined as an organisational arrangement, through which two or more firms acting in isolation manage to overcome their resource constraints. In fact, a growing number of firms rely on alliances to capture the resources they need to achieve their strategic objectives (Bragge et al., 2007; Urbano & Yordanova, 2008). Research shows that interfirm alliances are useful measures to fill resource gaps and to access additional competences (Montoro-Sánchez et al., 2009; Zacharakis, 1998). The concept of cooperation through alliances is found to be particularly involved with the phenomenon of collaborative entrepreneurship. As stated by Yan and Sorenson (2003), the cooperation among firms is one of the dimensions that contribute most to collaborative entrepreneurship.

Ribeiro-Soriano and Urbano (2009) characterise collaborative entrepreneurship as a firm's ability to collaborate outside the organisation. For Miles et al. (2005), collaborative entrepreneurship involves a group of firms that develop a strategy which allows them continuous innovation, through the respective collaborative capacities. This process is developed from alliances between two or more parties, all aiming to reach beneficial results. In this vein, the present paper conceives collaborative entrepreneurship as a strategy involving implementation within the firm, of knowledge and information coming from outside. The synthesis of the relationship between entrepreneurship and interfirm alliances is an interesting and fruitful area of investigation, but hitherto studies have mainly concentrated on small and medium-sized firms (SMEs) (Marino et al., 2002; Zacharakis, 1998), with a shortage of research applied to large firms. To fill this and other voids, in this paper the unit of analysis is the firm, whatever its size, and interfirm alliances.

One of the main contributions of this paper is to establish an interface between two important areas of management: entrepreneurship and strategic management. More precisely, the intention is to examine to what extent the formation of interfirm alliances can contribute to the development of collaborative entrepreneurial activities, i.e., how this decision can be interpreted as a form of collaborative entrepreneurship. To date, the role of entrepreneurship in alliance research, or vice versa, has received very limited attention in the literature (Alvarez & Barney, 2005). In particular, the influence of entrepreneurial orientation and firm resources on the decision to enter into alliances is an under-researched field. Consequently, the objective of this conceptual paper is to fill this caveat. In doing so,

its contribution lies in developing theory and a better understanding of how to use interfirm alliances as an approach to collaborative entrepreneurship.

The remainder of this book chapter is organised as follows: Section 2 refers to the main theories on which this paper is grounded, namely, resource-based theory and resource dependence theory. Section 3 discusses some definitions of interfirm alliances and, subsequently, the main reasons leading firms to adopt this business strategy, namely, obtaining and developing new resources. Section 4 offers a depiction of the various types of resources, capacities and competences a firm should possess, and more precisely, presents some typologies of these resources. As entrepreneurial orientation is the keyword to evaluate whether a firm adopts entrepreneurial actions, Section 5 deals with this concept and presents its various dimensions. Section 6 shows how formation of interfirm alliances can be interpreted as a form of collaborative entrepreneurship. The paper concludes with proposing a conceptual model for future analyses and some final considerations.

2. Principal theories

Various theories support the formation of alliances between firms, but in this book chapter highlights the two most important of them: Resource-based Theory and Resource Dependence Theory.

2.1 Resource-based Theory

According to Barney (2001), the development of Resource-based Theory resulted from frustration with the neo-classical economic justifications for firm performance, particularly neo-classical arguments based on market power such as homogeneity and mobility of a firm's resources. On the other hand, for Mahoney and Pandian (1992), the origins of Resource-based Theory are found in the field of strategy, in institutional economics (Positive Agency Theory, Theory of Ownership Rights, Theory of Transaction Costs and Evolutionist Theory) and in Industrial Organisation (Chicago School and Harvard School). Corner, quoted by Mahoney & Pandian (1992), places the origins in Neo-classical Theory, Industrial Organisation and Theory of Transaction Costs. They argue persuasively that the resource approach reflects both a strong industrial organisation approach and one which at the same time is unique.

However, Resource-based Theory is due to Edith Penrose, in 1959, with her book 'The Theory of the Growth of the Firm', where the firm is looked on as a wide set of resources (Buckley & Casson, 2007). Contrasting with neo-classical ideas, Penrose (1959) assumed the heterogeneity and immobility of resources and carried out an analysis of how some firms manage to achieve competitive advantage in a given industry while others do not (Bowen, 2007). In this way, resources were both the key to a firm's success and the main limitation of their growth (Buckley & Casson, 2007). The vision of Penrose made a useful contribution to good management practice, highlighting the creation of value through creative activity influenced by internal and external stimuli which lead to growth and innovation (Pitelis, 2005). Besides Penrose in 1959, other authors such as Hofer and Schendel (1978), Wernerfelt (1984), Grant (1991) and Peteraf (1993) also contributed to Resource-based Theory.

The objective of Resource-based Theory consists of analysing the position of resources in a firm and looking at some strategic options suggested by that analysis, namely the relationship between profitability and resources and ways of managing the position of resources in the firm over time (Wernerfelt, 1984). A central proposition of this theory is that firms are heterogeneous. Each firm is seen as a unique set of tangible and intangible resources (Esteve-Pérez & Mañez-Castillejo, 2008; Wernerfelt, 1984) and capacities that are acquired, developed and expanded over time. A firm's resources and capacities are the result of its strategic choices and commitment of resources over time and determine its performance at any time (Esteve-Pérez & Mañez-Castillejo, 2008). Therefore, the unit of analysis of this theory is the firm and that firm's resources (tangible and intangible) and capacities.

A resource is understood to be anything that can be thought of as a strength or weakness of a given firm (Wernerfelt, 1984). A firm's current resources are defined as those assets which are connected semi-permanently to a firm, such as: brand name, knowledge of technology, use of competent collaborators, commercial contracts, machinery, efficient procedures, capital etc. (Furrer et al., 2008). For Hart (1995), resources include physical and financial assets as well as employees' competences and organisational (social) processes. A firm's capacities are the result of the sets of resources acquired for unique activities that create value (Hart, 1995). Penrose (1959) refers to resources using the term of services, and other investigators (Chaston & Mangles, 1997; Hamel et al., 1989; Smart & Conant, 1994) refer to central competences. The firm can give a different direction to resources according to purpose. However, it is fundamental that they are 'labelled' to avoid conflict and to define the situations in which they will be used.

The term of capacities is used to describe how resources are applied in the firm. Grant (1991) suggests that capacities are what is generated from the result of applying the resources a firm possesses. Wernerfelt (1984) and Barney (1991) suggest that an optimal combination of a firm's resource profile and its activities in the product market should optimise its performance. It was this theory, therefore, that gave rise to articulation of the relationships between a firm's resources, capacities and competitive advantage. For Wernerfelt (1984), competitive advantage can be sustained if the capacities that create that advantage are supported by resources that are not easily copied by competitors. In other words, a firm's resources should raise barriers to imitation in the same line of thought. Bowen (2007) states that analysis of the characteristics of resources emerging in a firm and identification of the current or potential location of competitive advantage may lead to improved economic performance.

There seems to be consensus about the characteristics of resources that contribute to a firm's sustainable competitive advantage (Peteraf, 1993). At the most basic level, those resources must be valuable, irreplaceable and inimitable. For a resource to have effective value, it must contribute to a firm's capacity having competitive meaning and not being easily accompanied by alternative meanings (Barney, 2001). In the view of Miller and Shamsie (1996), resources should provide profit or avoid possible losses for the firm. The existence of resources that are heterogeneous and difficult to create, substitute or imitate by competing firms allows competitive advantage associated with a high level of performance. It is often questioned whether firms use resources and capacities appropriately, in order to give them competitive advantage. Therefore, Grant (1991) underlines that one of managers' concerns

consists of adopting strategies which enable the firm to make effective use of the resources and capacities available.

Resources and capacities allow formulation of competitive strategies, this fact being proven in the investigations by Chandler and Hanks (1994) who propose a relationship between resources, capacities and a firm's performance. Some authors (e.g. Chandler & Hanks, 1994) claim that the sustainability of a firm's capacities is the key to competitive advantage in the long term. Definition of sustainable capacities includes capacities that are not easily created by the competition, and which serve as a support for the strategic plan. In this connection, Grant (1991) underlines that a firm's resources and capacities have to be protected in order to ensure greater competitive advantage.

As long as a firm has the right resources, it is in a position to identify and explore new growth opportunities that may arise, as the environment is not a conditioning factor in a firm's evolution. Associated with resources is strategic management focusing on the firm's internal characteristics and respective performance (Grant, 1991). This approach differs from the classical theory of strategy by focusing fundamentally on resources, and it can also be assumed that some firms are heterogeneous concerning the resources they control (Greene et al., 1997). Combination and/or overlapping of resources allows firms growth and consequently expansion of business activities. However, it is not enough to analyse this theory in isolation in order to explain a firm's growth and performance, it being fundamental to consider firms together with the environmental context. Small firms cannot exclude their surrounding environment. This fact is due to the great influence exerted by the environment on small firms (Chandler & Hanks, 1994).

Resource-based Theory presents some limitations. For Bowen (2007), one limitation of this theory is that it focuses only on analysis of a firm's internal resources for implementation of its strategy, without taking into account the external institutional pressures which affect firms and the stance they adopt with regard to those pressures. Furrer et al. (2008) argue that Resource-based Theory does not suitably explain the difference in performance between firms that have the same level of uniqueness, rarity, inimitability and isolation of resources. For Barney (2001), this theory should be completed with theories of the entrepreneurial process and creativity for a better understanding of the strategic alternatives a firm can adopt given the resources it controls. It is in that context that this investigation emerges.

2.2 Resource Dependence Theory

Resource Dependence Theory is highlighted in studies involving organisational cooperation. This theory reflects the importance of resources as a 'critical variable' of the organisation. Resource Dependence Theory covers several variables, such as power, control, uncertainty and trust (Pfeffer & Salancik, 1978). According to some authors (Das et al., 1998; Grandori & Soda, 1995), this theory offers a dimension of qualitative and quantitative dependence in explaining business cooperation phenomena. The respective assumption considers that firms manage to survive by establishing interfirm alliances, allowing them to access indispensable resources (Pfeffer & Salancik, 1978; Zinn et al., 1997). In simple cooperation relationships, there is total inter-dependence between firms, and these alliances are regulated by association agreements so as to face up to competitors' resources. In the

most complex alliance processes, these are regulated through relational and binding contracts involving the transfer of resources (Grandori & Soda, 1995).

The choice of a partner in an alliance depends on the position of the resources in the market, and for that reason, it is important to analyse the environment. If the resources are abundant and their supply is stable, resource dependence is not a problem. However, if resources are scarce, firms need to develop strategies in order to diminish resource dependence and control the environment (Zinn et al., 1997). Reduced resource dependence can be achieved by forming alliances and other forms of collaboration. It is from the environment that scarce resources are obtained and opportunities identified. These resources are obtained through interfirm relationships. Some resources can be developed inside the organisation, but most of them are obtained by sharing when alliances are developed with other firms (Holmlund & Tornroos, 1997).

According to Sachwald (1998), forms of cooperation have been widely put into practice in order to lower entry or mobility barriers. With these cooperative agreements, the goal is to gain entry to markets at a low cost, in relation to the necessary resources. That is why Oliver (1997) and Sachwald (1998) consider the phenomenon of business cooperation as one of the main methods for firms to reach resources, competences and capacities that are not available in competitive markets, and also intangible resources (reputation, for example). The value or usefulness of a resource depends on its combination with other resources, as resources in isolation have no value. When resource availability is limited, the formation of alliances can be a strategy that is preferred over other organisational forms (Sachwald, 1998). Nevertheless, in some cases, business alliances do not bring benefits as the advantages brought to the firm are not as great as the costs involved. Resource dependence can be a question of technology, lack of raw material, access to new markets and new competences (Sachwald, 1998).

Grant (1991) considers differences between resources and competences. Resources are production method inputs, and so these methods need coordination between resources. Competences are described as the capacities of a set of resources to carry out a task or activity. This author also underlines that resources are the source of capacity, and competences are the source of competitive advantage. So the essential element between a firm's resources and competences is the capacity to achieve coordination in work teams. Sachwald (1998) also distinguish a firm's resources from its competences. These authors state that in a firm there may be resources, which are coded knowledge, or competences which are tacit knowledge. As resources are explicit they have a market value, and are easy to control and transmit, but competences are non-expressed (invisible) resources, they cannot be compared and so do not have market value. According to Pucik (1988), competences are tacit knowledge obtained over time, being constructed progressively by firms themselves.

Despite the contribution of Resource Dependence Theory, several criticisms of this approach have been expressed in organisational studies. The lack of empirical studies allowing analysis of the combination of resources is one of the criticisms made by Peteraf (1993). Collis (1991) also points out as a criticism the absence of applicability of the theoretical studies made of Resource Dependence Theory in the field of cooperative strategies. The same author emphasises that practical studies are only applied to multinational firms and

not to small and medium-sized ones. Grant (1991) and Priem and Butler (2001) also criticise this approach for the non-existence of integration of theoretical foundation, and for the limited effort in developing practical implications of this theory.

3. Interfirm alliances

3.1 Characteristics of interfirm alliances

Alliances are a phenomenon that firms have adopted to promote technological modernisation, through shared investment, in the search for competitiveness. However, certain doubts often still remain regarding the concept of interfirm alliances, despite their application being increasingly common. Some definitions of this concept are therefore discussed.

According to Badaracco (1991), alliances are organisational arrangements and operational policies through which individual firms share an administrative domain and form social relationships. Dussauge and Garrette (1999) underline that alliances are formed by relationships between independent firms that choose to act together in carrying out projects or activities. For Porter (1998), these cooperation phenomena are presented as organisational methods of economic activity using coordination and/or cooperation between firms.

According to Lewis (1990), alliances are cooperative strategic arrangements that allow cooperation between firms, aiming to satisfy common needs with the advantage of sharing risks. Wheelen and Hunger (2000) understand alliances as partnerships between two or more firms or business units, with the intention of reaching mutual objectives. Aaker (2000) adds that alliances reinforce the parties involved until the initially established goals are achieved. For this to happen, cooperating firms must adapt their assets or competences so as to face up to attacks from competitors.

All alliances are motivated by the need for partners' resources, in areas where own resources are more critical (Wilson & Hynes, 2008). In essence, these relationships allow partner firms to combine resources creatively in establishing sets of competitive advantage (Teng & Das, 2008). In these alliances, the intention is to stimulate the specialised competences of each firm so that they can join resources, allowing the creation of greater market strength (Bucklin & Sengupta, 1993). Alliances between firms include the sharing of resources with a view to the allies' general objective and the individual objectives of partner firms. The fundamental reason for forming an alliance between firms is the sharing of material and non-material resources to give firms a stronger competitive position (Chathoth, 2003). The resources obtained through alliances can include location, brand name and client base (Preble, 2000), for example.

Firm alliances arise from partnerships between firms which, using their own individual capacities, are unable to create one or more specialised resource internally or acquire it through the market. Therefore, an alliance becomes the vehicle through which partner firms have access to specialised means (Chathoth, 2003). In particular SMEs feel the lack of sufficient resources to develop marketing activities and penetrate the market. So with partners, a great variety of needs are met (Pansiri, 2008).

Alliances are forms of voluntary cooperation involving the share of information, mutual learning and exchange between members, as well as social control (Johannisson et al., 2002).

Alliances are considered as a complementary system which facilitates firms' innovative activity. These partnerships are a source of external knowledge, and so a firm's competitive advantage depends on its position in the relationship (Lechner et al., 2006). Alliances are one of the most powerful assets a firm can possess, as they give access to power, information, knowledge and capital (Hulsink & Elfring, 2003).

The majority of firms do not have the financial resources to allow expansion. Therefore, an alliance becomes fundamental, since the costs of obtaining a partner are less than those of firm expansion outside (Wilson & Hynes, 2008). One of the main advantages of this type of relationship is risk sharing. These alliances are advantageous for firms in the sharing of resources and risks, which is especially important as the uncertainty of their results increases (Chathoth, 2003).

Following these various investigations in the field of alliances, the conclusion is that when this type of business relationship is formed, higher rates of productivity, efficiency and effectiveness are reached. In order to overcome limitations that usually affect SMEs in the business process, whether through lack of resources (human and financial) or experience, this type of firm has increasingly adopted cooperation strategies in order to strengthen resources and capacities. Cooperative actions are a way for firms to organise themselves to compete at a local, regional and global level. However, these strategic alliances imply the loss of autonomy, as they require the mutual collaboration of partners.

3.2 Reasons for interfirm alliances formation

The motives leading firms to form alliances with others have been the subject of various investigations. The reasons stimulating alliance formation can be diverse, such as: improved competitiveness, risk reduction, the search for scale economies, access to technology, market exploration, the need to develop, response to government threats or pressure, among others. Bamford et al. (2003) restructure the motives for developing strategic alliances according to the following topics: possibility to create new business; easy access to the partner's capacities when resources are scarce or when risks are high; cost reduction; creation of scale economies; overlapping business; improvement of supplier efficiency through establishing optimal relationships; increased innovation and quality; and value creation.

For Lewis (1990), the inter-dependence of firms created by the shortage or absence of resources is a condition for alliance formation. Aaker (2000) also argues that strategic alliances serve as an instrument compensating for the lack of competences and resources. Alliances form a bridge between firms and the competences each party possesses, more efficiently and quickly (Hamel et al., 1989). This exchange of competences and resources allows firms to remain competitive in the market.

According to Neto (2000), the main reasons motivating alliance formation are: (a) to combine competences and use other firms' know-how; (b) divide the burden in carrying out technological research; (c) share the risks and costs of new opportunities; (d) offer an improved and more diversified range of products; (e) exert more pressure on the market; (f) share underused resources; (g) strengthen buying power with suppliers and consumer sales; and (h) strengthen firms so as to operate in international markets.

The study by Rossi et al. (2009) identified three base-lines supporting justification of alliance formation, only two of which are relevant for this investigation. One of the basic ideas is related to the need to access resources which are absent or in short supply and which can be supplied by the partners in the alliance. The other base-line is centred on the combination of resources in order to gain competitive advantages.

Studying Rossi et al. (2009) in more detail, the first base-line justifying alliance formation sets out from the assumption that the firm is not self-sufficient in relation to the resources it needs. This is the motive for forming an alliance, in order to satisfy the shortage or lack of resources. This approach to sustaining alliances is supported by Resource Dependence Theory, stating that firms are engaged in a constant struggle to obtain the resources they need and control that dependence.

The second approach of Rossi et al. (2009) supporting the development of alliances identifies that the combination of resources between the firms involved in these relationships allows them to achieve results which would not be possible if acting in isolation. This combination of resources is seen as a source of competitive advantage, this idea being supported by Resource-based Theory. As already exposed, this theory argues that alliances are instruments for combining resources among various firms, with the aim of obtaining new business opportunities.

The following Table 1 presents the various motives gathered from analysis of the literature review.

Reason	**Author(s)**
Complementary Technology	Mariti & Smiley (1983)
Transfer of Technology, Information and Capacities	Bamford et al. (2003); Harrigan (1985); Mariti & Smiley (1983)
Marketing Agreements	Mariti & Smiley (1983)
Scale Economies	Bamford et al. (2003); Contractor & Lorange (1988); Harrigan (1985); Mariti & Smiley (1983); Mason (1993)
Risk-sharing	Bamford et al. (2003); Contractor & Lorange (1988); Harrigan (1985); Mariti & Smiley (1983); Neto (2000)
Diminishing Instability/Uncertainty	Harrigan (1985)
Achieving a New Positioning	Harrigan (1985)
Exploitation of Synergies	Harrigan (1985)
Diversity and Evolution in sector of operation	Harrigan (1985)
Surmount Barriers	Contractor & Lorange (1988); Harrigan (1985)
Creation of New Business	Bamford et al. (2003)
Cost Reduction	Bamford et al. (2003); Harrigan (1985); Neto (2000)
Increased Innovation and Quality	Bamford et al. (2003); Mason (1993)
Exchange of Resources and Capacities	Aaker (2000); Contractor & Lorange (1988); Hamel et al. (1989); Harrigan (1985); Lewis (1990); Neto (2000)
Control of Markets	Neto (2000)
Reduction and Rationalisation of R&D Expenditure	Neto (2000)
Profit Generation	Bamford et al. (2003)
Product Differentiation	Grant (2002); Neto (2000)

Table 1. Reasons for Interfirm Alliance Formation

4. Resources, capacities and competences

Considerable irony exists around the process of alliance formation, as firms must possess some resources to be able to capture more resources (Eisenhardt & Schoonhoven, 1996; Saad et al., 2005). Indeed, according to Penrose (1959), firms tend to possess resources so as to increase their use, for example, technology, the firm's reputation, brand image and knowledge of marketing. In these circumstances, Das & Teng (2000) suggest there are two distinct motives for establishing strategic alliances: one of them involves the need to obtain new resources and the other consists of developing own resources by combining them with those of other firms.

A literature review suggests that firms' resources can be tangible (physical and financial) and intangible (based on knowledge). According to resource-based theory, intangible resources are more specific than tangible ones (Lorente, 2001). Intangible resources determine the method of growth, and as they are specific for the purpose for which they were created, they are difficult to codify and therefore protect against imitations or copies (Nonaka, 1994; Hill & Kim, 1988).

More concretely, the classification by Miller and Shamsie (1996), used later by Das and Teng (2000), distinguishes between property-based resources (physical and financial resources) and knowledge-based resources (intangible resources and skills). In fact, a firm is made up of resources and capacities that are managed differently from one firm to another (Nunamaker et al., 2002; Penrose, 1959). Following Penrose (1959), Hofer and Schendel (1978) also proposed six categories of resources: (a) financial resources; (b) technological resources; (c) physical resources; (d) human resources; (e) organisational resources; (f) reputational resources. Other classifications are referred to by other researchers (Grant, 1991; Peteraf, 1993; Wernerfelt, 1984), however, they concern the same type of resources.

Amit and Schoemaker (1993) consider resources as a set of specific factors held and controlled by the firm, and subsequently converted into products or services through technological mechanisms, information management systems, systems of incentive and trust between the different social partners. Those resources consist of: commercial know-how (patents and licences); financial or physical assets (buildings, premises and equipment) and human resources.

Barney (1995) classifies resources into: human resources – experience, knowledge, value judgments, risk tendency and individual wisdom associated with the firm; physical resources – machinery, equipment and premises; financial resources – debts, profits and shares; and organisational resources – history, relationships, trust, organisational culture (attributes of groups of individuals linked to the firm), formal and informal communication, control systems and reward policies, adding that these must be: valuable; rare; unable to be perfectly imitated and irreplaceable.

Other investigators such as Barney (1991) and Froehle and Roth (2007) refer to organisational resources. These authors argue that this type includes a firm´s formal reporting structure, its formal and informal planning, controlling and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its

environment. Froehle and Roth (2007) state that organisational resources also comprise the development championing, employee motivation, internal communication, lines of responsibility, managerial support, social networks, reward structure and development of team diversity. These resources reflecting the total sum of managerial decisions and activities are predominantly tacit and difficult to transfer across firms, and hence of questionable value in acquisitions.

The skills developed by the firm are also a crucial determinant for its development and growth. According to Penrose (1959,) managers' experience allows development of internal knowledge, skills and competences. This means that the experiences in earlier entrepreneurial activities and the management and negotiation of alliances in the past may impact on knowledge and future decision taking (Eden & Ackermann 2001; Hasty et al. 2006).These specific capacities mostly include tacit elements. Taking into account the various types of firm resources and capacities, Table 2 presents a typology which serves as the basis for this research.

Resources and Capacities		**Description**	**Author(s)**
Tangible Resources	Physical Financial	- Only affect choice of the type of diversity	Chatterjee & Singh (1999)
Intangible Resources	Technological	- Difficult to protect against copy or imitation	Hill & Kim (1988)
	Commercial	- More specific than tangible resources, for the context in which they were created - Difficult to codify or make explicit - Determine the choice of method of firm growth	Montoro-Sánchez et al. (2009); Nonaka (1994)
	Organisational	- Resources that include a firm's structure, formal reports, formal and informal planning, system control and coordination, as well as informal relations between groups within a firm and between a firm and those operating in its environment	Froehle & Roth (2007)
Specific Capacities	Prior alliances experiences	- Experience allows development of internal and tacit knowledge of resources, competences, operation and standard organisational procedures	Penrose (1959)
	Experience in collaborative entrepreneurship	- The business-person's experience in business activities can have an impact on knowledge and future decision-making	Eden & Ackermann (2001)

Table 2. Typology of Resources and Capacities

To conclude, firm success is connected to the important role of resources, as these are considered strategic for the firm when they are indispensible for the conception and implementation of competitive strategies (Barney, 1995). The challenge for a firm is to

identify and implement strategic assets, i.e., resources that are difficult to imitate, scarce, valuable and irreplaceable, specific resources as differentiating factors that allow it to achieve competitive advantage in terms of production and economic value (Amit & Schoemaker, 1993; Barney, 1995) and greater economic profitability over time (Grant, 1991).

5. Entrepreneurial orientation

According to various authors (e.g. Fillis & McAuley, 2000; Hills, 1994), the concept of entrepreneurship consists of the process through which it is possible to create value by combining different types of resources, so as to exploit a new opportunity such as entry to new external markets. Other researchers such as Styles and Seymour (2006) refer to entrepreneurship as an individual attitude associated with innovation, which creates value and takes on risk. Entrepreneurs are merely actors who have a talent for exploiting opportunities that are not easily identifiable.

In organisations in generally, and in firms in particular, various forms of entrepreneurship can be found. Thereby, the entrepreneurial process is independent of firm size (Antoncic & Hisrich, 2003). Entrepreneurial orientation is the key to understanding whether a firm adopts entrepreneurial actions or not, i.e., it is through the actions of both collaborators and the type of culture established internally in the firm (Covin & Miles, 1999). According to Stevenson and Jarillo (1990), intra-entrepreneurship (entrepreneurial orientation), is a process through which individuals in an organisation follow up opportunities irrespective of the resources they currently control. Brunaker and Kurvinen (2006) relate entrepreneurial orientation to the opportunity for existing organisations to be able to develop the way their business operates.

For Thornberry (2003), entrepreneurial orientation involves the creation of something new which did not exist before, and that can be a new business, product, service, delivery system or a new proposal of value to the consumer. That 'something new' requires additional resources or alterations to the standard strategic positioning of the firm's resources. Learning takes place both in creating 'something new' and in its implementation, which results in the development of new competences and capacities.

Entrepreneurial orientation combines competition inside the organisation with long-term cooperation directed towards winning. Consequently, the development of entrepreneurial orientation can be understood as socially effective and processes supporting all organisational members and their cooperative interaction. Internal entrepreneurial orientation indicates responsibility for all and at the same time allows teams to use their own flexibility and freedom.

For Miller and Friesen (1983), entrepreneurial orientation includes innovation, pro-activeness and accepting risks. In their studies, many researchers follow these authors' basis for investigation, for example, Covin and Slevin (1991), Lumpkin and Dess (1996) and Naman and Slevin (1993). Many consider these three dimensions of entrepreneurship as essential for innovation and new business creation.

Innovation as a dimension of entrepreneurial orientation (Antoncic & Hisrich, 2003; Covin & Slevin, 1991; Guth & Ginsberg, 1990; Kenney & Mujtaba, 2007; Lumpkin & Dess, 1996; Miller

& Friesen, 1983) corresponds to introducing new products and production technologies, and searching for new solutions to marketing and production problems. It is the extent and frequency of product innovation in an organisation and its tendency towards being at the forefront of technology. It is a firm's tendency to initiate and support new ideas, novelty, experimentation and creative processes which can result in new products, services or technological processes.

Also authors such as Miller and Friesen (1983), Covin and Slevin (1991), Lumpkin and Dess (1996), Antoncic and Hisrich (2003) and Kenney and Mujtaba (2007) define pro-activeness as another dimension of entrepreneurial orientation. It is the willingness to differentiate ideas from opportunities through researching and analysing tendencies. This requires the firm to be orientated towards the future. It is the attempt to lead rather than follow the competition, the pioneering nature of the firm's tendency to compete aggressively and pro-actively against industry rivals.

Also the fact of firms taking on risks is considered a dimension of entrepreneurial orientation (Antoncic & Hisrich, 2003; Covin & Slevin, 1991; Kenney & Mujtaba, 2007; Lumpkin & Dess, 1996; Miller & Friesen, 1983). So in a firm with entrepreneurial orientation there is risk-taking in terms of investment decisions and strategic action at stages of uncertainty. There is a clear understanding of the business, financial and professional risks associated with entrepreneurial orientation.

In order to understand the phenomenon of collaborative entrepreneurship, the collective business capacity is another important dimension of entrepreneurial orientation. As Miles et al. (2006) show, in the first phase of collaboration, the concept of collective business capacity emerges. Timmons (1994) considers the value of the team inside the firm to be extremely important in the early stages of new undertakings. The fundamental component of collective business capacity involves the whole team's skill in dealing with opportunities which may arise. Johannisson (2002) highlights that for better understanding of collective entrepreneurial capacity, the whole organisation must be recognised as a collective image.

For Reich (1987) and Tiessen (1997), the idea that entrepreneurial actions are developed individually is set aside, as these authors argue that entrepreneurship involves collective actions. Stewart (1989) defines this attitude and collective spirit when there are entrepreneurial teams and all collaborators are involved. This is why a firm that already has a good internal collective capacity is more able to develop entrepreneurial activities (Miles et al., 2006), and consequently shows a greater capacity to form alliances with other firms (Miles et al., 2005).

Other authors (e.g., Johannisson, 2002, Kenney & Mujtaba, 2007) see entrepreneurial orientation as a collective phenomenon resulting from collective actions where, in a new undertaking, the entrepreneur is never alone. In the understanding of Eisenhardt and Schoonhoven (1996), the collective image is represented by a connection between team members and decision-making by the whole team. In the case of small firms, the business-person's attitude with regard to his collaborators is very relevant, as only he can exert influence by creating the conditions that increase the collective spirit, making the firm more entrepreneurial (Exton, 2008; Lounsbury, 1998). Table 3 summarises the dimensions characterising entrepreneurial orientation formerly discussed.

Dimension	Definition	Author(s)
Innovation	A firm's tendency to initiate and support new ideas, novelty, experimentation and creative processes that can result in new products, services or technological processes.	Antoncic & Hisrich (2003); Covin & Slevin (1991); Guth & Ginsberg (1990); Kenney & Mujtaba (2007); Lumpkin & Dess (1996); Miller & Friesen (1983)
Pro-activeness	Organisational decision-making through anticipation and following up new opportunities and participating in emerging markets.	Antoncic & Hisrich (2003); Covin & Slevin (1991); Kenney & Mujtaba (2007); Lumpkin & Dess (1996); Miller & Friesen (1983)
Acceptance of risks	Risks are accepted in terms of investment decisions and strategic action in face of uncertainty.	Antoncic & Hisrich (2003); Covin & Slevin (1991); Lumpkin & Dess (1996); Miller & Friesen (1983)
Collective business capacity	Involves the whole team's skills in dealing with opportunities which may arise.	Johannisson (2002); Middel (2008); Stewart (1989); Timmons (1994)

Table 3. Classification of the Dimensions of Entrepreneurial Orientation

Authors such as Bragge et al. (2007) argue that for a firm to present continuous innovation, it must establish a combination between, first of all, collective entrepreneurship, and subsequently collaborative entrepreneurship. Therefore, the next section describes the concept of collaborative entrepreneurship, and more precisely, connected to the formation, or not, of interfirm alliances.

6. Alliances as collaborative entrepreneurship

Due to the growing emergence of new challenges and so as to establish an entrepreneurial culture at the heart of firms, the adoption of strategic alliances appears as one possible response to these challenges, through reinforcing resources of a diverse nature. In this context, a growing number of firms depend on alliance formation to access the necessary resources to reach their strategic objectives (Bragge et al., 2007; Urbano & Yordanova, 2008). The investigation carried out shows that alliances are used as a way of filling gaps in firms' resources (Montoro-Sánchez et al., 2009; Zacharakis, 1998).

Alliances emerge as means of accessing new resources, with the purpose of creating or entering new business. To explain this process, this paper turns to resource-based theory and resource dependence theory. These theories see the firm as a set of tangible and intangible resources and capacities (Wernerfelt, 1984), which provide competitive advantage (Das & Teng, 2000).

The decision to form an alliance is a strategy that allows firms to access resources and competences, and consequently that decision can be seen as a form of collaborative

entrepreneurship. The concept of collaboration (alliance formation) is particularly involved with the phenomenon of collaborative entrepreneurship, which results in something new through sharing knowledge, information and other resources. As Yan and Sorenson (2003) state, the collaboration process is one of the dimensions that contributes most to collaborative entrepreneurship.

For Miles et al. (2005), collaborative entrepreneurship involves a set of firms that develop a strategy which allows them continuous innovation through respective collaborative capacities. This collaborative process is developed from alliances between two or more parties, all aiming to achieve beneficial results. In this paper, the focus will be on collaborative entrepreneurship which can be defined as a strategy involving the implementation inside the firm, of knowledge and information coming from outside the firm.

The development of alliances began to be very important in the last decades, as this kind of strategy, when well implemented, allows increased performance and success by the parties involved in reaching their intended goals (Parkhe, 1993). This fact contributed to increased investigation in this area, with studies analysing topics as diverse as investment models, choice of organisational management, network structure and trust-building (Alvarez et al., 2006), among others.

As a means of adapting to a competitive environment, application of strategic alliances has been common practice, taking advantage of firms' underused resources and competences. Therefore, alliances allow integration of fundamental strategic resources and other business, so that increasingly entrepreneurial firms manage to reach their objectives (Alvarez et al., 2006; McEvily & Zaheer, 1999). These firms find it easy to identify and explore opportunities with partners who possess complementary resources and capacities, so having an advantage over those that are not able to do so (Dyer & Singh, 1998; McEvily & Zaheer, 1999). Zacharakis (1998) shows that entrepreneurial firms use strategic alliances as a way of filling gaps in their resources. For these firms to have the capacity to exploit new opportunities, they need to obtain resources beyond those they already possess, and control them, and for that reason they are often subject to greater risk (Teng, 2007).

As already mentioned, some investigators (e.g., Das & Teng, 2000) apply resource-based theory to the development of strategic alliances in order to obtain desired resources. This is also underlined by other authors (Ahuja, 2000; Eisenhardt & Schoonhoven, 1996) who state that the absence of strategic resources stimulates development of business cooperation processes. Behind alliances there is the objective of attaining or sharing valuable resources when these cannot be obtained through market exchanges or through fusions or acquisitions. Strategic alliances emerge when firms in vulnerable strategic positions need new resources, or when strong, very well-positioned firms capitalise on their resources to create opportunities for cooperation (Montoro-Sánchez et al., 2009).

Other researchers (Eden & Ackermann, 2001; Hasty et al., 2006) give great relevance to business-people's experience in entrepreneurial activities, and also in establishing strategic alliances, as these aspects can be decisive in decision-making. Firms that show entrepreneurial behaviour have greater profitability and growth than those that do not adopt entrepreneurial systems (Antoncic, 2007). For this scenario to be true, it is

fundamental that managers and all collaborators in a firm modify their attitudes and adopt the characteristics of collaborative entrepreneurship (Wunderer, 2001). However, it is not necessary for all collaborators to have entrepreneurial competences. It is just essential that those individuals are detected so that they can be well orientated, as stated by Kenney and Mujtaba (2007).

As to the definition of collaborative entrepreneurship, there is still no consensus. However, for the purpose of this investigation, Pinchot's definition, quoted by Thornberry (2003),will be adopted, stating that collaborative entrepreneurship aims to implement in the firm entrepreneurial behaviour coming from outside and introduce new habits within the organisation. Collaborative entrepreneurial phenomena are found in the creation of new business within the organisation, accompanied by internal innovative activities and initiatives by internal entrepreneurs (intra-entrepreneurs) in the organisation, or they can also occur through strategic changes (Guth & Ginsberg, 1990). This process allows increased business performance, since new knowledge is received, new competences are created or existing ones are reactivated (Hamel et al., 1989).

Constant innovation within organisations can be achieved with the collaboration of all actors, leading to the conclusion that the team concept is important in processes of innovation and entrepreneurship (Jassawalla & Sashittall, 1999; Stewart, 1989). Collaborative entrepreneurship is present when a firm's collaborators embrace opportunities without there being a relationship with frequently used resources (Stevenson & Jarillo, 1990). This form of entrepreneurship involves increased competences and the respective hypothesis of creating new sets of resources (Burgelman, 1984).

Internal entrepreneurial behaviour is present in the organisation when there is innovation in terms of something which did not exist previously, which may lead to establishing a new business, service or product. During the creation and execution of these new aspects, new capacities and competences emerge. These new acquisitions need extra resources or modifications in the strategic positions of the organisation's resources (Thornberry, 2003). Finally, according to Kuratko and Goldsby (2004), collaborative entrepreneurship is adopted by various firms so as to remain competitive, allowing growth. For this, the firm's objectives must include increased flexibility, innovation, collaborator initiative and risk acceptance. Another justification found by the same authors is based on the fact that this form of entrepreneurship allows firms to overcome barriers which may arise.

7. Concluding remarks and model of analysis

The present conceptual paper is a contribution to the scientific debate about the interface of entrepreneurship and strategic management. According to the objective and theoretical framework developed, Figure 1 outlines a research model, allowing analysis of the effect of both tangible and intangible resources and capacities on the decision to establish strategic alliances as a form of collaborative entrepreneurship.

Of course, the research model is of purely qualitative character. The prescriptive value of the conceptual model lies in supporting entrepreneurs and entrepreneurship scholars to understand the decision to establish interfirm alliances. To date, the several influences on the alliance decision have scarcely been susceptible to scientific scrutiny. Empirical

verification, in particular taking a holistic perspective, is almost absent from the literature. Hence, what remains is the empirical testing of the approach and the investigation of the quantitative impact of defined variables. In terms of guidelines for future research, this topic should be addressed by collecting information for expanding the conceptual model presented here.

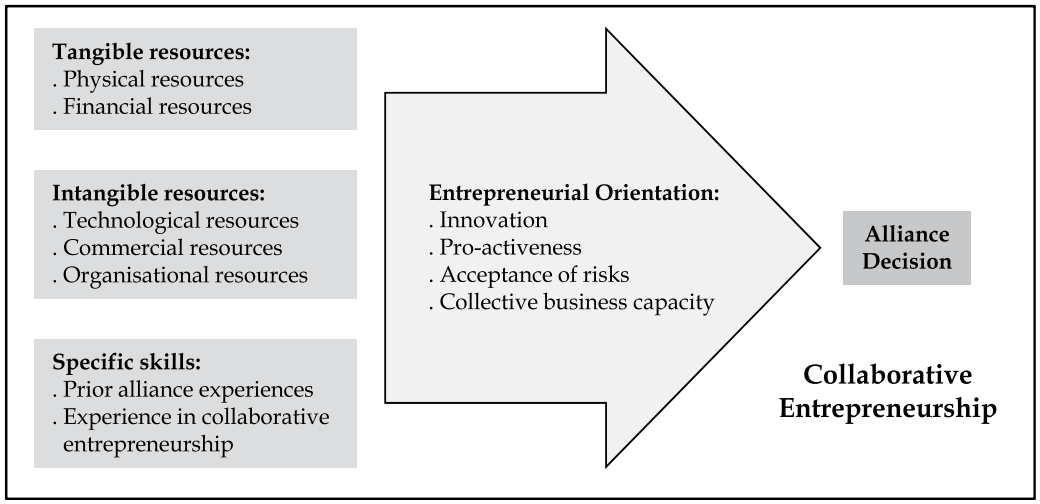

Fig. 1. Proposed Conceptual Model of Analysis

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8

Attractiveness of European Higher Education in Entrepreneurship: A Strategic Marketing Framework

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1. Introduction

Major steps are currently being taken to make Europe an attractive destination for foreign students willing to increase their competencies and skills. They include the creation of a comparable structure of study courses; the mutual recognition of diplomas; the assessment of academic institutions and programs based on common quality standards; the granting of financial incentives for geographical mobility of students and staff; and, more recently, the adoption of a strategic marketing approach. Significant efforts are in fact aimed to create a clear European "identity" in higher education, by improving the availability and accessibility of information on studying in Europe and by enhancing the attractiveness, profile, visibility and image of European higher education worldwide. Coherently with the Lisbon Strategy – whose aim was to make the European Union «the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion» by 2010 – a great emphasis has been given to the promotion of the European Union as an educational destination and a centre of excellence at world level. In particular, within the Erasmus Mundus Programme[1] several projects have been financed with the aim of promoting and rising awareness of the European higher education sector. Furthermore, within the Erasmus Mundus Global Promotion Project (GPP), a European brand – "Study in Europe" – has been built upon perceived strengths and with the aim to overcome negative perceptions; a web portal has

[1] Erasmus Mundus is a cooperation and mobility programme in the field of higher education that aims to enhance the quality of European higher education and to promote dialogue and understanding between people and cultures through cooperation with extra-European countries. In addition, it contributes to the promotion of the European Union as a centre of excellence in learning around the world. The Erasmus Mundus programme provides support to: higher education institutions that wish to implement joint programmes at postgraduate level (Action 1) or to set-up inter-institutional cooperation partnerships between universities from Europe and targeted extra-European countries (Action 2); individual students, researchers and university staff who wish to spend a study/research/teaching period in the context of one of the above mentioned joint programmes or cooperation partnerships (Action 1 and Action 2); any organization active in the field of higher education that wishes to develop projects aimed at enhancing the attractiveness of European higher education worldwide (Action 3).

been developed; many events to promote European higher education have been organised around the world; a media campaign and information materials (brochure, flyer, posters, DVD in seven languages) have been arranged.

Europe aspires to increase its share of the international students market, in which the number of internationally mobile students is predicted to rise to 7.2 million by 2025 (EUA, 2007). The share of such market is, at the moment, quite low for Europe, above all because it is in general too little-known as a study destination among non-European students. Among the different educational fields that are emerging as most attractive to young and talented students, Europe is investing heavily on entrepreneurship. In fact, there is nowadays wide acceptance of the centrality of entrepreneurship education and, thus, there are important efforts to support the development of entrepreneurship education at university level through government initiatives in many countries. This is due to the recognition of the possibility: on one side, to influence students' aspiration towards entrepreneurship through education – and particularly higher education; on the other side, to design policies and programmes in order to raise intentions towards entrepreneurial action and impact upon the conversion of these intentions into action (Clark, 2004; Gibb, 2005; Fayolle 2007; Napolitano and Riviezzo, 2008). Entrepreneurship education aims to promote creativity, innovation, problem-solving and self-employment, developing personal attributes and skills that are at the heart of entrepreneurial mindset. In this way, the benefits of entrepreneurship education are not just about start-ups and job creation but are extended to daily life, as students become more confident in what they do. As noted by Gibb (2005), entrepreneurship, viewed as a way to deal with a rising uncertainty and complexity, has «major implications for the way in which education prepare individuals for a life involving frequent occupational, job and contract status change, global mobility, adaptation to different cultures and greater probability of self employment». This scenario translates into a need to provide individuals with (Gibb, 2005) «personal entrepreneurial capacities but also with the capability to design organisations of all kinds […] in order to support effective entrepreneurial behaviour».

Promoting entrepreneurial spirit is therefore a key for universities, that, over the last decades, have been clearly perceived as more than higher education and research institutions. A third "mission", contributing directly to social and economic development, has been recognised to knowledge-producing organizations. University is nowadays required to operate as «an economic actor on its own right» (Etzkowitz, 1998), through the capitalisation of its knowledge and the encouragement of entrepreneurship. As noted in a recent European Commission Communication (2006) «universities and technical institutes should integrate entrepreneurship as an important part of the curriculum, spread across different subjects, and require or encourage students to take entrepreneurship courses, combining entrepreneurial mindsets and competence with excellence in scientific and technical studies». The need to support the expansion of entrepreneurship education at university level is, in fact, particularly high in Europe, where, as noted in many studies, the entrepreneurial activity is lacking behind when compared with United States or Canada. As a consequence in most European countries today there is a significant policy commitment towards entrepreneurship education. The European Commission itself has taken a number of initiatives in this direction, starting from the Lisbon Strategy in 2000, that emphasised the role of education as a policy instrument for economic growth and helped strengthen a growing recognition within higher-education institutions in

Europe that they can play a central part in promoting entrepreneurial mindsets and actual entrepreneurship; it is also possible to remind the Green Paper "Entrepreneurship in Europe", published in 2003, and its follow-up the "Entrepreneurship Action Plan", published in 2004, that offer a strategic framework for strengthening entrepreneurship education; and, finally, the "Oslo Agenda for Entrepreneurship Education in Europe", published in 2006, that present many proposals, from which stakeholders can pick actions at the appropriate level, and adapt them to the local situation.

As a result of such policy commitment, the diffusion of entrepreneurship education among Europe has been growing fast over the last years (Blais, 1997; Duke, 1996; Gartner and Vesper, 1994; McMullan and Vesper, 1987; Vesper, 1985, 1993; Vesper and Gartner, 1997, 1999; Vesper and McMullan,1988; Klofsten and Jones Evans, 2000; Ranga, et al., 2003; Jacob et al., 2003; Schulte; 2004; Guerrero Cano and Urbano Pulido, 2007; Wilson, 2006; Napolitano and Riviezzo, 2008; Riviezzo and Napolitano, 2010) and entrepreneurship is supposed to become a major academic discipline in Europe (Volkman, 2004). Entrepreneurship, as a relative "recent" and potentially high attractive field of study, could therefore represent a strategic subject to enhance the attractiveness of European higher education, especially towards those students coming from countries where entrepreneurship education is less developed and that could choose Europe instead of other countries with more tradition in such field as, for example, United States or Canada.

Starting from the above considerations, the aim of this chapter is to present and to discuss a strategic marketing framework to improve the European entrepreneurship higher education offer and its share in the international students market. In this direction, a picture of entrepreneurship higher education within Europe is firstly presented; the results of a survey conducted among extra-European countries students to assess their real interest in coming to study entrepreneurship in Europe are then discussed; a strategic marketing framework aiming to match the actual state of the art of entrepreneurship education offer and emerging needs coming from extra-European countries is finally proposed, as consequence of the previous results. Recommendations and implications for strategic marketing planning are therefore provided.

The results discussed in this chapter are a significant part of the research activity carried out within the project "*ENDEAVOUR*: *Entrepreneurial Development as a Vehicle to Promote European Higher Education*", co-financed by the Erasmus Mundus Programme in 2006[2]. The ENDEAVOUR project aimed to increase the interest in the European Union universities as an educational destination of choice, especially for academically talented students interested in studying entrepreneurship. Secondary objective was to increase competitiveness and to promote quality offer of the European entrepreneurship higher education through

[2] The ENDEAVOUR project was selected and financed within the first phase of the Erasmus Mundus Programme (2004-2008), under Action 4 (Enhancing Attractiveness). The new phase of the Erasmus Mundus Programme (2009-2013) (Decision N° 1298/2008/EC) continues and extends the scope of the activities already launched during the first phase. It now includes the Erasmus Mundus External Cooperation Window scheme, which was launched in 2006 as a complement to the original Programme. In addition, the Programme integrates cooperation activities with Industrialized Countries. The new phase of the Erasmus Mundus Programme (2009-2013) consists of three actions instead of the four first planned. The projects aiming at promoting European higher education worldwide are now financed under Action 3.

improved accessibility and structured co-operation between the European and third-country institutions, implemented by means of the creation of a suitable network. The three-years project was leaded by the University of Sannio of Benevento (Italy) and involved 17 partners Institutions – representing 7 different European countries and 6 extra-European countries – with a comprehensive set of competencies, experiences and know-how[3].

2. Objectives and methodology

This chapter aims: *a)* to present a picture of entrepreneurship higher education in Europe; *b)* to analyse needs and intentions of potential target groups (i.e. students from extra-European countries higher education institutions); *c)* to design a suitable marketing strategy to enhance the attractiveness of European education offer in the field of entrepreneurship. To this aims, two different surveys have been managed, with the involvement of all the partners of the ENDEAVOUR project.

On one side, a structured questionnaire has been used to collect information about the presence of entrepreneurship education activities – from the undergraduate to the post-graduate courses – within the universities of all the 27 European Union Member States. This analysis has been conducted according to a "work schedule" attributing each one of the ENDEAVOUR project partners from Europe the responsibility for specific countries. Primary data have been therefore collected through website search and/or telephone/mail interviews using the same questionnaire in each country. In order to make up for some lack of information (especially for some countries), secondary data have been considered as well. Since the overall objective was to gain a realistic overview of the entrepreneurship education offer, we focused our attention only on courses aiming to create and stimulate entrepreneurial mindsets – that's to say «the willingness and capacity to turn ideas into practice, supported by the necessary skills» (European Commission, 2008). Therefore, general economic or business courses that do not include this specific element have not been considered in any country.

On the other side, a structured questionnaire has been used to assess the real interest in pursuing some educational activities, especially related to entrepreneurship, in Europe among students from extra-European institutions. In particular, the same questionnaire has been submitted to a sample of students at higher education level in India, Singapore, China, Russia, Argentina, Brazil, Turkey. Again, this analysis has been conducted according to a "work schedule" attributing each one of the ENDEAVOUR project partners from non-European countries the responsibility for their own country. Primary data have been therefore collected through direct interviews using the same questionnaire in each country.

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[3] The consortium promoting the ENDEAVOUR project was composed by: Università del Sannio di Benevento (Italy), project leader; Tartu Ülikool (Estonia); Universidad de Sevilla (Spain); Université Paris Dauphine (France); National and Kapodistrian University of Athens (Greece); Seconda Università di Napoli (Italy); Università Carlo Cattaneo (Italy); Università di Salerno (Italy); Helsinki Business School (Finland); University of Bedfordshire (UK); Marmara Üniversitesi (Turkey); Petrozavodsk State University (Russia); Lobachevski State University of Nizhni Novgorod (Russia); Universidad de Congreso de Mendoza (Argentina); Facultade de Tecnologia Ciéncia e Educacào (Brasil); Indian Institute of Management Bangalore (India); School of Economics and Management - Tsinghua University (China); Kunming University of Science and Technology (China).

Finally, as a result of the two surveys, a strategic marketing framework has been developed through the definition of products and segments (i.e. "product portfolio" of the European education offer and "emerging segments" in third countries) and the identification of market opportunities in order to define attractive educational products.

In the following sections the results and the implication of the research are discussed.

3. Entrepreneurship education in Europe

As written before, in most European countries today there is a policy commitment to promote entrepreneurship education. However, it has until now been unclear whether this commitment has resulted in making entrepreneurship a widespread subject in higher-education systems, as no clear statistical picture of entrepreneurship in higher-education institutions across European countries existed. Important figures and data have been provided above all by European Commission through specific surveys and especially in recent years (European Commission, 2002, 2006, 2008). The few available studies suggest that entrepreneurship education has seen a dramatic increase in the number of students taking entrepreneurship related courses and this number is expected to continue to grow (Volkman, 2004). As a reaction to the positive social and economic effects of entrepreneurship, in fact, many universities are trying to advance entrepreneurial thinking and behaviour.

Despite these growing numbers, still there is a long way to run. Based on a recent survey (European Commission, 2008), it is in fact estimated that more than half of Europe's students at the higher educational level do not even have access to entrepreneurial education: this means that about 11 million students have no opportunity to engage in in- or extra-curricular activities that can stimulate their entrepreneurial spirit. Furthermore, the same survey shows that in the institutions engaged in entrepreneurial education around half of the students are effectively engaged in some kind of entrepreneurial educational activity. This implies that just «five million of the approximately 21 million students in Europe are currently engaged in entrepreneurship education» (European Commission, 2008).

Coherently with such and previous surveys, our findings show that, even if in all European countries more and more higher education institutions are offering entrepreneurship courses, significant barriers to the widespread diffusion of entrepreneurship education still persist. In particular, even considering the limitations of our findings due to the shortage of data for some countries, it emerge that:

- the diffusion of entrepreneurial education vary significantly from one country to another within Europe;
- entrepreneurship education is significantly concentrated within business and economic schools/faculties;
- undergraduate courses are widely diffused, while the overall offer of Masters and Ph.D. programs so far seems till too tight.

Our survey highlights a significant variation in the diffusion of entrepreneurship education among European countries (Figure 1). In general, students in the Western Europe have better access to entrepreneurial education than students in the countries that have recently

joined the European Union. For example, while in Finland all the higher education institutions and in Spain about 90% of them offer at least one course in entrepreneurship, such percentages descend to 5% in the case of Romania and 2% in the case of Lithuania.

At the same time, European students are more likely to obtain access to entrepreneurial education if they attend either a business school or a multidisciplinary institution with a business school department. For example, in the UK 60% of entrepreneurship courses are taught in business or management schools; in Spain such percentage is 55%; in Italy it is 49%. We know from the literature (e.g. Etzkowitz, 1998; Gibb, 2005) that entrepreneurship should be spread horizontally in the curriculum, across different fields of study. However, our survey indicates that specialised institutions/faculties within the technical area are still lagging behind with reference to entrepreneurship education.

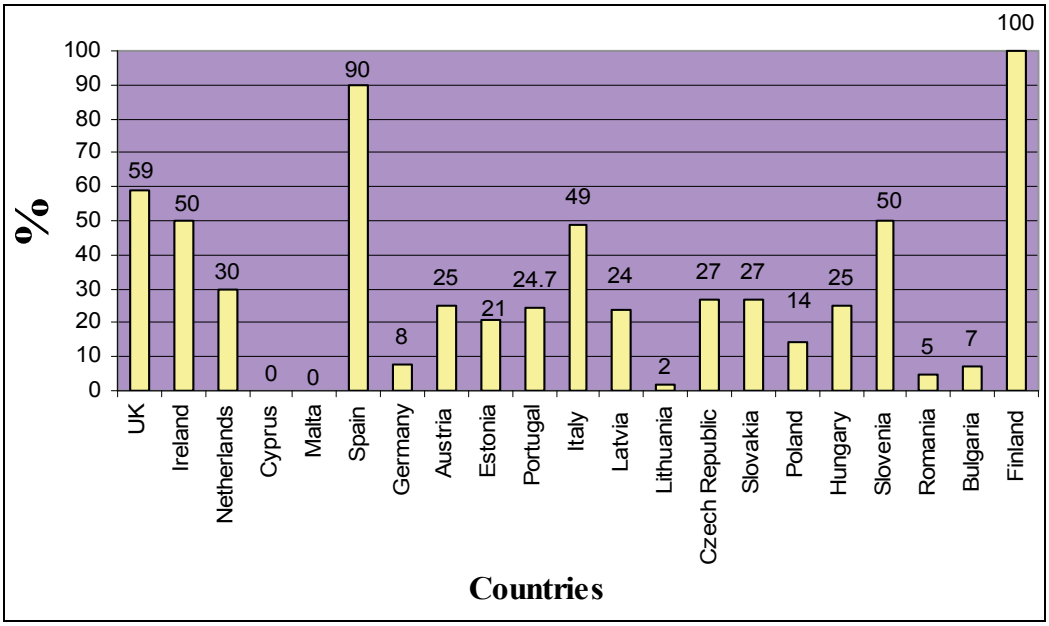

Fig. 1. Percentage of universities offering a course in entrepreneurship in EU

Finally, our survey shows that the extent to which entrepreneurship is being taught in Europe varies. In some institutions it is offered at all levels of study, but the results show that bachelor students have access to a larger number of entrepreneurial courses compared to both master's students and Ph.D. students. Spain, Slovenia and Italy are the countries that provide the wider range of opportunities at undergraduate level (49% and more of universities offer entrepreneurship undergraduate course) (Figure 2).

Slovenia and France with 50% of the universities and then the UK with 37% are the countries with the strongest offer at postgraduate level (Figure 3). Concerning the post graduate offer, it must be noted that the diffusion of Ph.D. programs focused on entrepreneurship is very tight and it is highly concentrated in the UK, in Ireland and in Finland, while, for example, in Italy it has been detached just one Ph.D. program.

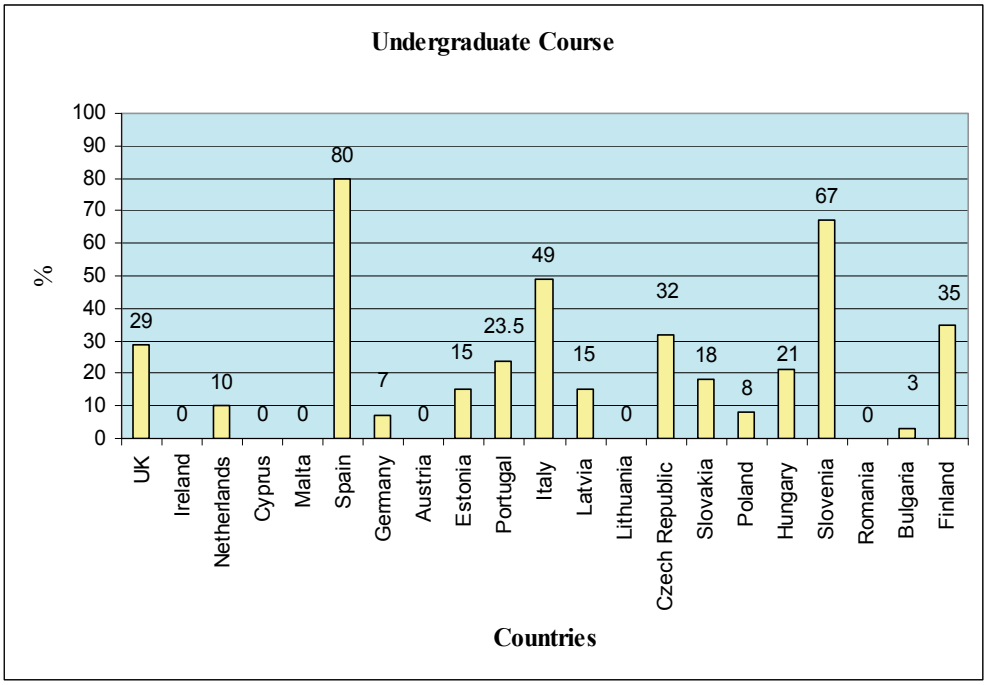

Fig. 2. Percentage of universities offering undergraduate courses in entrepreneurship in EU

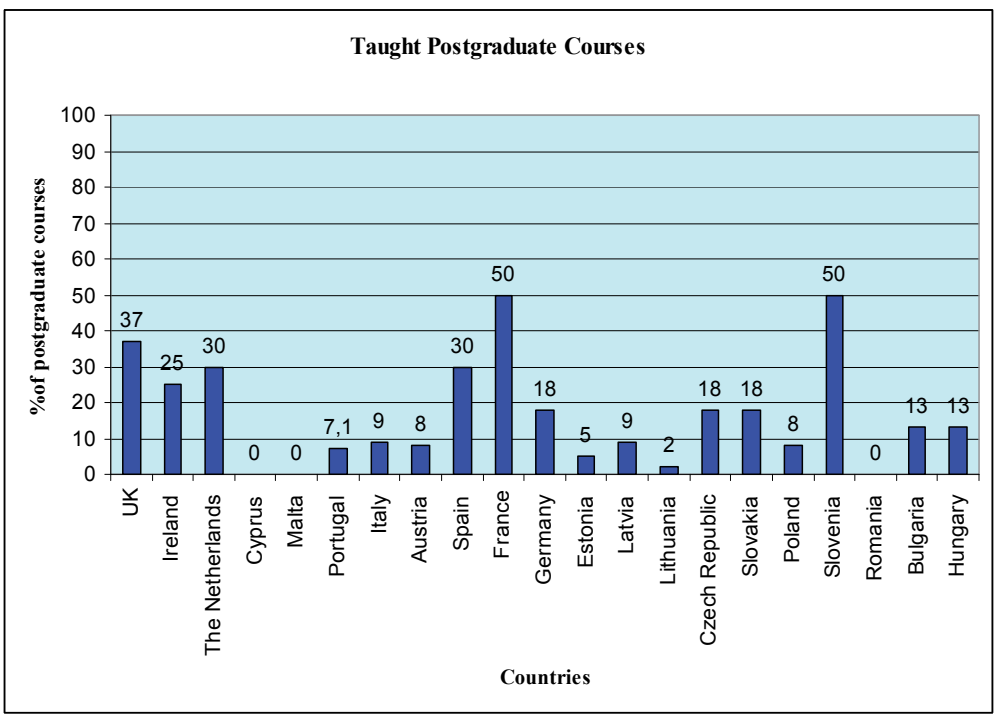

Fig. 3. Percentage of universities offering postgraduate courses in entrepreneurship in EU

However, as noted also in previous studies (European Commission, 2008), courses at Ph.D. level are very important as Ph.D. students in their research activities (particularly in the technical disciplines) can take advantage of an entrepreneurial mindset as well as skills. Furthermore, there are currently too few professors of entrepreneurship (European Commission, 2008), and many of them have not been trained from the start in that field. As a consequence, they may be unaware of the right approach to entrepreneurship teaching. There is a need to graduate enough Ph.D. students in entrepreneurship, to build up teaching resources. Institutions should therefore focus their attention on more than the early study levels in entrepreneurial education.

4. The demand for European entrepreneurship education

In order to analyse the attractiveness of European higher education offer in the field of entrepreneurship and to asses the interest of extra-European countries students to come to study in Europe, a survey has been realized in seven countries: three from Asia, two from South America, one from Eurasia and one from Europe outside the European Union. The sample for the survey, drawn among the students of the partner institutions in the different countries, resulted of approximately 900 students, divided as it follows: India, 126; Singapore, 30; China, 132; Russia, 400; Argentina, 88; Brazil, 60; Turkey, 50.

In general, our findings show that students in third countries are fairly interested in pursuing studies abroad and that European Union is perceived as an attractive destination. Interest in pursuing studies abroad ranged from 61% to 93% (the highest being Singapore, Brazil and Turkey). Regarding the preferred destination for study abroad, there is a clear divide between the Asian countries and the rest – the former (India, China and Singapore) having the highest preference for the United States, and the latter (Russia, Argentina, Brazil and Turkey) for the European Union. It should also be noted that Europe has to compete for students with other English-speaking countries like Canada and Australia, for which also the respondents in various countries have indicated relatively high preferences.

Among the European Union countries, the UK is the most preferred destination for all countries except Russia, where the preference was distributed among France, the UK, Italy, Germany and Spain in that order. One of the unexpected results in this regard was that even for Brazil, where they are more comfortable with other European languages than English, the topmost preference is for the UK, while the students of Argentina preferred Spain and as a second option UK. In general, it might imply that the choice may be more a function of the reputation of the institutions rather than the language used as the medium of instruction. An alternative hypothesis could be that the potential participants see greater benefits in learning English.

As for the programme of study, the maximum preference is for the Masters Programme (except for Brazil where 80% preferred the Degree Programme) and the preferred duration of study abroad is 2 years (except for Argentina where 38% preferred 1 year). It may be noted that the highest preferences for the 2-year duration are shown by the Chinese (82.5%) and the Brazilians (82.3%).

The same concrete interest is shown with reference to the entrepreneurship courses. In particular, even considering the limitations of our findings due to the size of the sample in each country, it emerges that:

- interest in pursuing entrepreneurship courses abroad is fairly high in all the countries, ranging from 64% to 80% (the highest being Turkey, China and Russia);
- as in the case of destination preferences for foreign studies in general, there is a divide between Asia and the rest of countries in terms of their preference for destinations for entrepreneurship studies – India, China and Singapore preferring the United States; and Russia, Argentina, Brazil and Turkey preferring the European Union (Table 1). Again, it emerges the "UK factor" among the European countries as well as the competition from the other English-speaking countries like Canada and Australia.

	India	Singapore	China	Russia	Argentina	Brazil	Turkey
	%	%	%	%	%	%	%
EU	40.47	83.33	42.50	65.00	89.29	41.70	78.00
Other European countries	24.60	53.33		3.00	32.14	40.00	10.00
USA	45.23	86.66	76.60	18.00	71.43	39.40	60.00
Japan	10.31	26.66	8.60	4.00	28.57	<1	10.00
Canada	26.19	46.66	34.60	6.00	58.33	<1	12.00
New Zealand	19.84	20.00	2.80	2.00	52.38	<1	2.00
Australia	30.15	30.00	23.80	2.00	47.62	6.70	12.00
Singapore	23.01	26.66	3.50	0.00	32.14	<1	2.00

Table 1. Preferred destinations for entrepreneurship study abroad

- concerning the reasons for going to study entrepreneurship in Europe, two reasons emerge as most important: 1) the relatively high quality of European entrepreneurship education, for which India, China, Brazil and Turkey have their highest numbers; 2) the possibility of collaborating with European Union companies, for which Singapore, Russia and Argentina have their highest numbers. In addition, there are also fairly high scores for "understanding European traditions in entrepreneurship" and "learning European business practices and business laws" (Table 2).

The overall implication of the commented results is that the respondents desire some "immersion" into European business, not just the participation into an academic programme. The objectives of understanding European business traditions, practices and laws and collaboration with European businesses cannot be achieved unless the participants are also given a chance to work in European firms, at least for a short period.

Other significant results of the surveys show that the major constraints against pursuing studies abroad (in general and particularly in entrepreneurship) are: 1) shortage of funds; 2) lack of proficiency in language; 3) compatibility problems with the home-country's education system. Respondents from Argentina and India have mentioned the additional constraint of Visa problems (46% and 38% respectively). Any attempt to enhance the

attractiveness of European higher education offer should necessarily consider such problems that are perceived as barriers towards international mobility of students.

	India	Singapore	China	Russia	Argentina	Brazil	Turkey
	%	%	%	%	%	%	%
High quality of entrepreneurial education in Europe	35.71	70.00	62.50	65.00	76.19	50.00	50.00
Understanding entrepreneurial tradition in Europe	31.74	73.33	32.60	43.00	67.86	27.30	32.00
Learning European business and business law	31.74	73.33	31.60	50.00	65.48	14.90	34.00
No good offer of entrepreneurial education in your own country	12.69	36.66	12.80	30.00	19.05	48.80	12.00
Possibility of collaboration with European companies	32.53	76.66	25.40	78.00	84.52	16.90	40.00

Table 2. Reasons for taking up entrepreneurship study in Europe

5. The developed strategic marketing framework

A strategic marketing framework is proposed with the main aim of matching the actual state of art of entrepreneurship higher education within Europe and emerging needs coming from extra-European countries. Such framework has been developed through the following steps: 1) Definition of European "product portfolio" of entrepreneurship higher education; 2) Definition of emerging segments in third country demand for European entrepreneurship higher education; 3) Identification of market opportunities in order to develop attractive educational products.

5.1 Definition of European "product portfolio" of entrepreneurship higher education

The European "product portfolio" of entrepreneurship higher education can be defined through the following categories: a) Undergraduate courses; b) Post-Graduate Programs. The Post-Graduate Programs can be in turn split in the following categories: b.1) Master Courses aim to enable students and practitioners to operate effectively at a high level of executive responsibility in creating and managing new businesses; b.2) Ph.D. Programs that provide skills and competencies for academic research in entrepreneurship; b.3) Professional Courses aim to support business start-up and to develop leadership skills.

In Figure 4, the European product portfolio of higher education in entrepreneurship is categorized through a 2x2 portfolio matrix, which classifies each product according to the following criteria:

- *Complexity*: it represent the effort needed to create and manage the product offering and can be categorized as low (course) and high (program);
- *Orientation*: it represent the main focus of content and purposes in the product offering and can be defined as research-oriented and practice-oriented.

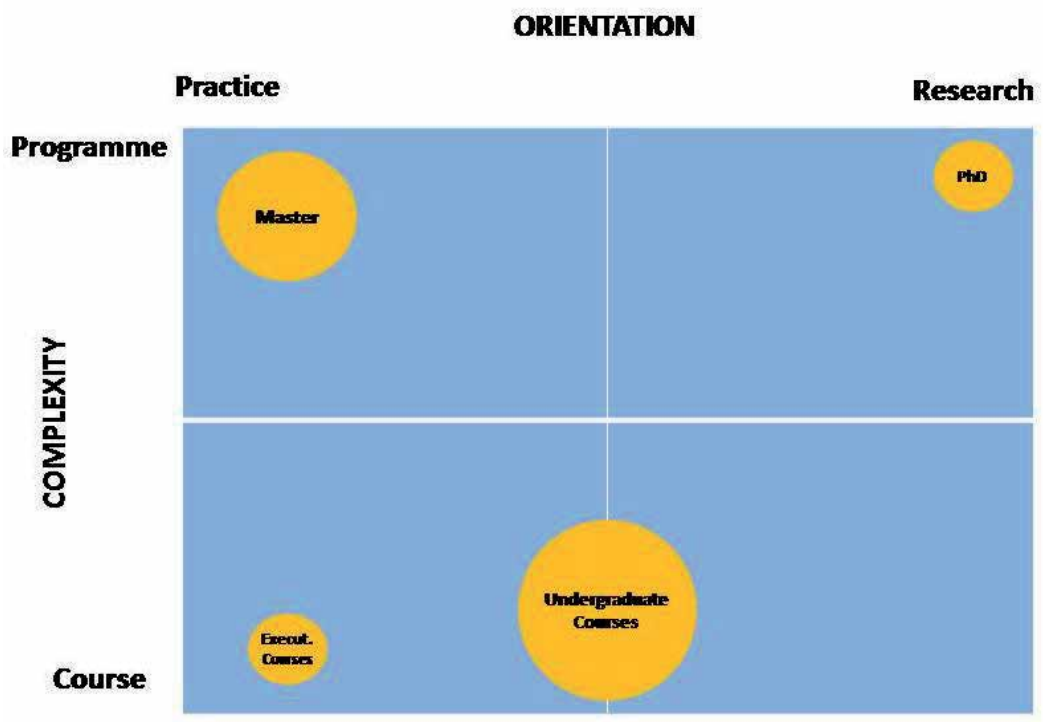

Fig. 4. The European "product portfolio" of higher education in entrepreneurship

Figure 4 shows the actual portfolio of European higher education offering in entrepreneurship; the size of the circle in each cell of the matrix represent the size and strength of the offering for each product category. According to results, European offering seems to be well positioned mostly on practice-oriented programs (Master, Executive education), while research-oriented initiatives (Ph.D.) still need more effort and investments for growth.

5.2 Definition of emerging segments in third countries demand

The analysis of target group needs and potential interests toward European entrepreneurship education put in evidence that it is possible to detect specific needs and attitudes among the different countries involved in the survey, as well as common patterns in them. As consequence, a marketing strategy designed to support innovative educational

planning and promote the actual opportunities offered by European academic institutions must use segmentation procedures in order to meet emerging needs and allocate resources more efficiently.

Arising from results of the survey, different groups of prospective students from third countries are identified according to the following segmentation variables:

- *Orientation:* this variable involves segmenting third countries students by orientation toward the entrepreneurship education (research vs. practice);
- *Geography:* this variable involves segmenting students by their area of origin.

Figure 5 shows the segmentation map; colors express the size of each segment and thus its relevance for the development of higher education programs in entrepreneurship.

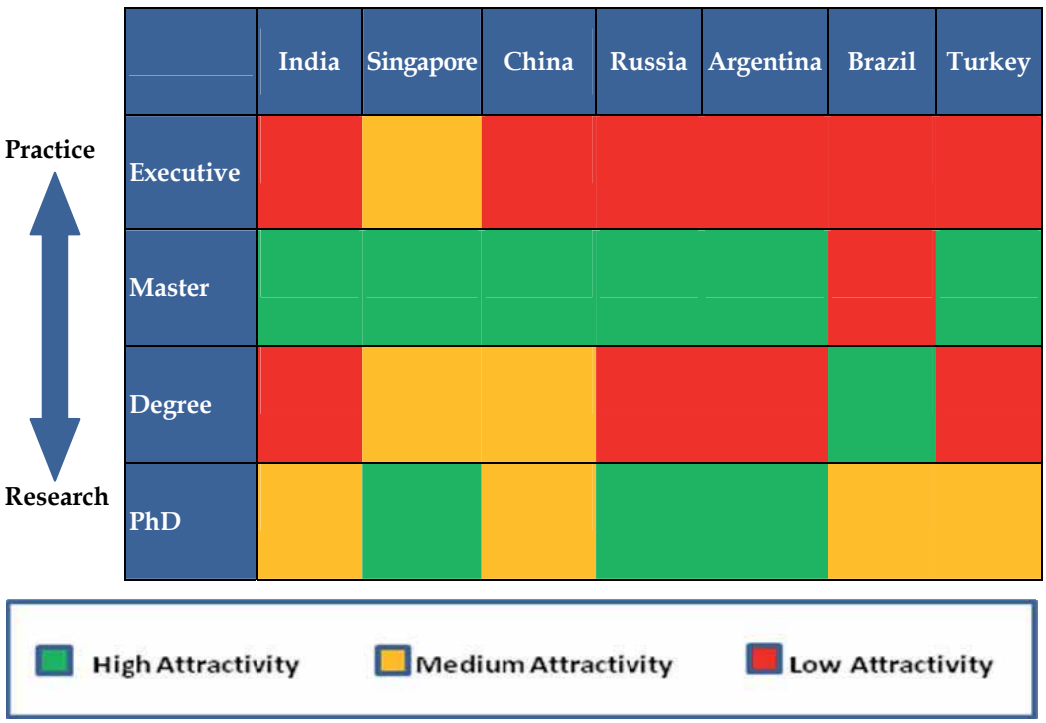

Fig. 5. Size and relevance of Third Countries student segments for entrepreneurship offering

According to Figure 5, practice-oriented students (especially for Master programs) emerge as the most substantial and attractive segment for higher education offering across all the countries investigated. As well, students interested in pursuing studies at doctorate level emerge as a high-potential segment for the development of high quality educational programs in entrepreneurship.

As reported in the analysis of target group needs it is possible to identify common patterns across all the segments: in particular, the need of financial resources, the proficiency in English and the favorable perceived image of European institutions emerge as significant inputs for a successful marketing strategy.

5.3 Identification of market opportunities

In order to allocate resources with efficiency across all the products offered, educational institutions must identify and evaluate market opportunities and analyze their own resources and competencies. An helpful tool aiming to support the identification and selection of marketing strategies is the "Market Attractiveness/Organization Strength Matrix". In such matrix, each product of the organization's portfolio is allocated on the basis of how attractive the actual/prospective market is and how well the organization is positioned to take advantage. The grid is divided into four quadrant summarized as the following:

- high strengths in high attractive markets represent opportunities for gaining or maintaining a competitive advantage ("*Keep up the good work*" quadrant);
- low strengths in high attractive markets indicate high priority in intervention for product improvement ("*Improve the product*" quadrant);
- relevant skills in slightly attractive markets suggest that it may be convenient to invest in market development ("*Develop the market*" quadrant);
- finally, low organization strengths in slightly attractive markets indicate the needs to select initiatives in order to better allocate resources ("*Select*" quadrant).

Figure 6 presents a market attractiveness/organization strength matrix for European offer of higher education in entrepreneurship.

Fig. 6. The market attractiveness/organization strength matrix for European higher education in entrepreneurship

According to results reported in the matrix, there are no products that completely fall in the "Keep up the good work quadrant"; both Masters and Ph.D. are located in the area of product improvement, while undergraduate and executive courses are located in the "Develop the Market" and "Select" quadrant. As consequence, in order to properly allocate resources within the actual "product portfolio" and achieve the goal of increasing its share of the international students market, European Union can explore the following options:

- *Product development*: primary attention should be devoted to the improvement of both Master and Ph.D. offering, as they both fall in the high attractiveness quadrant. However, the different consistency of the actual offering (represented by the different size of the circles) underlines the need to develop different strategies for them. As regard to Masters, results of our survey emphasize that a fair number of academic programs are already offered by European universities and departments; as a consequence, European Union could allocate resources mostly in the direction of the improvement of collaboration and integration among existing experiences and competencies, in order to increase the overall quality and attractiveness of product offering and create significant opportunities for knowledge sharing. On the contrary, results from the analysis of the state of art of Ph.D. initiatives show that the number of programs offered by European university is still too tight: thus, priority in resource allocation should be devoted to the creation of new and high quality programs, both by leveraging the skills and competencies of existing institutions and by supporting the creation of new departments and research centers devoted to the analysis and research in entrepreneurship.
- *Market Development***:** it aims to attract new customers and to stimulate market growth. Such strategy could be of interest for undergraduate courses. As the actual offering of European university is already consistent and quickly growing, the main priority for European Union should be in the direction to increase promotion in order create knowledge and attract new consumers to existing products.
- *Selection***:** it involves to devote less attention in the short term and to select a limited number of products. Such strategy could be of interest for executive education, as both the actual offer and the market potential seems to be still slight; as consequence resource in the next future could be allocated in a selective way.

These results provide significant support for the strategic and marketing planning of higher education initiatives in entrepreneurship.

6. Conclusion and marketing implications

This chapter seeks to provide practical support for the strategic and marketing planning of European higher education initiatives in entrepreneurship. Results from the analysis of European offer and third countries demand put in evidence the existence of significant market opportunities. Actual offering of European institutions is positioned mostly on practice-oriented programs (Master, Executive education) and in such sense it seems able to detect needs and preferences of prospective students from third countries. However, in order to boost its potential, the main priority for European Union should be to allocate resources in the direction of improving the "product strategy" through the integration of existing competencies and experiences and the support to the creation of new and high

quality research programs. Moreover, in order to increase the interest of students from third countries, "pricing" plays a significant role: as the need of financial resources emerges as the major constraint for pursuing studies abroad, European Union should create and promote significant opportunities for scholarship and grants – as it is already doing within the Erasmus Mundus Programme. As regard to "promotion", the main direction of resource allocation should be increasing awareness and developing interest in European educational offering. Given the wide range of countries involved in such activity, public relation (i.e. participation in international fairs and events), web-marketing as well as publicity seems the most appropriate instruments for integrated marketing communication. Finally, a unique "distribution" strategy should be developed in order to facilitate the application procedure by international students. A potential high-value solution could be the creation of a prospective-student web-portal with a standard and centralized application procedure, strengthening efforts recently undertaken by the European Union within the Erasmus Mundus Global Promotion Project.

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9

From Traditional Service to E-Service Market Change in Poland During Transformation 1989-2010

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1. Introduction

It has been thirty years of transition in Poland, the transition from the idea of real socialism[1] to democracy and from centrally planned economy to a free market. Today's transformations continue to run in the atmosphere of a global economic crisis, which has been the largest for the last seventy years. Poland is one of the few countries which have not suffered its strong effects, though has been incorporated into a global crisis through participation in a global economic exchange. This is one of the effects of the implementation of the principles of democracy and free market economy.

An analysis of the contemporary social changes includes identification of the phenomena and processes associated with the operation of the third economic sector, namely services. The starting point for our considerations is the concept of the three sectors of the economy developed in the thirties of the twentieth century by Colin Clark Grant and Allan G.B. Fisher. In this paper we are trying to show the evolution of societies from traditional to modern ones and metamorphosis of their economies. Our empirical reference system are transformations of the service sector in Poland, while referring to certain aspects of the transformation of the third sector of the economy in the megastructural context. Contemporary Poland has been in the transition phase from the dominance of agriculture and extractive industries to expansion of the sphere of services, both traditional and modern ones, including E-service. This process has been accompanied by transformation of farmers, and especially working class into the class providing services, which we call the new middle class. These are people of high civilizational competence, creative, flexible and professional.

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[1] Real socialism, also associated with the term communism, is the name of a political and economic system in Poland in 1944 - 1990. The starting date is connected with domination of the USSR after the Second World War, a country that established its sphere of influence in Middle-East Europe. Poland was one of the countries in that sphere. The closing date is the year of first democratic elections, after which Lech Wałęsa became the president of Poland. Real socialism was characterised not only by political domination of the USSR in the region, but also limited civil liberties, central government held by a single party – the Communist Party, and central economic planning.

The key elements of Polish economic transformation have been the dynamics of the economic crisis in some countries of the European Union and the United States or Japan, and changes within the state, including those related to political dominance in the sphere of power. An important problem still remains the situation in the oil-rich Arab countries, especially in Libya. The increase in fuel prices triggers the rise in prices of almost all goods and services. And consequently Poland is being influenced by all these trends.

The process of transformation in Poland is still continuing, and Polish people associate with this process two main groups of issues. Firstly, the profits resulting from the marketization of the economy: improving the supply of shops, a general rise in living standards, the introduction of a free market. Secondly, the benefits coming from possession of certain freedoms: freedom to travel, freedom – in general, civil liberties and freedom of speech as well as political freedom. Polish people appreciate, above all, economic freedom, free market, restoration of private property, implementation of capitalism, privatization, the opportunity to develop their own businesses. The issues of freedom and marketization of Polish economy still seem to prevail in the evaluation of Polish transformation.

The main aim of this paper is an attempt to analyse Polish transformation in terms of economy, through an initial presentation of the identification of the phenomena and processes associated with the operation of the third economic sector, namely services. Reaching by the state the advantage of services especially modern ones, over other sectors, means reaching maturity in terms of economic development. We are going to connect the expanding sphere of services in Poland with the principles of a free market but also with Poland's place and its role in the creation of a network of contemporary connections between global centres of innovation. We are also going to show both Poland's informatization level as well as associated with it the level of development of the sector of modern services.

2. The sector of services: Metamorphoses

Since the mid-nineteenth century, when Auguste Comte defined the object of sociological research, some attempts have been made to understand the fundamental transformation of society from traditional to modern one and related processes of urbanization, industrialization and the spread of capitalism. Thus, among others, Claude Henri de Saint-Simon and Auguste Comte developed the idea called the law of three stages, which states how society (civilization) develops. According to this law, human beings develop through the theological stage, the metaphysical stage and the positive stage[2]. But it was primarily in the early twenty-first century when people felt a strong need to understand social changes taking place because never before in human history changes had occurred as rapidly as today, and had not covered all spheres of life, such as: art, science, religion, morality, education, politics, economics and family life[3].

[2] A. Comte, *Rozprawa o duchu filozofii pozytywnej,* [The Course in Positive Philosophy] tłum. J.K., Wydawnictwo ANTYK: Kęty 2001; C.H. de Saint-Simone, *O systemie industrialnym* [w] *Pisma wybrane,* tłum. Stanisław Antoszczyk, t.2, Książka i Wiedza: Warszawa 1968

[3] P. Sztompka, *Socjologia zmian społecznych.* [Sociology of social changes] Wydawnictwo Znak: Kraków 2005, s. 13

The scheme of imperative stages of social development, namely the traditional society (preindustrial), modern (industrial) and postmodern (post-industrial), and today also the information society (postmodern) was determined by reference to the level of economic development[4]. One of the earliest models of development was formed by identifying the third sector of the economy – the sector of services, and distinguishing it from agriculture and industry. Previously it was thought that industry and services were interdependent. Already mentioned Colin Clark Grant, together with Allan G.B. Fisher were the authors of the model of economic development which took into account the three sectors of the economy. Clark-Fisher's model refers to three stages of development:

1. Domination of agricultural production, fisheries, forestry and mining of natural resources - at this stage there are low-income countries.
2. Production concentrated in industry and construction - at this stage there are countries with an average income.
3. Domination of services (including education), and this stage includes high-income countries. The advantage of the third sector means reaching maturity by the country in terms of economic development[5]. Taking into consideration the abovementioned model we can distinguish three key sectors in economic development: agriculture and extractive industries (sector I), processing industry (sector II) and services (sector III). Each of them dominates at different times of development of specific societies.

In a traditional society whose economy was based on farm work, dominated labour-intensive technology, and manwork was directed mainly at harnessing mother nature. In modern society dominated manufacturing, capital-intensive technology and human competition with machines. Postmodern society relied on information, processing, technology and competition between people. One of the features of postmodern society became domination of services. However, these are the highly qualified services. The very understanding of the concept of 'service' is not unambiguous. American sociologist Daniel Bell wrote: "the word 'services' automatically can be associated with low-paid work in fast food restaurants, but this is misleading. By the idea of main sectors of service we mean banking services, designing, professional services, and existential (health, education, social services), and only at the very bottom of this list can be found services addressed to an individual customer."[6] Characteristic for postmodern society are specialized and technical services. This means that services can be divided into traditional and modern ones, which come primarily for the production, collection and distribution of information. States with such services constitute the backbone of the global economy, culture and politics. Traditional services have existed since the beginning of sedentary civilizations, and commerce and craft services had already accompanied the oldest Greek polis and Roman urban centres, *civitas*.

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[4] K. Krzysztofek, M.S. Szczepański, *Zrozumieć rozwój. Od społeczeństw tradycyjnych do informacyjnych.* [To understand progress. From traditional to information societies] Wydawnictwo Uniwersytetu Śląskiego: Katowice 2005, s. 36

[5] http://www.dolnyslask-innowacje.eu/pages/files/File/biuletyn/311207/ISKRA_KrzysztofPiech.pdf

[6] D. Bell, *The World in Year 2013.* "Deaedalus. Journal of The American Academy of Arts and Sciences" 1987, vol. 116, no 3. (quotation translated by the author)

The modern world has created a new sector – modern services, or E-service, which characterizes information societies, that have not been clearly defined by the researchers. Some of them, like a Japanese sociologist and computer scientist Masuda Yoneji[7] or an American writer Alvin Toffler[8], treated information society as the next, necessary stage in the evolution of post-industrial society. Y. Masuda, for example, spoke directly about post-industrial information technology society. Others, especially Majid Tehranian[9], recognized information society as an entirely new stage in the process of universal modernization. They also argued that in this stage there are only a few countries of rich West, though the development of modern services sector is being shared by a growing number of countries on different continents.

In the process of building the information society, the access to knowledge and information and the ability to use them in everyday life is becoming the most important for the citizens. A key element of economically, environmentally and socially sustainable world are Information and Communications Technology (ICT) – and the level of readiness of countries to use ICT is determined by the Networked Readiness Index (NRI). The ICT level determines the level of development and competitiveness of single countries. Network-readiness indicator (NRI) is a state of preparation for the effective use of ICT in three dimensions: general business, legal and environment infrastructure in ICT; readiness of three key social actors: individuals, businesses and governments; actual use of ICT[10]. According to 2010-2011 NRI ranking, the most outstanding country was Sweden, which remained the leader like in 2009. Equally high in this ranking are other Scandinavian countries, as well as Switzerland, the United States of America and Canada. The sixth place went to Taiwan, the first country not belonging to the rich West. A hundred and thirty eight countries were scheduled in this ranking. Poland was in the 62nd position, which means slight advance having compared to the 2009-2010 report, by three positions and an increase in total grade from 3.74 to 3.84. The maximum note is 6.0. Last in the ranking, for many years, have been African countries. In the 2010-2011 ranking it was Chad, which received a note of 2.59[11]. Poland was placed in the mid-ranking list, which means the average willingness to the network (NRI), and the same level of preparedness to use ICT. And these techniques with the level of public access to the Internet are necessary for the development of E-service.

According to NetTrack study in 2010, 52% of the population in Poland benefited from the Internet comparing to 49.5% in 2009. Among Internet users in 2010, 72.0% did so on daily basis or almost every day, and 19.1% several times a week. Most Polish people use the Internet at home (93.8%) and at work (21.2%). The largest group are Polish Internet users with secondary education (41%) and university education (26%). More than 44% have been

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[7] Y. Masuda, *Modernization and the Structure of Societies.* University Press: Princeton 1986

[8] A. Toffler, *Trzecia fala,* [The Third Wave] tłum. Ewa Woydyłło, Państwowy Instytut Wydawniczy: Warszawa 1997; A. Toffler, *Szok przyszłości,* [Future Shock] tłum. Wiktor Osiatyński i in. Wydawnictwo Zysk i S-ka: Poznań 1998

[9] M. Tehranin, *The Course of Modernity: The Dialectics of Communication and Modernization,* "International Social Science Journal", 1988, vol. 32, no 2

[10] www.weforum.org/issues/global-information-technology

[11] "The Global Information Technology Report 2010-2011":
http://www3.weforum.org/docs/WEF_GITR_Report_2011.pdf

using the Internet for more than five years, and the most often visited pages among Polish internet users are: GOOGLE (89.5%), ALLEGRO (68.3%) and ONET (57.6%)[12]. The access to the Internet of almost a third of municipalities in Poland is still less than 30% of the dwellings. High (above 50%) or very high (above 70%) level of access to the Internet was recorded in only 19.5% of communes in Poland. Very high access (70%-100%) can be found in the largest cities in Poland and their surroundings: Warszawa, Wrocław, Kraków, Poznań, Gdańsk or Metropolis Silesia[13]. With comparison to the computerized European Union, situation in Poland is not satisfactory. Among the EU residents, 24.8% owned fixed broadband. In Poland only 13.5%, which placed the country in the last three EU countries. On the other hand, 58% of entrepreneurs in Poland legitimize broadband Internet access, while the EU average is 83%. These results rank Poland at the end of the European Union countries when it comes to the level of computerization and Internet usage by its residents[14]. According to the International Telecommunications Union (ITU) at the end of 2009 the access to the Network had 26% of the world's population. This number doubled between 2003 and 2009. However, there is a huge disparity in Internet access between developed and developing countries. In countries with the highest level of civilization development, 60% of households have access to the network, while in developing countries, this is only 12%. In recent years, the largest increase in the access to the Internet has taken place in China and India[15].

Innovative activity, which is the core of modern development and offers access to the most modern services needs spatial concentration – restructured industrial regions, university areas, technopolis, and most of all metropolitan areas. These are metropolises that offer easy access to a variety of businesses, universities, research centres – the ideal background for innovation[16]. A limited number of major metropolitan centres like New York, Tokyo, London or Frankfurt, not only dominated the economy of nation-states to which they belong, but also created a worldwide network of coordination centres for major financial resources of the world[17]. These metropolitan areas are characterized by service excellence, institutions and facilities, uniqueness and specificity of place, as well as multi-faceted innovation capacity in technical, economic, social, political and cultural terms. But metropolitan areas are, above all, a high level of human capital, intensive research activity, the accumulation of innovative companies and public institutions. This is a gathering of inventors network-affiliated with all the metropolitan spaces of the world[18]. An interesting theme in the discourse on contemporary cities is, what Richard Florida called, a creative class, whose representatives are open to the new phenomena,

[12] http://www.gospodarka.pl

[13] 'Silesia' Metropolis is the name of 14 cities – Bytom, Chorzów, Gliwice, Katowice, Mysłowice, Piekary Śląskie, Ruda Śląska, Siemianowice Śląskie, Świętochłowice, Tychy, Zabrze, Dąbrowa Górnicza, Sosnowiec, Jaworzno. The constituent cities united in the Metropolitan Association of Upper Silesia

[14] http://www.gospodarka.pl/tematy/Internet-w-Polsce

[15] www.vista.pl

[16] A. Olechnicka, A. Płoszaj, *Metropolie a innowacyjność* [Metropolises and innovation] [w] B. Jałowiecki (red.) [Is a metropolis a city?] *Czy metropolia jest miastem?* Wydawnictwo Naukowe Scholar: Warszawa 2009, s. 137-138.

[17] P. Kubicki, *Miasto w sieci znaczeń. Kraków i jego tożsamości.* [The city in the network of meanings. Kraków and its identities] Księgarnia Akademicka: Kraków 2010, s. 154.

[18] A. Olechnicka, A. Płoszaj, *Metropolie a innowacyjność,* [Metropolises and innovation] op.cit. s. 138.

tolerant and introduce cultural and viewpoint diversity. According to an American sociologist, these are metropolises which provide coexistence of the three Ts, namely talent, tolerance and technology, which attract top class professionals, generating innovative, modern services and stimulating economic development[19]. Metropolises are also spaces of the largest concentration of scientific potential, which is manifested in the number of network connections with research centres in the state and abroad, expenditures on research and development (Research and Development), employment in science and research sector and number of publications. In the ranking based on such criteria excel metropolitan centres in the United States, Japan and Western Europe. The largest, modern cities form a network of global cities, in which Warsaw, as the only Polish city, held 19th position[20].

In Poland we can also observe a strong concentration of research activities in major cities, domestic metropolises where is the highest expenditure on R&D, the highest level of employment in the field of research, and the number of scientific publications. For example, the concentration of employment in R&D in the urban centres in Poland ranges between 93% and 99%. Having considered the above criteria Warsaw region with Warsaw playing the major role is in the first position but also other centres of Warsaw metropolitan area. The same applies to other Polish regions and subregions in which research activity is focused, primarily, in the capitals of regions (cities), but also in the larger centres co-creating the region. Along with the Warsaw region the greatest potential for research in Poland is concentrated in Gdańsk, Kraków, Łódź, Poznań, Wrocław and Katowice, more precisely Silesian metropolitan area. In the region of Upper Silesia, for example, the research potential is not only restricted to Katowice, but also Gliwice, Chorzów and Zabrze play an important role. In regions with the highest research potential there is also the largest number of scientific publications, mainly with the regional metropolis affiliation. Larger dispersion can be observed in the region of Katowice, where only in Katowice the affiliation is 49.6% of scientific publications, when, for example, in Wrocław it is 99.9%, and in Warsaw 96.1%. Research teams from eight Polish regions and subregions with the highest research potential provide 85% of the number of scientific publications and 90% of the teams participating in the 6th EU Framework Programme[21].

Therefore, it is very important to encourage development in many Polish regions, subregions, and urban centres in the direction of increase both in research and development, as well as the number of workers employed in this sector. Urban spaces have always had access to the highest technologies relevant to the stage of social development. Today, the most important is the development of knowledge and inventiveness. So you need to create centres of research, based, with all the proportions kept, on the Silicon Valley, which is the space consolidating creative ideas, capital, labour and raw materials. The priority is knowledge of strategically important areas of application, produced by the innovation centres such as Stanford University, California Institute of Technology (CalTech), or the engineering teams of the Technology University in Massachusetts (MIT) and their networks.

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[19] R. Florida, *The Rise of The Creative Class…and how it's transforming work, leisure, community, & everyday life.* Basic Books: New York 2004

[20] A. Olechnicka, A. Płoszaj, *Metropolie a innowacyjność,* [Metropolises and innovation] op.cit, s. 141.

[21] A. Olechnicka, A. Płoszaj, *Metropolie a innowacyjność,* [Metropolises and innovation] op.cit., s. 142-144.

The abovementioned pattern originating in the United States of America is a long perspective for Polish regions, but without such a perspective it is not possible to build modern urban spaces included in the global network of innovation. For example, the region of Silesia has many universities, whose participation in the development of the region and its innovation should dramatically increase. The key point to the emergence of the metropolises of global or even European status is technological progress and innovation, which are inextricably connected. Simultaneously, global cities are spaces terrain hatching new ideas, which to the highest degree contribute to global development. In order to achieve it you need the right climate associated with the level of investment attractiveness, and level of resources and labour costs.

Regions in Poland are characterized by different levels of investment attractiveness, which is constituted by transport availability, employment resources, market capacity, economic and social infrastructure, the level of economic development, environment condition, public safety and the level of activity of the regions to the investor[22]. In the context of the issues presented, the most important is the attractiveness of regions for service activities. Thus, the most attractive regions are: Warsaw, Łódź, Katowice, Kraków and Poznań. The strengths of these regions are the high number of skilled workers and college graduates, high levels of social activity, high absorbency of the market, good transport accessibility, well-developed business sector, high productivity and a large number of companies with foreign capital. On the other hand, high labour costs, crime rate and low detectability are some of the drawbacks.[23] Attractiveness of regions for the service activity is often accompanied by attractiveness for high-tech activities. If we take into consideration the level of attractiveness, the following would be the top ranked regions: Warsaw, Kraków, Poznań, Łódź and Wrocław. This attractiveness results from the high level of resources, most important of which is the level of education and competence of the people, the high economic and social activity, developed transport hubs, including airports, market capacity, institutional density, high development of cultural infrastructure and high productivity. The weakest side is the low level of public safety.[24] The above analysis shows that the most attractive spaces for modern services and advanced technology are the biggest cities, which are characterized by the perfection of services, institutions and facilities, uniqueness and specificity of a place, as well as multi-dimensional potential for technical, economic, social, political and cultural innovation.

3. E-service today

Urban spaces that had always focused on the modern technologies and services relevant to the stage of social development, underwent a profound transformation. Gideon Sjöberg, basing on development and modernization of cities, created two types of cities characteristic for traditional and modern society.[25] Both traditional and modern cities

[22] M. Nowicki (red.), *Atrakcyjność inwestycyjna województw i podregionów Polski 2010:* www.IBnGR.pl [Investment attractiveness of Polish voivodeships and subregions]
[23] Ibidem, s. 28-30
[24] Ibidem, s. 35-38.
[25] G. Sjőberg, *The Preindustrial City. Past and Present.* Free Press: Glencoe 1960, passim. Por. też K. Krzysztofek, M.S. Szczepański, *Zrozumieć rozwój. Od społeczeństw tradycyjnych do informacyjnych.* [To

were characterized by visible differentiation, which to some extent went along with ecological division. In fact, this meant that classes and social strata and occupational groups in the urban space occupied certain territories. All divisions resulted from social differentiation of inhabitants of the traditional cities that by adopting almost a caste system, comprised of elite status groups, the vast masses of the urban population and the unclassified population. Each group occupied a separate piece of space performing specific actions and taking the appropriate style and way of life (endogenous groups). We must also remember that the level of urbanization in traditional society was low, which changed substantially during the industrial period, which brought people with different cultural capital within the boundaries of the urban space. This fostered focusing on one area of the representatives of many cultures, generating distances between people forming subsequent classes and social groups. Cities that were most often set up around the great centres of industry, commerce and banking system differentiated its inhabitants on the basis of the level of education, professionalism, property, style and standard of living and place of arrival in the urban area. And it is not only about a classic division the city versus the countryside, but division resulting from the religious, ethnic or national diversity.

In the second decade of the twenty-first century some part of urban world was transformed into metropolises – global cities, and there is a question whether they are still cities or a new form of spatial concentration of people and accompanying infrastructure. Several thousand years of cities' existence had produced different models for the urbanized area of Europe and North America. The model of cities of the Old Continent was described by Max Weber. He argued that "a city creating a community of residents must have the following characteristics: fortification, the main square, its own court of law, at least partially separate, associations, and partial autonomy and authorities elected with the participation of citizens."[26] Discussion about American cities emerged in the minds, first of all, representatives of the Chicago School, including Robert Ezra Park who believed that the modern American city "[…] is largely created by the simple process of mother nature and develops so that it is difficult to recognize its institutional character. [...] the plan of most American cities is a typical chessboard. The block is a distance unit. This structure may suggest that the city is an artificial construction, which can be accurately made and spread." Moreover, Robert E. Park publishes the claim, which has become a classic in the sociology of the city: "[…] it is a fact, however, that the roots of the city lie in the habits and customs of the people who inhabit them. As a result, the city has both moral (social) and physical organization, which includes characteristic interactions to mutual formation and modification."[27] The city is organized by people in terms of space, which in the past, surrounded by walls, now is becoming a space without borders. These are contemporary global cities, or areas of the world's largest economic development and

understand progress. From traditional to information societies] Wydawnictwo Uniwersytetu Śląskiego: Katowice 2005, s. 59-61.

[26] B. Jałowiecki, *Fragmentacja i prywatyzacja przestrzeni* [Fragmentation and privatization] [w:] B. Jałowiecki, W. Łukowski (red.) *Gettoizacja polskiej przestrzeni miejskiej.* [Ghettoization of Polish urban area] Academica SWPS: Warszawa i Wydawnictwo Naukowe Scholar: Warszawa 2007, s. 11. (quotation translated by the author)

[27] K. Czekaj, *Socjologia Szkoły Chicagowskiej i jej recepcja w Polsce.* [Chicago School Sociology and its reception in Poland] Wydawnictwo GWSH: Katowice 2007, s. 74. (quotation translated by the author)

market of the world's highest rates of consumption, and their power extends not only the regional or national boundaries but also continental[28]. The walls, which used to have a defensive function, symbolic as well as separating people from foreigners, disappeared from the picture of today's cities and metropolitan areas are characterized by the contemporary space of flows[29]. Lack of physical boundaries means unlimited range of global cities, and their expansion through online tools and the territory.

The modern metropolises are not only a space of flows, but most of all the information centres of the world. These are information cities, the structures collecting and analysing the greatest good of the modern world – information. Metropolitan centres accumulate the world's newest generation of services (highest category), making a dislocation – in the semi-peripheral or peripheral countries – the world's next steps in the manufacturing of products. A new industrial space is being created. The space involving the separation of the production process to different locations, while ensuring their reintegration through the network. This separation of production is consistent with the resources of the workforce at the site. In the centre of a metropolis an innovative idea is emerging, which is becoming a product in the semi-peripheral space or periphery of the world. Supervision of the whole – until the final product – comes from the metropolises, which are also the centre of power.

In the cities, also in European regional Polish cities – Warsaw, Kraków, Wrocław, Poznań and Metropolis Silesia – the infostructural networks are becoming more and more important, though much more is still to be done in the area of infrastructure. Network of highways, roads and rail links remain a key challenge for successive governments and Polish regional governments.

Essential developmental deficits of Polish cities are primarily due to insufficient infrastructure, inadequate supply of educated manpower and delays in the development of E-service, which is the most modern sector of services. They should be complimented with traditional services, also requiring appropriate infostructure. The gap between E-service in Poland and the European Union (EU average) can be illustrated by some of the selected indicators listed below. In 2009, 21% of Polish people benefited from Internet banking (EU average 32%), about 9% of Polish citizens looked for a job online (EU average 15%), 18% of the population in Poland read online editions of newspapers and magazines (EU average 31%), 23% ordered goods and services online (EU average 37%), and 2% of the population conducted a transaction with an entity from other EU countries.[30] The market of credit cards in Poland has been growing relatively fast over the last eight years; in the last eight years the number of issued credit cards has increased twenty times; four times the number of card transactions, and five times their total value. Therefore, the number of ATMs has doubled and the number of businesses accepting payment by credit cards has increased by half[31]. The rate of E-service development in Poland is rather average. It refers to services which deal

[28] S. Sassen, *The global city. New York, London, Tokyo.* Second Edition. Princeton University Press: Princeton and Oxford 2001.
[29] M. Castells, *Społeczeństwo sieci.* [The Rise of the Network Society] Tłum. M. Marody i in. Wydawnictwo Naukowe PWN: Warszawa 2007, s. 381-429.
[30] http://www.gospodarka.pl/tematy/Internet-w-Polsce
[31] http://www.pentor.pl/56460.xml?doc_id=11278

primarily with banking services, including also non-cash transactions. In addition, E-service is a service and IT software, which is related to software sales, service equipment, computers repair, networks, LAN, WLAN, Internet, Web sites. Among these services E-government also has an important role, namely electronic governance and management, particularly at the local level. It can be defined as the way in which public administration uses new technologies in order to provide citizens with tailored services and information, and presenting them in a more practical, useful and easier to use way. In addition, E-government is a representation of the traditional services provided by public authorities at different levels in their electronic counterparts, which ensure their usage 24 hours a day, 7 days a week. Electronic government is the overall actions that use information technology and telecommunications to create better and more efficient administration in a changing world and ultimately to improve the quality of governance or even management of the state.[32] However, in the development of E-government there can be seen a certain inequality: when the level of services aimed at business is relatively high, the availability for ordinary citizens in Poland remains low. The percentage of basic public services fully available for citizens online is 27% and 88% for entrepreneurs, while the percentage of Polish people using E-administration is 18%, while the EU average is 30%. The percentage of Polish companies benefiting from E-administration is accelerating (61%) and lessening the distance to the EU average (71%).[33]

Despite some changes in the field of E-service in Poland, there is still a distinct distance from other European countries in terms of computerization. The condition of public E-services in Poland may not be satisfactory. Although 99.4% of Polish institutions use the Internet, and 89.7% have their own websites, the webpages provide access only to some information, and it is difficult or even impossible to download certain forms and make electronic transfers.[34] Nevertheless, the evidence of progress is the ability to make a tax return through the Internet, fill in the census form, register at university or apply for a job. You can also make any payments. Today, there is also a vivid discussion on the possibility of the Internet voting in parliamentary elections or presidential elections.

Polish cities (metropolitan areas), because of civilizational backwardness and peripheral location, for a long time had remained outside the network of the largest global metropolitan areas. The situation began to change in 1989, but especially after Poland's accession to the European Union. As a result, a global network of major metropolitan areas began to open to the Polish cities. The scale of flow of capital, services and people increased substantially, and Polish airports are recording the second in the world (after China) percentage increase in the number of passengers. The cities attract huge number of foreign tourists and foreign investment is going mainly to the major urban centres.[35] Along with these changes goes a change in the cultural sphere, which is increasingly willing to accept diversity understood as the notion of innovation and creativity which guarantee the value of social development.

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[32] H. Krynicka, *Rozwój E-usług publicznych w Polsce*; [Development of public E-services in Poland] http://www.bibliotekacyfrowa.pl/Content/34608/008.pdf

[33] http://www.gospodarka.pl/tematy/Internet-w-Polsce

[34] H. Krynicka, *Rozwój E-usług publicznych w Polsce,* [Development of public E-services in Poland] op.cit.

[35] P. Kubicki, *Miasto w sieci znaczeń,* [The city in the network of meanings] op.cit., s. 156-157.

Modern cities are not only centres of technology, knowledge, information and power, but also migration, which has two opposing faces. On the one hand, it is the inflow of highly skilled, professionals and financial elite, who can easily decide on the change of place of residence and work. On the other hand, the migration of people with lower qualifications, because global cities need workers doing less prestigious and less paid job.[36] Metropolitan community can be divided, in a simplified way, into the metropolitan elite who is sometimes identified with the new middle class, metropolitan proletariat and redundant people. The former, perform management functions, supervise the flow of information, form the creative class, using the terminology of Richard Florida. The latter perform reconstructive work, though necessary for normal functioning of the city and the metropolis. And finally, the third ones, have already ceased to be needed for a metropolis, or have never served in the most important functions, becoming over time fragmented people, as Zygmunt Bauman would define them, using very elegant language though.

4. Conclusion: From craft to E-service

In the long history of urban development, the location of various kinds of services in the city has been a very important issue. The services have affected the character of cities and the standard of living of their inhabitants. In ancient societies these were traditional services, mainly handicrafts, provided mostly to a single man. Today's services are focused, primarily, in the spaces of global cities, which became a place of modern services, due to bringing together individuals within its borders with the highest level of civilizational competence and creativity. Modern services, professional and creative individuals occupy the centre of the world's metropolises, which is defined as a rare good. Metropolitan centre is marked by a double stigma, as the most expensive area of the city in an economic sense – the most expensive flats, office and commercial space, as well as the space associated with the prestige and social status. Work and residence in the heart of a metropolis are the desire of many people, but available for a scarce number of them. It is a space separated from the outside world by a symbolic wall of wealth, competence, and above all prestige. Meanwhile, traditional services are no longer filling the city centre, because their position had been changing and became more marginal and gave way to E-service. Transformation of economic sphere of metropolitan area have also affected the change in population, and urban architecture. "Truly great cities, are the ones in which great people live" as Walt Whitman, a great American novelist and poet wrote many years ago. Today's world's metropolises are centres of knowledge, information, decision, power and modern services, but also these are their inhabitants, who are screenwriters and directors of the presence.

World cities have also become hubs of the network connections. These are the global centres of decision-making and control – where innovations spread from and there the network of the largest transnational companies is focused. Knowledge is produced there and flow of information is focused. Advanced services are concentrated there – services of higher quality. This concentration of advanced services requiring power and skills has been recorded in several cities around the world, such as New York, Tokyo or London. In Poland, this is Warsaw, Metropolis Silesia, Poznań, Wrocław and Kraków. Advanced services and markets are being connected in the global network, which does not constitute a permanent

[36] P. Kubicki, *Miasto w sieci znaczeń,* [The city in the network of meanings] op.cit., s. 155.

hierarchy of cities that create it, but it requires constant competition. These are networks of production and management that offer opportunities to raise the personal situation by changing social position. Modern cities are not the concentration of capital, but processing and information management. These are the places of concentration of economic forces and centres of power and decision-making concerning global economy.[37]

Such concentration of IT tools which can be used to obtain information, select, analyze, process, manage and communicate it to people enhances, among others, redeployment phenomenon. This phenomenon is related to the relocation of traditional industries - dirty industries to areas with low level of social development and, above all, low environmental awareness of their residents. Developed countries are heading toward clean, green technologies, and the largest cities of the modern world accumulate information, not the industry. So we can say that underdeveloped societies are based on the traditional branches of industry, which mostly come from the rich centres and developed countries on E-services. Simultaneously, the development of E-services makes it possible to manage the factories that have been located thousands of miles from the place of strategic decision-making - the car industry is a good example. It is also about low-educated workforce, which is the greatest in the poor regions of the world. These are people who are able to perform only simple work, and do not have powers that would give them the opportunity to participate in and benefit from the world of IT. The high correlation between the level of social development and the level of IT can be seen for example in China or India, where the growth of economic importance of these countries on a global scale is closely connected with the development of the world's fastest Internet in these countries.

Contemporary Poland is facing the challenges of the modern service sector development – E-service, development of the metropolitan area, which could be included in a network of global cities. The economic transformation, which started in 1989, introduced Poland to a group of countries forming a strong structure of the modern world. Polish people are fully aware that every effort should be made to enhance Poland's political and above all economic position in the world. The state can anticipate economic success if it focuses its attention on the development and application of modern technologies in everyday life.

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10

Creative Business Model Innovation for Globalizing SMEs

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1. Introduction

Internationalization of its activities and business model cannot be assumed as a habitual process in small entrepreneurial company's growth. Very many small businesses of big country origin do not need to internationalize themselves at all because of huge home market. Internationalization becomes topical for hi-tech small and medium sized enterprises (HSME) of small country origin because the need to cover R&D expenses ("push" factor) which is not realistic in own domestic market and attractiveness of bigger international markets ("pull" factor) (Luostarinen & Gabrielsson, 2004). The traditional model of internationalization is a slow, incremental and resource-intensive process known as the Uppsala model (U-model) of internationalization (Johanson & Vahlne, 1977; Andersen, 1993). The innovation related I-model links the gradual internationalization of an HSME to internal and external actors, and to factors carrying "push" and "pull" mechanisms (Andersen, 1993). The barriers derived from usually slow and resource-consuming processes of internationalization have been overcome by the new category HSMEs called "born global" company (BG). However, the phenomenon of BG-s is not fully explained by the more gradual U- and I-models, also known as the process models (McNaughton, 2003). BGs do not need to start in or focus for a long time success in home market; they may start globally, i.e. on other continents, from the very beginning. Although the definition of "hi-tech" is differently defined by many authors, the main characteristics are related to novelty of the product, R&D intensity of production/service, qualification of employees or belonging of the company to some research intensive industry sectors (Shearmur, Doloreux, 2000). Here, besides mentioned characteristic features, HSMEs are defined as the companies which are contributing to creation of high-technology new knowledge themselves, this knowledge is unique and creates competitive advantage on the market. Usually business model supports implementation of concrete advantages; it describes the way how a firm is creating value to all its stakeholders. From the company's position – the business model is mediating technical inputs into economic output (Chesbrough & Rosenbloom, 2002).

Some companies operate for a long time in domestic market, but then after some event (a critical incident) globalize themselves; these companies are called "born-again global" (BAG) firms (Bell, McNaughton & Young, 2001) and their behavior is defined as reactive (Bell et al, 2003). Into this category of firms belong partly also "globalizing international" firms, which have started their business within home continent after the domestic market

period (Gabrielsson & Gabrielsson, 2004). Then they start to globalize their activities outside home continent (ibid).

But the concept of born global or its modifications do not explain why and how some hi-tech small and medium sized enterprises (HSME) become global, while others do not. The shortcoming of the BG and BAG approach can be seen, as they do not expose the creative entrepreneurial processes which take place during internationalization/globalization. The entrepreneurial process includes (experiential) learning at both levels: individual (entrepreneur) and organizational (Corbett, 2005). Based on a concrete case study of knowledge-based small company leveraging its technological knowledge and reaching global market, a "learned global" concept is suggested (Mets, 2008). That involves the need to derive knowledge about the markets as well as creation of new technological knowledge and development of product(s) responding to higher market value, but also right positioning in the value chain of the concrete product or business (Vadi & Türk, 2009). This cannot happen accidentally, these processes need creativity, learning and accumulation of knowledge, and experience before becoming global.

Leverage of intangible resources was first seen as competitive advantage of multinational companies (MNC) by Hamel and Prahalad (1993). This phenomenon creates advantage potential for global corporation before local company, if implemented, disproportionately strongly exceeding their size ratio especially in knowledge-intensive spheres regarded as "new economy" (Mets, 2003). That points out that HSMEs of small and open economies (SMOPEC) (abbreviation from Luostarinen & Gabrielsson, 2006) are competing with global competitors not only in international markets, but also in home market. Of course, it is easier to enter psychically and culturally closer neighboring target markets than to become global from inception.

As can be concluded from the short overview above, in the core of business internationalization lies knowledge (push factor) as resource enabling HSMEs to respond to global market needs (pull factor) and real globalization process happens under the certain circumstances depending on knowledge-related processes and business model chosen for reaching to global market.

The chapter aims to conceptualise the business models and general factors of becoming global by technology- and knowledge-intensive SMEs of small open economy country origin.

To fulfill the aim the following research tasks are set up:

1. Examining main factors enabling global breakthrough by HSMEs.
2. Analyzing "knowledge-market" conceptual framework of globalizing business model for HSMEs.
3. Disclosing small transition country context of globalization of HSME.
4. Mapping empirically knowledge-market business model development trajectories for HSMEs of different technology sectors.

The results of the study provide better understanding of strategic options that "new economy" companies may follow in their internationalization process. To open theoretical background of the topic the next section clarifies the main trajectories and processes of global breakthrough of HSME in "born global" context. The following sections create

"knowledge-market" framework of HSMEs' globalization process and systematize some leveraging business models. After that, methodology and short description of a case study sample companies are given. Empirical findings and discussion of results, and conclusion end the paper.

2. Global breakthrough trajectories of HSMEs

Generalizing globalization process of HSMEs one can find three main ways differing from each other in terms of speed and extent of internationalization: gradual, born global (BG) and born-again global (BAG) trajectories (Johanson & Vahlne, 1977; Andersen, 1993; Bell, McNaughton & Young, 2001) as presented in Figure 1.

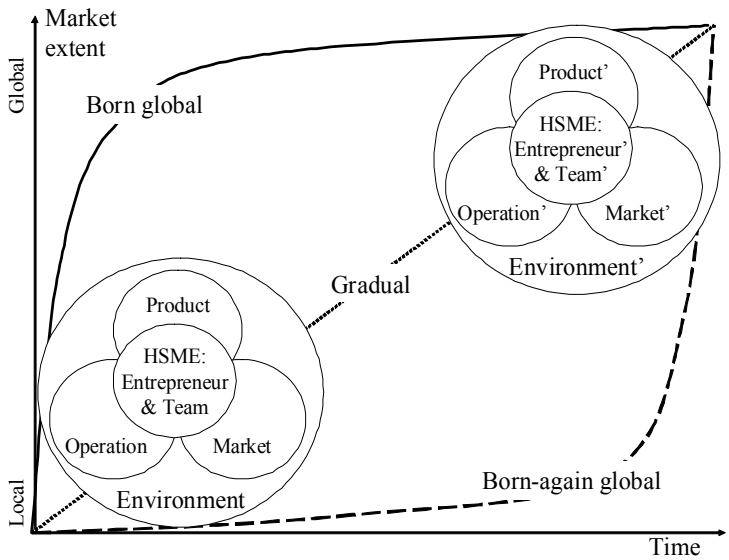

Fig. 1. Trajectories of HSME internationalization (Mets, 2009)

Luostarinen (1979) first introduced globalization strategy including three sub-strategies (or fields): the product (P), the operation mode (O) and the market (M), and altogether – POM-strategy. POM-strategy itself leads to global marketing strategy, which consists of pricing, distribution and customer strategy (Luostarinen & Gabrielsson, 2004). The POM-strategy as a model covers and partly overlaps the components of business model – the way how a firm is creating value to all its stakeholders. Researchers of Helsinki School Luostarinen and Gabrielsson (2004, 2006) have demonstrated that the BG may exist in any field of product categories of HSME: (1) high-tech, (2) high-design, (3) high-services, (4) high-know-how, and (5) high-system businesses. The authors argue also that one product category compliments another, for example: high tech companies offer services for their innovative goods, or, high-service companies package their product and manuals into diskettes, which presents physical goods (ibid). Characteristic to BGs is that they differ from product and operation mainstream patterns of internationalization of conventional (non-born-global) companies; the same is valid for their POM-strategy (ibid). Becoming global depends quite frequently on HSME's capability to attract venture capital (VC) companies to invest into BG.

VC investors affect the management of HSME, even employing professional managers into company, which accelerates globalization process. Some founders of HSMEs are more experienced and better skilled in global business, which speeds up the process (Luostarinen & Gabrielsson, 2006). This points out the importance of market learning in realization of own opportunities.

Effective recognition of opportunities is considered one the most important outcomes of entrepreneurial learning as an experiential process (see Politis, 2005; Corbett, 2005). The learning can be organizational; the "learning organization" is the concept used to describe an organization's ability to manage change (see for example Senge, 1990). From the perspective of entrepreneurial learning described by Politis (2005), it is more or less an individual process. This viewpoint is only partly supported by research among Italian technology entrepreneurs, where networking capability and the creation of technological competence with limited resources play a key role (Ravasi & Turati, 2005). Organizational learning of SME's in terms of an entrepreneur's capacity to learn and to integrate the working team remains the leading factor; and entrepreneurial learning is mostly an action-learning process (Deakins et al, 2000).

Three different internationalization routes/trajectories (shown in Figure 1) contain creative learning, which is more or less intensive in some period. The main result of learning is inventing and reaching business model corresponding to own product. Frequently the product contains intellectual property (IP) – invention protected by patent. That is the factor strongly attracting funding by VC. The main difference between BG and BAG is the timing and a moment of globalization.

BG means going global from inception. That means that not only the business idea, but also all other factors (Product, Operation, Market & Management) must be appropriate for the strategy of rapid globalization. Lack of just one of the factors can lead HSME to failure. BAG keeps the local business model for a long period, and may even involve some exports and other internationalization activities. Favorable events, or the accumulation of a success factor or resource, possibly gradually, can trigger the globalization process.

Although several authors have tried to define BG company via share of sales on international/global markets or period of becoming international/global, there is no agreement about the concrete value of criteria (Luostarinen & Gabrielsson, 2006; Svensson, 2006; Rialp, Rialp, Urbano & Vaillant, 2005). It seems that strategy (POM-model) and management behavioral patterns and ambition to achieve competitive advantage match better to general understanding of rapid globalization process than formal criteria. This position is supported also by the authors mentioned above. Hereby arises also another crucial aspect: not only global market breakthrough, but also protecting and deepening competitive advantage in global position has high strategic importance for HSME. That means the need to better understand the content of core competence(s) in creating long-run competitive advantage hard to copy by competitors on the market.

3. Knowledge-market grid – the field of creative actions for global HSMEs

The POM-strategy model is less explicit about the organizational mechanisms which besides entrepreneurial learning may release the potential for such behavior, or about what makes

this mode of operation possible. The competence and knowledge of organization acquire more power in organizational structures which use the mechanism of leverage. Leverage is defined as "the extent to which profits can be increased when revenues and capacity utilization rise" (Crainer, 1999). Often the concept of leverage is linked to the idea of stretching financial as well as non-financial resources (Hamel & Prahalad, 1993).

Leveraging intangible resources at the human level is achieved as a result of the multiple duplication of the working process, creating higher skills and performance along a learning curve, but it also means the initial creation and development of such skills and related competences. At company level, this means extending knowledge, skills, competence and performance over all parts of the organization, reaching every person engaged in the process. In knowledge business, leverage means invention, permanent improvement, and the acquisition of new "soft" and "hard" processes, and spreading of new technology in conjunction with what already exists. The leverage mechanism is a part of the mode of operation as explained in the matrix in Figure 2.

Market extent	**Complexity of knowledge**		
	Low	**Medium**	**High**
High	Single/initial domain technology Diversification across the markets globally	Integrated technologies Diversification across the markets globally	**High system product Diversification across markets globally**
Medium	Single/initial domain technology Duplication across familier markets	**Integrated technologies Duplication across familier markets**	High system product Duplication across familier markets
Low	**Single/initial domain knowledge and inventions Single/home market**	Integrated technologies = combination of high-tech & service Single/home market	Multi domain technologies = high system product Single/home market

Fig. 2. Knowledge-market leverage grid for technology business internationalization (based on Mets, 2009)

The matrix describes the strategic options of an HSME in terms of the leverage of technology and knowledge, and of markets. Leverage means combining several single domains of knowledge or technology with each other in order to gain more complex results. Hereby it should be mentioned that the complexity can be related to "product" as well to "operation" aspect of POM-model. That can mean growing complexity of technology knowledge in production process and can but must not necessarily reflect in product itself. Meaning of growing complexity contains here first of all growing multiplicity of (interdisciplinary) knowledge domains from high-tech, -design or –services to high-know-how, and high-system businesses as mentioned above (Luostarinen & Gabrielsson, 2004). Of course, complexity can vary between domains of single products, therefore complexity has relative meaning if implementing for comparison of concrete objects. Knowledge or technology

domain is characteristic to one concrete product/service with its modifications. Labeling quadrants with two axes (Market extent, Complexity of knowledge) in three-scale measure (L-low; M-medium; H-high) we can describe different ways of leverage of knowledge according to the globalization concept of HSME. The BG company is ready to move into the quadrants LH-MH-HH or even to start from there leveraging its business model at the inception. BAG company can follow more mazy trajectory, for example: LL-ML-LM-LH-MH-HH. This process could be understood as experiential learning, creating new knowledge in the company about product as well as about market (see similar approach: Casillas et al., 2009). As a result, unique high level products and services are created on the basis of the multiplication of new and existing knowledge and competences (for example, in quadrant LM). As the creation of high level competences is a path-dependent, usually the result of interdisciplinary (learning) process, it is a competitive advantage that is hard for competitors to replicate. The market can be expanded gradually by selling to neighboring and culturally close countries, or related markets, whereas if expansion into different markets in different continents is made in a very limited timeframe it is a global player. The more reachable and relevant to customer needs and use the company is the more chances it has of becoming a global player. Customer reach becomes critical for an HSME. Typically the Business to Business (B2B) model is prevailing before Business to Consumer (B2C) sales model among BGs (Luostarinen & Gabrielsson, 2006). Very often it can be difficult for a global business and networking model to reach every individual, for example peer-to-peer (P2P), like that of Skype (Yovanof & Hazapis, 2008). In that case, globalization is simply a global replication of the business model globally, or the business model itself is global. The uniqueness defends the company's position as global.

Nummela, Saarenketo and Puumalainen (2004) have found that companies with narrowly defined core competence started their international operations on average two years earlier than companies with broad competence. As could be understood from the grid (Figure 2) this means capability of HSME to go global with single domain knowledge. Does this contradict to learning and knowledge leverage processes in B(A)Gs? Obviously not, first, the company has its history which starts not just the moment of legal registration of its founding, but starts far before with the learning, experience and knowledge accumulation by founders and managers (Casillas et al., 2008). Second, (new) opportunity recognition by company leaders can happen in any period of company's existence, which can trigger absolutely new developments in/by the company like it happened with NOKIA moving into new technology and business field, which changed also the business model and behavior categorized as "globalizing international" (Gabrielsson & Gabrielsson, 2004). That means "pre-history" period of B(A)G is important, may-be crucial point of the globalization concept.

4. Leverage over business model

The basic for the business model are questions about the customer and the value for customer, and also the way firm makes money from that (Magretta, 2002). It is also generally agreed that business model is not a strategy as practically confirmed by many authors (Hedman, Kalling, 2001; Magretta, 2002; Shafer, Smith, Linder, 2005). Although in some cases authors state strategy being a part of business model (for example, Jansen et al, 2007), the concepts really have intersection and there is hard to "draw sharp boundaries

around abstract terms" (Magretta, 2002). Main issue is the fit between strategy and business model aspects (Zott, Amit, 2008). To define business model and its elements we can find tens of definitions (for example, Alt, Zimmermann, 2001; Shafer, Smith & Linder, 2005), and several categorizations for business model typology (Weill et al, 2005; Jansen, Steenbakkers & Jägers, 2007). Generalizing the concept in this article business model describes how the company is transferring its inputs (and own resources) into the value and provides the value for/to the customer, and earns the revenue. In that general framework of business model and strategic capabilities of HSMEs raises the question about globalization: which are elements supporting and enabling globalization of some businesses, and which – the barriers to that process.

Mechanism for leverage of resources, incl. intangible resources was first seen as competitive advantage of multinational companies (MNC) (Hamel & Prahalad, 1993), which could be very effectively implemented by replicating knowledge and competences based on their business models (Winter & Szulanski, 2001). This phenomenon sometimes known also as "McDonalds approach" (ibid) creates advantage potential for global corporation before local company. Therefore SMEs of "new economy" are seeking leverage mechanism to go global, some of them linking their business into networks of global players (MNCs), some – seeking their own independent business model using more world-wide network – the Internet.

Hereby we describe three different business models for globalizing of SMEs based on that criterion: first, being subcontractor – a part of value chain of MNC in all its locations (Fig 3), second, having own sales-revenue channel in the Internet or mobile environment, and third, based on that – so called "freemium" business model.

Example of the first case is Regio – provider of location based services (LBS) creating a part of value chain for Ericsson, global cellular (mobile telecom) network supplier, since 2004 (Mets, 2009).

The business model (Fig 3) is replicated on different markets, because every market (country, region) has own legal regulation of telecommunication. Besides, LBS are depending on mobile operator, local infrastructure, language and culture. These are elements requiring product to be customized for every concrete market. Therefore product mix (1...N) in concrete cellular value chain (1...N) can be different. But generally, as Ericsson's networks established by operators worldwide, Regio reaches the same local markets customizing and replicating its main business model globally. Although, company can offer some free product samples in special marketing campaigns, LBS revenue is mainly covered by users up to 100 %.

Usually there are no remarkable infrastructure, culture or language limitations for such a business, or these barriers are easily overcome. These companies can sell their hi-tech or knowledge-intensive products or services via Internet, which serves as service environment also or only the environment to reach contact to customers. Because of universal character of such a product the Internet enables leverage of product over global market. Usually, the question about ensuring trust is the question. On the example, Asper Biotech owes its fast market launch in genotyping to scientific reputation of the founder, well-known professor in the field (Mets, 2009).

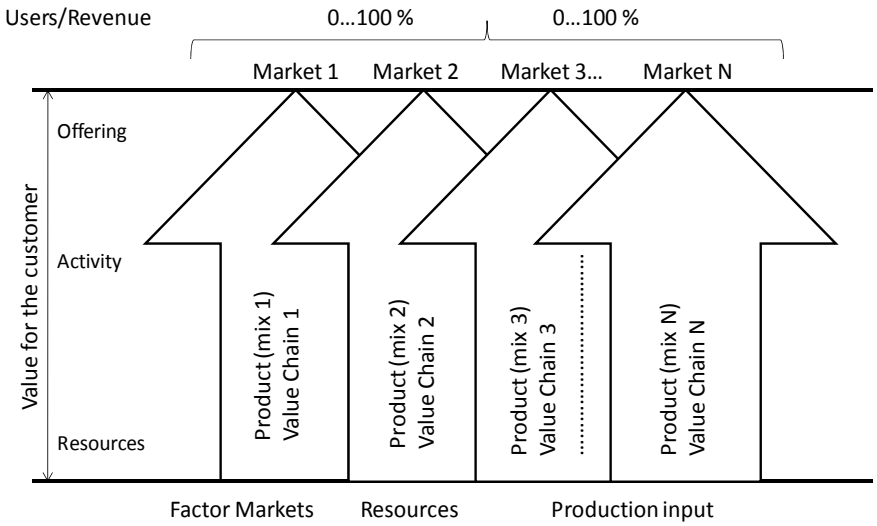

Fig. 3. Replication model: global replication of local business model = business model leveraged over market(s) globally (author's drawing)

Another type of business model is representing companies implementing the Internet environment for global sales (Fig. 4).

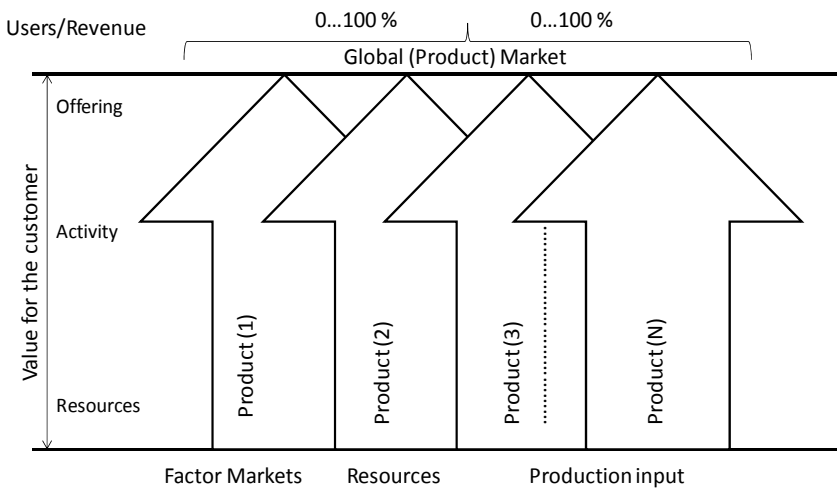

Fig. 4. Leverage model: global leveraging business model = leveraging market globally (author's drawing)

"Freemium" business model is represented by Skype (Fig 5) offering its VoIP service independently worldwide. Skype represents development trajectory, where globalization starts from one concrete worldwide free product and after global breakthrough it is

leveraged with wide range of improvements and additional premium (paid) functions (1,...,N). This is known as Freemium Business Model (Katzan, 2009) using the principle: "you give away 99% to sell 1%". Of course, regular delivery costs of Free Product (0) must be minimal, if not –company can hardly cover these costs from premium products. In real numbers, as of June 30, 2010, Skype had 560 million registered users [of free product mostly] with 8.1 million paying customers. "For the six month period ended June 30, Skype reported earnings of $13.1 million on revenue of $406.2 million" (Knowledge@Wharton, 2011). Partly, "premium product" of many Internet companies can be positioned among global leveraging models in Fig 4.

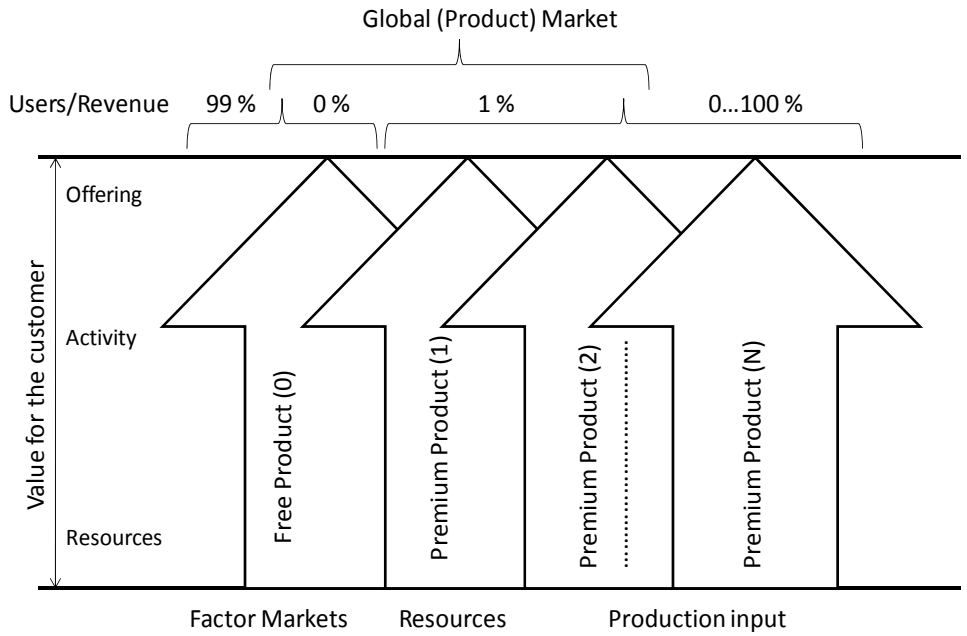

Fig. 5. Freemium model: global leveraging "freemium" business model = leveraging market globally (author's drawing)

Generalizing the models above, differentiation of replication and leverage models is not always explicit. Quite frequently, company can create its own service web-page in different languages meeting similarly local market expectations. Main feature to identify is that wider used languages, like English, enable spreading of market practically into any region and there does not exist, for example, physical or legal barriers to that process, especially on markets of R&D-intensive products. That means also implementation of similar marketing mix targeted to similar customers of different continents.

In replication (business) model (Fig 3) product-mix means complexity of products and relevant complexity of knowledge duplicated on every concrete Market 1...N. In other models (Fig 4 and 5) the product is related to one concrete relevant knowledge domain, from which part can be offered for free (Fig 5). Complexity of products and relevant knowledge is growing with widening their mix over the global market.

5. Empirical research and methodology

Empirical research is based on the process theory and general knowledge-market framework of globalization of HSMEs as discussed in the first sections of the chapter. The approach is especially, focusing on the role of knowledge (sometimes results of research and development – R&D), which is the basis for product as well as operations development in reaching global market. Globalization is understood not simply as internationalization, it is reaching other continents. Mapping the trajectory of knowledge-market development in internationalization of HSMEs can give basic understanding for further strategy creation by businesses as well as for actors of public sector in forming entrepreneurship policy. That means also the need to analyze changes of complexity of knowledge in that process – is movement from "high product" towards high-system business/product the rule for BGs and what is happening with complexity of (product) knowledge in globalization? What is the timing of accumulation of necessary competences for globalization and how it is related to internationalization process - is there so called "pre-history"? Can we identify entrepreneurial learning in globalization process? How has entrepreneurship environment influenced financing of HSMEs? And what are the consequences of competitive advantage, business model and strategy?

Case studies were used for mapping the main factors affecting internationalization of technology intensive SMEs in the "knowledge-market" framework. Main criteria for selection of a company for case study were the following:

- Estonian origin of the company or/and tight relations to Estonia;
- The company should be relevant to a success story, i.e. it should be already global;
- The main development track of the company could be observed;
- Main part of knowledge and technology is created in Estonia;
- The companies represent technologies of different fields.

It was not possible to find many Estonian companies that met the described characteristics, therefore more well-known of them were selected for the study. The sample contains five ICT, mainly Internet and software companies, and three HSMEs represent biotechnology field. Current case studies are based on secondary data and personal interviews. First of all, search for research publications was carried out using Google Scholar®. That gave possibility to learn the aspects researchers already covered with regard to case companies. Then historical facts and general overviews were collected from previous researches (Mets, 2008, 2009) and media (for example Tänavsuu, 2009). After that web-pages and annual reports of the companies were studied. The facts collected during the previous studies as well as current research were evaluated in the context of research questions. The aspects not covered before and newer trends were mapped, also some interpretations were checked in interviews.

6. Globalization cases of eight technology companies

Cases in the current chapter are presented in the Tables 1, 2 and 3 structured according to the raised research questions, aspects for mapping business model and globalization process of the HSME, and important factors in that process. The facts in tables are presented very shortly on the level of notes, partly disclosed more in the section of findings and discussion. Business models were categorized according to p. 4.

Company name, founders, founding data	**Regio**, 3 geographers, 1988	**Mobi Solutions**, IT & business students, Oct. 2000
Product/service, launched: date	Estonian road-map, 1989; GIS, 1994; LBS, 1999	SMS voting, 2001; SMS ticket, 2002; M-business/services...
Domestic period	Until 2001	Until 2002
Lessons learned before globalization	Modern GIS technology in USA, 1994; business development – risk capital, 1998-2000	Testing products/services on the local and neighbouring markets
Globalization	2004, LBS with Ericsson network	Associated companies and subsidiaries: Canada, 2006; China, 2008
Production development	ISO 9001:2000, since 2006	>100 services
Number of clients	>100 million	53385 service providers, 25.03.2011
Countries	In all continents with Ericsson	50 (covered by subsidiaries)
Details about BM	B2B; part of Ericsson's value chain	B2B; partnering with Ericsson; clients: Skype, Paymentwall, TravianGames, Barn Buddy, etc
Competitive edge	Latecomer effect in GIS, leverage of different technology domains	Easy to use; no fees (from concrete service only)
Strategy & IP	"Piggybacking", IP protected by business model	Leverage via subsidiaries
Customer involvement in BM development	Several tests of LBS, LBS development – via business partners: mobile network operator (EMT) and Ericsson	Tracking customers' reactions in SMS voting and other market tests

Source: Author's compilation based on Mets, 2008, 2009; Mobi Solutions, 2011; Raime, 2011; Rannu, 2004; Reach-U, 2011; Fortumo, 2011.

Table 1. HSMEs of replication business model.

Company name, founders, founding data	**Solis Biodyne**, 1995, university background of 2 founders	**Asper Biotech**, 1999, university professor & CEO of clinics	**Icosagen** (until March 2009, Quattromed), 1999; university spin-off, 4 researchers leaded by prof. Mart Ustav
Product/service, launched: date	DNA polymerases, dNTPs, PCR Master Mixes and other reagents	Genotyping equipment & service of human disease: DNA tests, 2001	medical molecular diagnostics, main customers: Estonian hospitals, 1999

Company name, founders, founding data	**Solis Biodyne**, 1995, university background of 2 founders	**Asper Biotech**, 1999, university professor & CEO of clinics	**Icosagen** (until March 2009, Quattromed), 1999; university spin-off, 4 researchers leaded by prof. Mart Ustav
Domestic period	Starting from university research needs	Practically did not exist	Small share of export; active growth on Estonian and neighbouring markets
Lessons learned before/after globalization		Selling only services, change of BM, moving equipment sales into associate	Hi-tech NPD is highly expensive; hardly manageable combination of wide product/service portfolio
Globalization	1998, USA, Germany, Finland	2001-2002, Japan, USA, Norway, Italy	2008, ASTM intern. standard D7247 on FITkit®; 2009, QMCF tech-gy licences to global pharmacies
Production development	ISO 9001:2000, since 2007	ISO 9001:2000, since 2000	ISO 15189, 2004; ISO 9001: 2000, 2007
Number of clients	>300	1000...10000	
Countries	>30	>40, in 2009	
Details about BM	B2B2C, distributers in 25 countries	B2C, direct sales of services over Internet	B2B
Competitive edge	High quality DNA enzymes - stable at room temperature	Recognized methodology, low cost	R&D-based service methodology; low cost R&D intensive service; strong growth-orientation
Strategy & IP	Patenting; distribution network development	Patent, IP partnering with Stanford University; focus on end users	Patenting; Standard-creator; widening local business via merger in 2006, sold to financial investor in 2008; transition from service to global IP business

Company name, founders, founding data	**Solis Biodyne**, 1995, university background of 2 founders	**Asper Biotech**, 1999, university professor & CEO of clinics	**Icosagen** (until March 2009, Quattromed), 1999; university spin-off, 4 researchers leaded by prof. Mart Ustav
Customer involvement in BM development	Low, practically following classical business model	Changes of BM from B2B2C to B2C, distributors' network replaced with direct sales over Internet to final customer	B2B; Local & neighbouring market service B2B has transferred into R&D and IP business mainly

Source: Author's compilation based on Solis Biodyne, 2011; Mets, 2009; Mets et al, 2010; Tänavsuu, 2009; Parts, 2011.

Table 2. HSMEs of leverage business model.

Company name, founders, founding data	**Skype Technologies S.A.**, 2002, Swedish-Danish-Estonian team	**Fraktal**, 2007, Skype-team Estonian members	**Sportlyzer** – start-up, 2009, karate Champion & web consultant
Product/service, launched: date	VoIP phone, launched Aug. 2003	Web design & service Edicy, Aug. 2009	Virtual personal coach, 22/03/2011
Domestic period	Did not exist	Practically did not exist	Start up phase
Lessons learned before/after globalization	P2P file sharing technology KaZaa	Experience of BM from Skype	Following BM of Skype
Globalization	Aug. 2003-Jan. 2004: users from 200 countries	Ongoing process	Start up phase
Production development	Intensive expansion of complexity of product	Customer involvement	Free product for customer-driven development
Number of clients, free/payable, million	560 / 8,1	0,23 / NA	Start up phase, NA
Countries	>200	>20	World-wide
Details about BM	P2P, freemium	B2C, freemium	B2C, freemium
Competitive edge	Free VoIP phone supported market expansion	Free web-host & design-based market expansion	Virtual multi-domain intelligence; free service-based market expansion

Company name, founders, founding data	**Skype Technologies S.A.**, 2002, Swedish-Danish-Estonian team	**Fraktal**, 2007, Skype-team Estonian members	**Sportlyzer** – start-up, 2009, karate Champion & web consultant
Strategy & IP	Patented product; collaborating & competing with telecoms	Basic product – free ad for the web	Basic product – free ad for the web
Customer involvement in BM development	Customer feedback for product development	Customer involvement mainly via product development	Customer involvement via product development

Source: Author's compilation based on Mets, 2009; Fraktal, 2011; Sportlyzer, 2011; Puus, 2011; Edicy, 2011; Knowledge@Wharton, 2011.

Table 3. HSMEs of freemium business model.

7. Findings about globalization and business models of HSMEs

Following general understanding from former researches, Estonia corresponds to the environments of small open economies' (SMOPEC) context of BG HSMEs being even remarkably smaller than Finland or Sweden covered by several authors earlier (Luostarinen & Gabrielsson, 2006). Since 1992 the Estonian government has practiced a liberal economic policy, and has opened the Estonian market to foreign goods and capital. That policy has helped to attract foreign investments which fostered to overcome backwardness inherited from Soviet occupation. As liberal but also comparatively poor economy Estonia has not supported neither technology-based nor any start-ups as strongly as neighboring Western countries could do. Therefore the main survival condition for companies has been the balance between costs and revenues which did not give the chance to invest enough into new technology development.

Case 1. Pour business environment at starting company is a part of explanation of "long journey" of Regio, founded in 1988 (Table 1), to global market as presented in Figure 6.

Before internationalization Regio had already quite a wide range of products of different technology domains (design, cartography, GIS and software). Because the lack of resources product development was hindered for several years in the mid of the 1990s. Later, in 1998 the Baltic Small Equity Fund (BSEF) became risk capital partner for Regio, but even that was not enough. More possibilities were created through the merger with DONE for additional investment in 2000. In February 2002, the parent company of Regio went bankrupt, which gave a chance for by management buy-out a year and a half after the merger. Global breakthrough succeeded first with one product only – location based services (LBS) provided as a part of value chain of global player Ericsson since 2004. Spreading worldwide LBS service afterward has enabled to compliment global product with the elements of its traditional and new products leveraging complex knowledge across global markets. The process in "knowledge-market" framework is described with S-shape curve.

Case 2. The journey to its own product mix and business model by the founders of Mobi Solutions, students of business and IT, was much smoother based on a good example

provided by the invention of mobile payment and launching mobile parking system in Estonia by Estonian Mobile Telephone just on the 1st of July 2000 (Rajasalu and Laur, 2003). But even then Mobi Solutions reached its own model leading to global market after several years of local and regional testing of their own services. Now, Mobi offers the specific "easy to use", "pay after receiving money" and "pay only as much as you use" business model to its clients. By creating the business model "ready for use" for their clients, Mobi has created its own business model to rent out the business model to customers. In this way the customers are co-creating their own businesses with Mobi.

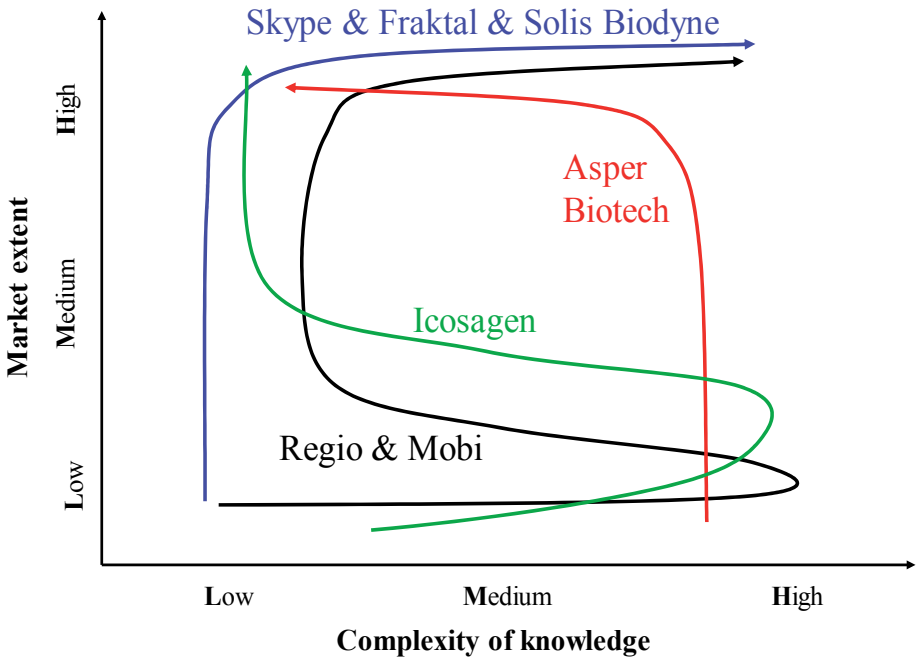

Fig. 6. Product knowledge-market trajectories of globalizing HSMEs (the author's drawing)

Mobi seems to be also "learned global" company with one big difference, although implementation of its services needs mediation of local mobile operator and network provider (frequently Ericsson), spreading of Mobi's services is quite free. And the Internet serves for offering and revenue of service – market and value chain of Mobi is quite independent compared to Regio. The involvement of customers in new product development process of Mobi, implementing of Living Lab features were unique. But now, having already global experience, Mobi team was involved into cluster initiatives of Enterprise Estonia developing Living Lab experience in Estonian ICT sector (Varblane and Lepik, 2010). Mobi's case is interesting because the lack of external funding in early development phase – main investment was founders' own work and spending money; even earnings then went for salaries of employees, but not to owners. In that stage VC providers did not agree to fund them, but later if offered, Mobi did not need VC investment any more.

Case 3. Solis BioDyne (Table 2), founded in 1995, started like Regio in still poor economic conditions with a good academic business idea originating from a university. It took only

three years to reach the US market with its main product of DNA enzymes and reagents. The company has built up its own network of distributors. This is quite a classical distribution system, only because of the international nature of science and worldwide courier services, sales are developed according to the same model globally as shown in Fig. 6. The company became famous for offering technical solution to the problem of the Bill & Melinda Gates Foundation in HIV DNA transport in the so-called "jungle conditions" (Tänavsuu, 2009).

Case 4. The case of Asper Biotech is an example of contrary development of product on the market (Table 2). The beginning was also quite classical stage of knowledge accumulation. Professor initiating the HSME was very active also in business development and finding the funding. Using already improved entrepreneurship environment in Estonia in the beginning of 21st century the founders succeeded to involve remarkable resources for product development from different risk funds and European Union framework program. Complexity of the product range at the beginning was quite high. Asper Biotech started global offering from inception. It was supported by advertising, research publications and personal contacts of prof. Metspalu. Learning in the process of market development it became clearer that in the specific business with very small shipments and mediation of genotyping services "business-to-business" (B2B) model with local partners could not be efficient. As a result direct sales ("business-to-client" – B2C model) to final customers were implemented. The most complicated part of product range – technology platform with complementary methodology and software needed another commercialization approach, therefore it was moved into another business Genorama with its specific strategy. As a result, a complex system-offer was replaced with less complex product/service for the client in the global niche market. In the "knowledge-market" axis the process could be described with the rotated L-curve (Fig. 6). Besides that the company has found that they still may be at the very beginning of customary market creation for gene test and diagnostics which market need should be facilitated.

Case 5. Somewhat similar is the development pattern of another biotech company Icosagen, which started as a university spin-off, but its trajectory is influenced much by high-level competence-base, local service business-oriented growth with smaller share of international transactions during several years. Intensive product development, license deals and patenting ensured the real breakthrough with standardizing their FITkit® technology in specific field globally. Selling local market oriented medical diagnostics subsidiary with the wide product range in 2008 to VC created a new situation for the company – now R&D and services could be more focused on the development of highly efficient QMCF technology and IP trade as well on services implementing the FITkit® technology. This is not clear yet about leverage potential of global breakthrough with other related technology/knowledge domains, therefore the development trajectory is described with lower half of S-curve. Icosagen has heavily utilised IP protection. Icosagen has patented and protected trademarks of their solutions FITkit®, E2Tag, and QMCF. Even more, Icosagen has invested their funds and efforts in standardizing their technology. In 2008 ASTM International (www.astm.org) adopted a new standard for test method that bases on Icosagen's FITkit® technology.

Case 6. Skype represents another development trajectory, where globalization starts from one concrete product and after global breakthrough it is leveraged with wide range of

improvements and additional functions growing knowledge complexity of the product. The trajectory (see Figure 6) seems to be very relevant to classical process of moving from "high product" to "high system" business, which could be described with the Γ-curve. The knowledge accumulation for VoIP-company was strongly supported by "pre-history" of technology and business competences developed in KaZaA project. The same important was also an international team, its visionary ideas, technological skills and capability to attract VC at the very early stage. Although some experts guess that in technological meaning Skype did not change too much in ICT world (Landler, 2005), main was clever way for "putting together bits and pieces". The "peer-to-peer" (P2P) technology concept and business model of the Skype has found being disruptive innovation (Yovanof & Hazapis, 2008) completely changing global market of telecommunication. The case confirms again that the most effective innovations do not need hard basic research any more, just new ideas how basic knowledge could be used (Mets, 2006).

Case 7. Fraktal – the company developing web-design concept and environment Edicy has its roots in Skype as the founders came from the Skype team, but also the business model and internationalization trajectory have a very similar (but not completely configured) yet pattern (Fig. 6). However, it includes a very specific aspect – involvement of customers in its product development phase.

Case 8. From that idea the next step can be seen at Sportlyzer (Table 3), which besides "freemium" business model and customer involvement in product development has gathered together an inter- and multidisciplinary team for creating virtual intelligent consultant in sports coaching for active people around the world. The initiator of the idea Tõnis Saag (32) has personal long-term experience in sports, after receiving a bachelor degree in public governance he started master program in entrepreneurship. One of his first study tasks – his business plan has been realized in a new business now. The concept of virtual personal trainer was just launched in March 2011. Its globalization trajectory is expected to follow the Skype, but as it is still in embryonic phase, no track in Fig. 6 yet. Start-point could be expected somewhere at higher complexity service then.

As seen from the mapping of knowledge-market trajectories of eight hi-tech companies there exist three main patterns for reaching global market: rotated L-curve and Γ-curve describing born global companies, and S-curve belonging to learned (sometimes "born again") global company. All these patterns can be combined for description of some longer period of development processes. The type/pattern of trajectory seems not to be depending on technology field of company – ICT or biotech. Besides, in biotech business on the example of three companies patenting of own inventions seems more compulsory than for ICT field where Skype has been more active in patenting, others less. Partly that can be related to observation that product ideas of biotech companies are more based on university R&D, ICT businesses have weaker linkages to basic research.

8. Main results and conclusion

Analyzing globalization processes and trajectories, and reaching real functioning business model configuration by eight completely or partly Estonian-origin case companies above allows us to make some generalizations.

First, striving to globalize own business is very natural for hi-tech SMEs of small country origin, which confirms so called push factor of need to cover R&D expenses and pull factor of demand by huge global markets.

Second, although "born global" concept of such type of HSME has widely spread among researchers, understanding real mechanisms and business models enabling to implement these mechanisms for born global businesses remain behind the screen until somebody discovers opportunity and invents business model to implement that opportunity. Usually this creative process can be not synchronized with creation of formal business body (company). Therefore not depending on "born" or "born again" concept real creative "learned global" process for business model invention takes a place.

Third, appearance of the "born global" phenomenon in company's behavior presumes knowledge and experience accumulation – i.e. entrepreneurial learning period, which is leading to (global) business (breakthrough) opportunity recognition. This competence accumulation period can take place before formal company founding as well as in the framework of already functioning businesses.

Fourth, although the global breakthrough in narrow niche market and product domain seems to be dominant among HSMEs, this is not the absolute rule as demonstrated by Asper Biotech going global with new technology platform and service based on that in the same timing. Later they reshaped their business model raising the question about rationality not possibility of offering some product combination.

Fifth, sectorial differences between HSMEs partly influence the business model to be used. We have no example of biotech companies using freemium business model spreading wider in ICT business. In that context biotech companies combine Internet with more traditional business logistics although globalization knowledge-market trajectories can be similar as demonstrate the cases of Solis Biodyne and Skype or Icosagen and Mobi. That means just global breakthrough from inception with Γ-shape trajectory or journey of learning according to S-shape trajectory can characterize the companies in both sectors.

Sixth, business model, especially "freemium" type of that in ICT field seems to be the instrument to overcome cultural, legal and other barriers of traditional businesses like these appear according to Uppsala model. Another approach is business in global communities with similar culture and values like "scientist to scientist" model as demonstrate biotech HSMEs.

Seventh, as shown by cases of Regio, Mobi and Sportlyzers there is growing importance of multi-disciplinary teams in development of HSMEs.

Eighth, the last trend seems to be involvement of customers into product as well business model development process as demonstrate the followers of Skype – Fraktal and Sportlyzer.

Usually BG HSMEs focus on global niche market, but they can also challenge the whole industry. It seems that partly the aspect depends on the maturity of the industry and the linkages to basic research. Skype is a good example of going wide market from inception. But Asper Biotech could refer to the potential/chance to turn new technology niche product/service into wide customer market need as a result of growing awareness of potential clients in genome testing.

BGs of small (transition) country origin have usually relatively low resources for marketing, but not only, there is lack of resources for anything. But this could be not disturbing to global breakthrough as seen on the example of Skype. Clever business model and free of charge basic service with freemium business model can create absolutely new approach in the industry. Technology innovation that means also innovation in the market and human behavior, can finally lead to social innovation. Moving from single product/knowledge domain to "high system" products is not the absolute rule. Market can cause the contrary processes, i.e. simplifying complexity of the product as well as change of the business model. That happens in the learning process the company can experience on the market.

The experience with the eight Estonian-related case study companies demonstrate that the HSMEs of small country origin can be very successful, but even success stories have their "critical" points, learning from which creates better basis for knowledge economy of the country. From lessons experienced by case companies can learn entrepreneurs and managers of technology and knowledge-intensive businesses as well as relevant public sector. These are lessons for educators of future engineers and scientists-technologists – how to integrate technology competences with entrepreneurial skills. The schools the engineers and researchers of case companies graduated from are still giving too little knowledge, skills and attitude towards creative behavior in entrepreneurship. Creative entrepreneurship is the challenge not only for higher education institutions of Estonia but also for the whole national innovation system.

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What are the differences between an entrepreneur and a manager? According to Schumpeter, the main difference lies in the entrepreneur's ideas, creativity, and vision of the world. These differences enable him to create new combinations, to change existing business models, and to innovate. Those innovations can take several forms: products, processes, and organizations to name a few. In this book, an array of international researchers take a look at the visions and actions of innovative entrepreneurs to be at the source of new ideas and to foster new relationships between different actors to change the existing business models.

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