



PhD Program in Business Administration

Entrepreneurial Management in Hungarian SMEs

PhD Thesis Work

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The choice of topic, justification of the central research question, and contribution to theory

I started my PhD studies in September 2002 on the PhD Program of Corvinus University of Budapest (formally known as Budapest University of Economic Science and Public Administration), specializing in the field of strategic management under the supervision of Professor Károly Balaton, DSc. From the very beginning, I was interested in studying the strategic renewal capabilities of organizations exhibiting innovative market behaviors from the point of view of management. My initial focus was refined first during the course of my PhD studies in Hungary and abroad, and second as I have progressed in elaborating the pertinent literature. My thesis thus focuses on the strategic behavior of managers in small- and medium-sized organizations with the aim of studying the phenomenon of entrepreneurial management in organizational settings.

The underlying assumption of my dissertation is that strategy is a pattern in a streams of actions, whether intended or not. In spite of the great variance in these behaviors, a few consistent patterns can be identified. With the appropriate use of taxonomy formation, however, these patterns in behavior can be classified into a few easily separable types of business-level strategies (for more details see Antal-Mokos and Kovács, 1998; Hortoványi and Szabó, 2006; Miles and Snow, 1978). Taxonomies supported by empirical studies not only expose the generic strategies but, at the same time, explain differences in management and organizational processes (Ucbasaran et al., 2001). Entrepreneurial management is assumed to be one of such behavioral patterns (a latent strategy). The main goal of my research is to identify and analyze thoroughly the phenomenon of the entrepreneurial management process. In order to reach this goal,

- I have embedded my research in a broader context for systematically mapping the roots of entrepreneurship. After summarizing the literature review, I position my research in the cross-section of “individual” and “process” studies, namely, what empirical evidence is provided by managers of Hungarian SMEs that could help us to understand the phenomenon of entrepreneurial management and what can we learn from the behavior of entrepreneurial managers that may be utilized in professional management?

- Focusing closely on the practice of entrepreneurial management, I have revised Timmons's model (1994) and derived my hypotheses upon the suggested new model. I have also incorporated the critiques of previous studies and identified a novel research methodology – multidimensional scaling – for revealing the latent strategies and identifying taxonomies. Entrepreneurial managers are identified on the level of their entrepreneurial orientation. My hypotheses are tested by cross-tabulation and Pearson correlation.
- My results have revealed that there are two new, formerly hidden dimensions opposed to entrepreneurial orientation: “speculation orientation” and “product push orientation”. By distinguishing entrepreneurial orientation from these dimensions I believe the verification of my hypotheses is improved. Finally, the interpretation of my results provides useful insights for managers and policy-makers as well as researchers. In addition, I also identify new research questions for future, follow-up research.

1. The evolution of entrepreneurship theory

1.1. The roots of entrepreneurship in economic theory

1.1.1. Entrepreneurship, as arbitrage

It was the writings of the Irish-born banker, Richard Cantillon, whose work *Essai Sur la Nature du Commerce en Général* (published posthumously in 1755 and 1931), that gave the concept of entrepreneurship an “economic meaning” and the entrepreneur a role in economic development (Cornelius et al, 2006: 377). Cantillon had defined discrepancies between supply and demand as options for buying cheaply and selling at a higher price. Entrepreneurs were alert to supply-demand arbitrage options, however, they were assumed to purchase inputs at a certain price while selling them at an uncertain price. This emphasis on the arbitrage clearly suggested that entrepreneurs bring the market into equilibrium (Murphy et al, 2006) by eliminating market imperfections.

1.1.2. Entrepreneurship, as creative destruction

The nineteenth century was characterized by the emergence of an industrial society, that begun with Britain’s industrial revolution from the mid 1700s until the 1830s. During this time of conjectures, competition across industries (e.g. cotton versus corn) added discontinuity dynamics to economic activity and entrepreneurs were able to discover more niches and kinds of opportunities, and they began to accumulate wealth and displace aristocrats. Explanations of entrepreneurial activity began to include unique awareness and understanding of such circumstances. Entrepreneurial activity came to be regarded as a mechanism of change as it transformed resources into unforeseen products and services.

It was against this background where the thoughts of Joseph Schumpeter (1885–1950) were developed. Schumpeter’s seminal work was *Theorie der Wirtschaftlichen Entwicklung* (1912, and a rather different second edition was published in 1926) or *Theory of Economic Development* (1934), which is the English translation of the second edition (c.f. Madarász, 1980). It was Schumpeter who postulated that capital consists more of goods or production equipments, rather it is a political factor; a power over the production (Sundbo, 1998:54).

Capital only has a function in a dynamic economy, as a tool to give the entrepreneur power to break the market's status-quo by introducing innovations into the system. Accordingly, entrepreneurship forces "creative destruction" across markets and industries, simultaneously creating new products and business models. The core of Schumpeter's definition is that innovation is an effort made by one or more people who produce an economic gain, either by reducing costs or by creating extra income. The economic gain is in this case not related – as in traditional economic models – to the reduction of wages or to the increase of prices. Rather, there must be a qualitative leap induced by the change: there must be elements which are new to the given sector or industry.

Schumpeter's contribution had three important merits on the development of entrepreneurship theory:

First, entrepreneurial activity is largely responsible for the dynamism of industries and long-run economic growth (Szanyi, 1990). As Baumol pointed out (1968) the entrepreneur does not only compensate for the market imperfections which were assumed by microeconomic theory, but entrepreneurs link market problems with innovation, and through this create growth and development for both the firm and the market. By focusing on the creation of future goods and services, their delineation directs scholarly attention to the problem of emergence (Gartner, 1993). This added a distinctive feature to entrepreneurship research; an element that was missing in established theories in economics and management (Davidsson, 2003:331).

Second, in Schumpeter's theory the ability to break with established practice and "keep capitalism moving forward" (Mintzberg et al, 1998:125) have great social consequences. The Schumpeterian innovation that creates disharmony and disorder is not created by the capitalists' exploitation of the working class, but by the creative activity of the entrepreneurs (Sundbo, 1998:55). The creative destruction is to be remedied subsequently by imitators (i.e. other market actors), who will ultimately balance the system (Murphy et al, 2006). The inclusion of imitators or followers adds the view that driving the market process does not require that the first mover makes a profit. Even if the first mover eventually loses out, when someone gets the business model right, the process leads to a lasting change in the market (Christensen, 2003; Davidsson, 2003).

Third, Schumpeter portrayed entrepreneurs as visionary change agents (Sandberg, 1992), and characterized them with the desire to build up wealth. From Schumpeter's point of view, however, the entrepreneur is not necessarily somebody who puts up the initial capital or invents the new product, but the person with the business idea (Mintzberg et al, 1998).

As a consequence, the view that ownership is required for entrepreneurship was challenged (Murphy et al, 2006). Importantly, entrepreneurs should not necessarily be owners or founders, but could be hired managers as well. As Davidsson argues (2003:334) entrepreneurial activity refers to "all new activities regardless of the formal or legal organizational context" hence, the emergence of new goods or services can occur within new or established organizations, i.e. through different modes of exploitation. Hence, the stated domain of entrepreneurship includes corporate entrepreneurship as well (Stevenson & Jarillo, 1990; Zahra et al, 1999a), where, corporate entrepreneur is someone particularly rich in initiative within an organization, someone who struggles to realize an idea often at the expense of existing norms (Sundbo, 1998).

Schumpeter's reasoning of creative destruction stimulated considerable discussion. According to Kirzner (1973), for example, entrepreneurship consists of competitive behaviors that drive market processes. Simon (in Davidsson, 2003:318) put it slightly differently; by emphasizing that entrepreneurship is the introduction of a new economic activity that leads to change in the marketplace. Both definitions highlight that entrepreneurship is about making a difference. If it does not, it is not entrepreneurship (Davidsson, 2003:318). Under this suggested framework, entrepreneurship must produce something "new to market". That firm is entrepreneurial which gives buyers new choice alternatives to consider, challenge incumbents as well as attract additional entrants as followers. As a result of entrepreneurial activity, resources are more effectively and efficiently used, and this is what drives the market.

In some respect, the suggested definition of entrepreneurship is restrictive. The inclusion of outcome criterion – in the form of lasting market impact – distinguishes entrepreneurs from business founders and managers. Without a strong, conscious drive to grow and conquer, business founders are not entrepreneurs. Neither managers, who used to plan, coordinate and evaluate (Chandler, 1990). Moreover, entrepreneurship shall be

distinguished also from change management. The management of organizational and ownership changes – such as acquisition, internal re-organization, or management succession – by themselves do not constitute entrepreneurship (Davidsson, 2003:321). A manager may facilitate entrepreneurship through organizational change, but without changing the buyers' choice options or influencing competitors' behavior the activity remains change management.

Consequently, it is important to separate conceptually the organizational or ownership change from its effects. It is the market related activity that may eventually result in entrepreneurship. Therefore, it is the launching of new business activities that might follow from it, and not the organizational change itself, that constitute entrepreneurship.

1.1.3. Entrepreneurship, as value creation

The Schumpeterian innovative path breaker has remained a basic point of reference for many of his successors (e.g., Cole, 1959; Knight, 1967; Drucker, 1970; Baumol, 1968, 1990). The Austrian economics school viewed entrepreneurial activity as rooted in an economic system in which information is unevenly distributed across people (Shane, 2001). The division of knowledge explains the presence of uncertainty, which gives rise to market opportunities. Drawing on the arguments rose by the Hayek and Mises, Kirzner (1973) proposed that it is the possession of idiosyncratic information that leads to the existence and identification of entrepreneurial opportunities. Because every person has some information that others do not have, the information as well as knowledge is randomly dispersed. Thus, there are inherently rooms for improvement in the system, which also implies that resources are not coordinated in an effective way.

Consequently, the inefficiencies create opportunities to new economic activities that add value (e.g.: a new alternative that buyers can choose). By seeking out these opportunities and by constantly reorganizing resources in a more effective way, the entrepreneur leads the process toward stability (Landström, 2005:39) thereby entrepreneurship contributes to the reallocation of resources in society (Dahmeén, 1970 in Landström, 2005). The entrepreneurial alertness to opportunities and the creative re-combination of resources turned the perception of innovation to be constructive (Davidsson, 2003).

Creating something new, improved, or competing is not a straightforward task, however. For Frank H. Knight (1967) and Peter Drucker (1970) entrepreneurship was about dealing with uncertainty. Knight was the first who made a distinction between risk and uncertainty (Cornelius et al, 2006), where uncertainty refers to situation in which outcomes themselves are unknown, while risk refers to the situation when the probability of distribution of outcomes is unknown. Uncertainty hence is unique and uninsurable, and scholars argue that the skills of the entrepreneur lie in the ability to handle the uncertainty that exists in any given society.

Despite of its origin in economic theory, the traditional theory of economics has had little room for entrepreneurship. Regrettably, aside from the above mentioned scholars and some others, few economists followed Schumpeter's tradition. Mainstream economics always preferred the abstractions of the competitive market where resources would find each other through a price system; and for those who "focus on the tangible parts of the business, such as money, machinery, and land, the contribution [of entrepreneurial vision and creativity] may seem baffling" (Mintzberg et al, 1998:128).

1.2. Entrepreneurship, as an independent field

Near the end of the nineteenth century, the concept of diminishing marginal utility as an explanation to certain economic activity opened the way for subjectivist frameworks describing relations among people, not objects like demand and supply (Murphy et al, 2006). As a result, socio-political and cultural circumstances, *vis-à-vis* economic ones, became increasingly central drivers of market system phenomena and problems. Human and environmental factors became useful for explaining market actor behavior in addition to economic ones. It was left to behavioral science researchers to continue theoretical development in entrepreneurship research, and research comparing entrepreneurs to other types of people emerged. David McClelland was one of the first to present empirical studies in the field of entrepreneurship that were based on behavioral science theory (Cornelius et al, 2006).

1.2.1. Entrepreneurial traits

In his pioneering work *The Achieving Society* (1961), McClelland highlighted that psychological traits such as need for achievement, desire to accept responsibility in complex situations, and willingness to accept risk under conditions of skill-based performance are factors stemming from individual differences (Bakacsi et al, 1996). For McClelland, the premise was that the norms and values that prevail in any given society, particularly with regard to the need for achievement, are of vital importance for the development of that society (Midgley & Dowling, 1978).

According to his view, entrepreneurs are people who have a high need for achievement coupled with competitive spirit, strong self-confidence and independent problem solving skills, and preference of taking calculated risks. They work to excel: either to provide remedy for inefficiencies or to outperform others by new solutions. Moreover, McClelland showed correlation with the level of a country's need for achievement and its economic development through a large number of experimentally constructed studies. McClelland with his seminal work contributed greatly to the recognition of entrepreneurs as an important driving force of development (Johnson, 1990).

As a result, two new research trails emerged, one, focusing on the motivations of entrepreneurs as primary causes for their behavior (Gregoire et al, 2006); second, drawing attention to the contextual factors that motivate and affect individual level entrepreneurial activity (Shaver & Scott, 1991).

1.2.2. Entrepreneurship and regional development

Meantime, public policy makers were confronting the challenge in Western Europe and North America of restoring economic growth and competitiveness (Audretsch, 2004). The turning point was the late 1980s, when conventional wisdom that large corporations in oligopolistic setting are the engine of innovative activities was refuted. Empirical studies (i.e.: Ács & Audretsch, 1988) found consistent and compelling evidence that small firms and new ventures were also important source of innovation.

In addition, the regions that exhibited the highest rates of growth and job creation also exhibited the highest rates of entrepreneurial activity. The globally experienced huge structural changes in societies worldwide after the post war era – e.g.: economic recessions, technical progress, increasing internationalization of economies, and far-reaching political changes emphasizing stronger market-oriented ideologies – created a level of uncertainty and disequilibrium that constituted a breeding ground for innovation and entrepreneurship (Cornelius et al. 2006; Stevenson & Jarillo, 1990). From the fall of Rome (circa 476 CE) to the eighteenth century, there was virtually no increase in per capita wealth generation in the west.

With the advent of entrepreneurship, however, per capita wealth generation and income grew exponentially by 20 percent in the 1700s, 200 percent in the 1800s, and 740 percent in the 1900s (Drayton, 2004 quoted in Murphy et al, 2006). This new economic up-heal redirected the research interest to the study of supply side economics and in factors – like entrepreneurship – determining economic growth. Baumol (2002 in Audretsch & Kleinbach, 2004) argued that entrepreneurial activity account for a significant amount of the growth left unexplained in traditional production function models.

While the traditional factors of labor and capital and even the addition of knowledge are important in shaping output, the capacity to harness new ideas is also essential to economic output. Consequently, entrepreneurs are socially important not because they

exist, but because they contribute to productivity and growth. Audretsch and Kleinbach (2004) found empirical support that entrepreneurship exerts a positive impact on a region's output as measured in terms of Gross Domestic Product. The role of entrepreneurship has been reversed completely, and entrepreneurship was perceived as an engine of economic and social development throughout the world.

By the new millennium, public policy has responded with the promotion of entrepreneurship, even it became the central thrust of the European economic strategy (Audretsch, 2004). That milieu stimulated today's considerable discussion, debated and popular research investigating the link between innovation and regional development (Wenneker et al., 2005; Audretsch & Fritsch, 2002; Ács et al, 2001); legal aspects and policy implications with special focus on transition economies (Aides, 2005; Johnson et al, 1997; Vecsenyi, 1992; Hisrich & Vecsenyi, 1990), and finally self-employment and regional development (Blanchflower et al, 2001; Csapó, 2006). Based on the still vivid general interest in these research traditions, the Global Entrepreneurship Monitor (GEM) – a not-for-profit international academic research initiated in 1999 with 10 countries – today conducts research in 43 countries. The aim of the GEM research is to capture the entrepreneurial landscape by investigating entrepreneurial activity at various stages of the entrepreneurial process, as well as studying a variety of factors characterizing both entrepreneurs and their businesses in each participating nation and across countries (Ács et al, 2001). In some countries, the survey also includes questions for the analysis of family-based entrepreneurs and social entrepreneurship.

Consequently, in the late 1970s entrepreneurship began to emerge as an independent academic field of inquiry. The Babson Conference on Entrepreneurship was started in 1982. The Academy of Management made a separate Entrepreneurship division in 1987. Although the 1980s were a period of growth in entrepreneurship institutionally, much of the research was largely descriptive and was quite simplistic both methodologically and theoretically (Shane, 2001). As scholars entered entrepreneurship research from others fields, most notably from the field of strategic management (e.g.: Kathleen Eisenhardt, William Gartner, and Ian MacMillan etc.) strong connections could be found with between entrepreneurship and other fields of business and social science inquiry (Shane, 2001).

1.2.3. Women entrepreneurs

In 1976, the *Journal of Contemporary Business* published Eleanor Schwartz's article "Entrepreneurship: A New Female Frontier". While her article was not the first academic paper on entrepreneurship, it was groundbreaking in that it was the first article ever published focusing on women entrepreneurs (Hisrich & O'Brien, 1981). Historically and traditionally women have been confined to the private sphere of domesticity, and hence have been denied access to the requisite resources for the entrepreneurial entry – access to capital, business and technical education, or prior management experience.

The typical cases of business ownership of woman throughout the centuries have usually been those in which the woman inherited a business from her father or husband. Because of the scarcity of women entrepreneurs until relatively recently (1900s), information and knowledge about women as business owners or entrepreneurs has been limited.

In contrast, from 1972 to 1982 the number of self employed women in the United States increased by 69 percent, five times greater than that for men in the same period (Scott, 1986) Similar trends were observable both in developing countries and in transition economies (e.g: Hisrich & Fülöp, 1994). While many businesses operated by women entrepreneurs were in traditionally female dominated occupations (like services and retailing), women were also broadening their participations in non-traditional fields, for example in forestry, fishing, mining, construction, and manufacturing (Hisrich & O'Brien, 1982; Stevenson, 1986). The objectives of studies focusing on women entrepreneurs were to identify the reasons why women were going into business for themselves, the types of women who were doing so, how successful they had been, and finally what are – if any – the disadvantages and advantages of being female entrepreneurs compared to their male peers.

1.2.4. Entrepreneurial process

At the beginning of the millennium, entrepreneurship scholars became particularly engaged in studying the phenomenon of entrepreneurial process: from opportunity exploration to exploitation. While retaining an interest in individuals, scholars have emphasized the fit between the entrepreneurial actions and the specific opportunity (Davidsson, 2003). Entrepreneurship actually appears to be influenced heavily by factors beyond the control of individual entrepreneurs (Shane, 2001).

Most importantly, the variance of opportunities – due to their context specificity – seems to be crucial to the process (Gartner, 2001; Low & MacMillan, 1988). Shane and Venkataraman (2000) have claimed that opportunities exist irrespective of individuals or firms; which highlights the importance of studying the possibility of different modes of exploitation for a given opportunity. According to Davidsson (2003:338-339), the assumption that “opportunities exist independently of particular actors”, is true. However, opportunities do not exist as complete; they do not come to fruition without unique insights and organizing activities of the entrepreneurs.

Because of differences in knowledge, skills, motivations and other dispositions, individuals (and firms) differ from one another as regards what ideas they can and will pursue and as regards what external opportunity they can profitably exploit, and how.

In short, economy is fundamentally characterized by heterogeneity; therefore individuals, organizations, competence clusters, regions, and industries differ in terms of discovery and exploitation propensity. For example, “opportunity-based” entrepreneurship and “necessity-based” entrepreneurship occur for very different reasons. Hence, the intersection between opportunities and entrepreneurs or mode of organizing, or both, has become an emerging issue in the development of entrepreneurship theory (Busenitz et al, 2003).

Putting slightly differently the subjectivist perspective on opportunity, it seemed meaningful to look at how individual initiative enters the exploitation process. It all started with the influential paper of the sociologist Mark Granovetter published in 1973. In *The Strength of the Weak Ties* Granovetter argued that weak ties (i.e. acquaintances, that are relative loose contacts available to an individual) provide access to information and resources beyond those available in strong interpersonal circle; but strong ties have greater motivation to be of assistance and are typically more easily available.

1.2.5. The social nature of entrepreneurship

Inspired by social network theory, entrepreneurship scholars began to investigate the phenomena from a fresh angle: what are the impacts of factors such as prior knowledge or social network on both identification of opportunities and their transformation into value (Gregoire et al 2006). For example, entrepreneurship researchers argued that

information provided through weak ties enable entrepreneur to identify opportunities; hence they are rich sources of entrepreneurial ideas (cf. Hite, 2005; Floyd & Wooldridge, 1999; Hansen, 1999; Hortoványi & Szabó, 2006b; Uzzi, 1997; Hansen, 1991). Having identified an opportunity, the entrepreneur needs to determine which interpersonal relationships are crucial for support; and most of his or her time must be spent on building, negotiating, and maintaining these relationships (Byers et al, 1997). As a result, a new social network emerges, in which the entrepreneur becomes a central figure.

The key part of the entrepreneurial process is the articulation of the idea. Since the entrepreneur relies on his or her subjective, prior knowledge in judging the value of an opportunity, the key part of the process is to articulate their idea to others who may be unsure about or would not do it at all. The social nature of entrepreneurship means that entrepreneurs need to spend a great deal of time with searching, persuading, and negotiating in order to indeed pursue an opportunity beyond the resources they control currently.

Consequently, by “bridging” these otherwise unconnected persons or groups, entrepreneurs can extend their capabilities and access to resources (Floyd & Wooldridge, 1999). However, sparse network rich in structural holes, featuring the absence of ties among those in the network (Burt, 1992) present an action problem to implement ideas (Obstfeld, 2005). Interestingly, research highlighted that an individual who is first to recognize an opportunity may not be the one who champion the mobilization of resources. Venkataraman et al. (1992) pointed out that the shift between the person, who identify opportunity to another who actually realize that opportunity is more likely the result of social isolation created by the individual’s lack of appropriate ties, or the inability to nurture and develop such ties. It follows that in social network individuals are disadvantageous with a few weak ties compared to individuals with multiple weak ties as they become disconnected from the other parts of the network (Barabási, 2003).

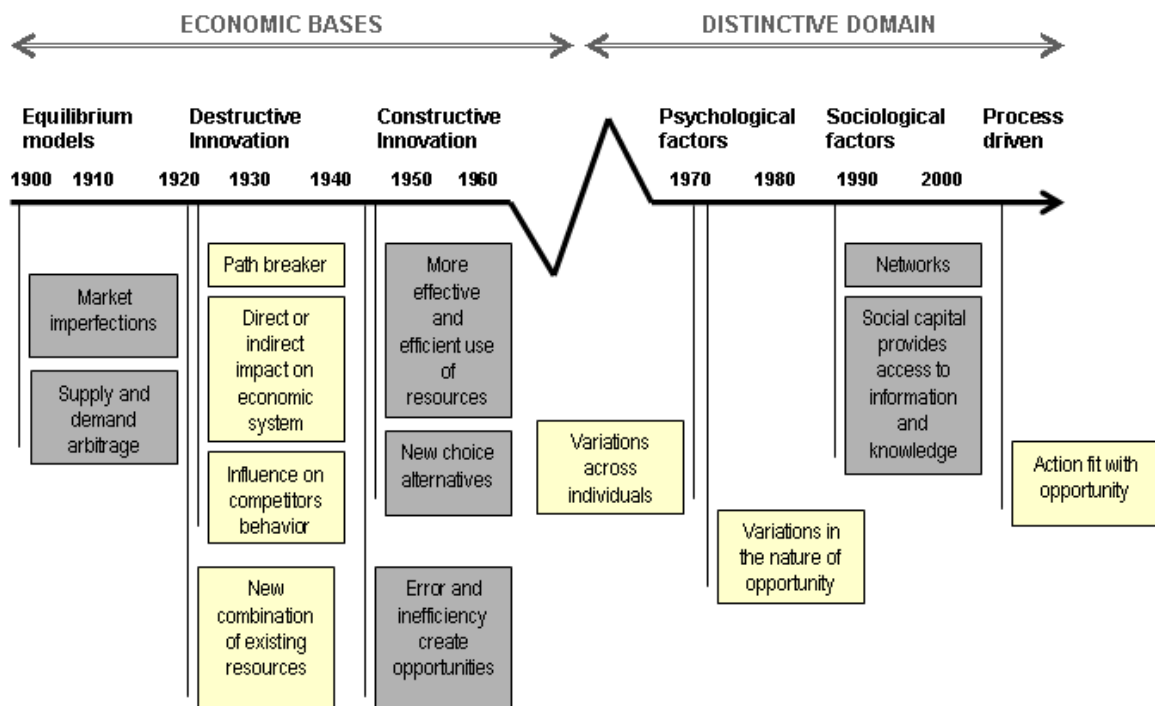
While various aspects of a person’s location in a structure of interpersonal relationships, it became apparent that social networks have value. Social networks improve productivity of certain individuals and groups, as their superior connections to others allow them to gain access to valuable resources. According to Coleman (1988) social capital facilitates individual or collective action. While in his work, Coleman used the term to explain

particular social phenomena neutrally (Portes, 1998), such as how some people of privilege managed to gain access to powerful positions through their social connections, he reveals that social capital is a privilege that is linked to the possession of a membership in a group. Hite (2005) has revealed that entrepreneurs can proactively manage their ties in order to enhance the emergence and growth of their venture idea.

1.3. Milestones in theory development

The following figure provides a comprehensive overview of the conceptual timeline in building entrepreneurship theory. The milestones indicate the process of establishing entrepreneurship as a distinct scholarly domain, although the certain aspects of the phenomena are also explained and predicted in other established disciplines such as economics, psychology and sociology as well as the various branches of management studies. During its 35 years of existence, entrepreneurship theory has been developed by addressing questions through inductive approaches. Therefore, theoretical inputs and quality standards from other fields of research were contributed.

Figure 1. Theory development timeline



Source: Adapted from Murphy et al (2006)

While not fully mature, entrepreneurship shows all the signs of a maturing field from its increasingly internal orientation and the establishment of key areas of research through to an enhanced, discipline-specific, theoretical approach with a professional language of its own (Cornelius et al. 2006).

2. Conceptual and empirical challenges of the phenomenon

Despite the number of published papers that might be considered related to the theory of entrepreneurship, no generally accepted theory of entrepreneurship has emerged (Gartner, 2001) the body of entrepreneurship research is stratified, eclectic, and divergent. Analysis of published entrepreneurship researches (c.f. Aldrich & Baker, 1997) show that the field generates many theories and frameworks; multiple but disconnected themes reflecting the disciplinary training and lens of their authors (Gartner et al, 2006) and there exists no powerful unifying paradigm (Busenitz et al, 2003).

In its increasing complexities of its own, entrepreneurship is intertwined with a complex set of contiguous and overlapping constructs such as management of change, innovation, value creation, small business management, technological and environmental turbulence, and industry evolution. Furthermore, the phenomenon can be productively investigated from disciplines as varied as economics, sociology, finance, history, psychology, and anthropology, each of which uses its own concepts and operates within its own terms of preference (Cornelius et al. 2006; Low & MacMillan, 1988).

Despite the potential for richness and texture that such a diverse mix of disciplines brings, in many cases, the problems and issues addressed by researchers are fundamentally different from each other. In comparing management and entrepreneurship research published until 1995, Aldrich and Baker (1997) concluded that entrepreneurship research exhibits comparatively low levels of convergence. More importantly, the progress toward coherence in paradigm development tends to be rather slow and limited (Murphy et al, 2006; Curran and Blackburn, 2001; Shane and Venkataraman, 2000).

In 1988, Low and MacMillan in their article *Entrepreneurship: Past Research and Future Challenges* critiqued researches in the field of entrepreneurship, which inspired three important advances in theory development (Aldrich & Martinez, 2001) including:

- (a) a shift in theoretical emphasis from the characteristics of entrepreneurs as individuals to the consequences of their actions;
- (b) a deeper understanding of how entrepreneurs behave: use knowledge, networks, and resources to construct firms;

(c) a more sophisticated taxonomy of environmental forces; all at different levels of analysis.

In addition to the above, the critique had raised another important issue: the lack of specification in the level of analysis for entrepreneurship research. Ucbasaran et al. (2001) went further by categorizing entrepreneurship research into a hierarchy of analysis levels: research dealing with the *individual* entrepreneur, the entrepreneur's *firm*, and the *industry* the firm is in. Taking it further, the geographical, regional, national, and international context of the firm are also relevant levels for comparative studies.

In recognition to the complexity and the dynamic nature of the phenomena, table 1 aims to briefly summarize the conceptual challenges in entrepreneurship literature. The horizontal axis – as suggested by Low and MacMillan – contains the outcome, the process, and the context; the three variables are indispensable for understanding entrepreneurial success. The vertical axis contains the four different levels of analysis. Their intersection specifies the underlying research focus.

Table 1. Summary of conceptual challenges in Entrepreneurship Theory

Level of Analysis	Outcome	Process	Context	COMMON drivers
Individual	Unique characteristics of the entrepreneur as cause of performance	Connection between action and inputs	Result of stimuli: life experience or training	Why some people and not others
Start-up and Small Firm	Causes of failures and/or exits	Process of capitalizing on smallness and newness	Resource mobility & public capital availability	Ingredients of successful venture creation
Corporate	Corporate internal venturing & Spin-offs	Intrapreneurship	Renewal (cf: industry life-cycle)	Paradox of efficiency
Aggregate	Engine of regional growth	Social embeddedness	Cultural differences in entrepreneurial inclination	Policy implications
VIEWED as...	Economic phenomenon	Social-behavioral phenomenon	Evolutionary phenomenon	

The following section provides in-depth discussions about each research stream presented in the matrix.

2.1. Research focuses according to variables investigated

2.1.1. Outcome

Outcomes refer to the growth and the performance of trends in financial, organizational, and human terms over time and in comparison to competitors. The competitiveness of entrepreneurial businesses vis-à-vis their traditional competitors is the important issue here.

Being a defining characteristic of entrepreneurship, organic growth of firms has become a legitimate interest for entrepreneurship research in the late 1980s with the main research question: “Why do some firms continue to develop and expand, whereas others remain small and behave conservatively” (Davidsson et al, 2006:1).

Advocates of outcome perspective argue, that without any consideration of growth, entrepreneurship is reduced to a “dichotomous empirical variable” (Davidsson et al, 2006:33). Davidsson et al. (2006) suggest that entrepreneurship is an *economic phenomenon* occurs only if value is created and hence, entrepreneurship shall be measured by what effect new organization or activity has. An organization or an activity can grow only if it is successful. Most start-ups never create much organization; and new activities undertaken within existing organizations do not add to their size. Irrespective of which level of analysis is chosen, some aspects of growth should be regarded as part of the entrepreneurship phenomenon.

In addition, the measurement of the overall performance – including efficiency and effectiveness of different entrepreneurial activities – is essential for applied research (Venkatarman, 1997; Low & MacMillan, 1988). According to Gregoire et al. (2006), entrepreneurship scholars begun to focus on the venture-performance inspired by the seminal work of Porter’s (1980) *Competitive Strategy*, though this cluster of research – in contrast to strategic management – is perhaps less focused on the influence of industry structure, firm-level strategy, and more with founders’ and organizational characteristics (cf: Dobák, 1988; Roure & Maidique, 1986; Van de Ven et al, 1984). However, the relationship between entrepreneurship and performance is rather complex, due to the multidimensional nature of performance construct (Lumpkin & Dess, 1996).

Inherently, entrepreneurial activities may lead to favorable outcomes on one performance dimension and unfavorable outcomes on another performance dimension.

The choice of appropriate performance indicator is essential for conducting valid research, since the applicability of the indicator is contingent on the unit of analysis (Davidsson et al, 2006). When the unit of analysis is the individual, the use of sales as well as the accumulation of assets is equally interesting as a performance indicator. The growth in terms of employment, however, seems to be of secondary relevance, since increase in employment is almost never a goal in itself for a growth oriented entrepreneur.

Table 2. The relationship between unit of analysis and suitable growth indicators

	Individual	Firm	Aggregate
Sales	High suitability	High suitability	High suitability
Employment	Low suitability	High suitability	High suitability
Assets	High suitability	Limited suitability	Low suitability

Adapted from Davidsson et al, 2006:53

The growth of firm level activities on the other hand can be captured by the study of sales expansion and increase in employment. The success of a new activity is reflected in an increased demand for the products and services provided to the market, which in turn increases sales. The measurement of assets is often considered problematic, due to differences in accounting practices.

Sales growth is the best growth measure of firm level activity, since it reflects even short-term changes; it is easy to obtain, as well as it has high generality. It seems unlikely that growth in other dimensions could take place without increasing sales (Davidsson et al, 2006:52). It is possible to increase sales without acquiring additional resources or employing additional staff, for example, by outsourcing the increased business volume. It is also possible to replace employees with capital investments, making production automated. The second case also highlights that there could be inverse relationship between capital investments and employment growth. The use of multiple indicators of growth, however, gives richer information and may be better than single indicators (Zahra & Covin, 1995; Freeser & Willard, 1990; Evans, 1987).

Two innovative measures of firm performance, economic value added (EVA) and market value added (MVA), have recently received considerable attention. EVA and MVA attempt to measure “the difference between the value of a firm’s outputs and the cost of the firm’s inputs (Kay, 1993). Unlike conventional accounting measures of profitability (e.g.: return on investments), EVA and MVA recognize the cost of capital and the riskiness of the firm’s operations (Dess et al, 1999), and as such, they appears to be especially well suited for the study of corporate entrepreneurial activities.

Additional, non-financial measures are also needed to better evaluate the outcomes of entrepreneurial activities (Zahra & Covin, 1995) since entrepreneurial activities may take many years to fully pay off and being documented in financial performance. Employee turnover (Jackson et al, 1991; Bantel & Jackson, 1989; Zenger & Lawrence, 1989), top management team heterogeneity (Ensley et al, 1998; Priem, 1990; Murray, 1989) or public image and reputation could be insightful in accessing near-term outcomes.

Regional growth can be captured best by looking at employment change as well as measures of enterprise dynamics – start-up rates, exit rates, or net-entry rates (Audretsch & Fritsch , 1994; 2002). In comparative studies across industries, however there is a need to control for measurement bias.

First, the relative importance of start-ups versus established firms for example varies greatly across industries. Specifically, the start-up rates are higher in the service sector than in manufacturing industries. Second, changes in the rate of unemployment and self-employment rates might be distorted by taxation policies just in case of assets measures, such as return on equity. Third, industry specificity also needs to be controlled, because for example manufacturing industries tend to be more capital intensive, while the service sector tends to be more labor intensive. Consequently, assets are considered as weak indicator in highly-aggregate studies.

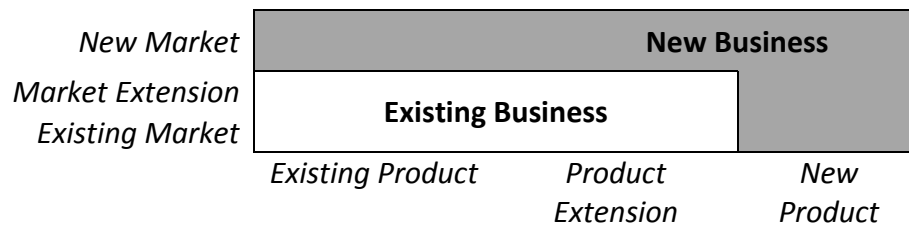
Econometric studies tend to show a correlation among the level of entrepreneurial activity, national wealth and economic growth. There is a dilemma around causality (Wickham, 2006). Are regions wealthy because entrepreneurs operate – or do entrepreneurs emerge because the region is wealthy? Since these studies are complex in nature, the identification of correlations seems inadequate; identifying the direction of causality would be more explanatory.

Scholarly interest for the challenges the growing entrepreneurial firm faces (cf. Harper, 1995; Adizes, 1992; Churchill & Lewis, 1983; Greiner, 1972) constitutes another wing of outcome studies. According stage models, as the firm grows it passes through a sequence of stages (cf. start-up, early growth, later growth, maturity, decline or renewal), each with its own particular characteristics and challenges. The underlying assumption is that problems a firm faces at an early stage of its existence are not the same it may face in later stages. By knowing where the organization stands in its life cycle, an entrepreneur can understand the root of the problems, and hence the transition from one stage to another is more likely to succeed.

Though these growth models seem to be overly normative, contemporary research found that organizations in different phases of their lifecycle encounter problems prescribed by Adizes' model (Göblös & Gömöri, 2004). In her case study research, Salamonné (2006) revealed that growth-pattern of Hungarian small- and medium-size enterprises is step-by-step as it was predicted on the basis of stage-models. Her final conclusion was that an integrated model of Adizes and Greiner is relevant in the Hungarian context. Based on similar research, Szirmai (2002a, 2002b) concluded that for both the entrepreneur and for the researcher the most important is to address the question how to extend or shorten organizational life cycle, how to delay the decline stage, and what interventions are needed for smooth transition from one stage to another.

Finally, entrepreneurial success has a flip side, as well. That is failure. It is not necessary that each and every entrepreneurial effort will be successful in itself. Failure is also an important phenomenon in entrepreneurship, provides an important learning opportunity (McGrath & Cardon, 1997). Regarding the different levels of analysis, researchers looking at the issue of failure tend to examine the conditions that may lead to failures; attributed to mistakes made by entrepreneurs themselves versus being attributed to factors that adversely impacted the venture but were outside of the control of the entrepreneur. Analyzing start-ups Vesper (1983) for example identified 12 barriers to entrepreneurship. Typical problems include poor business model, inexperience and lack of market knowledge, inability to delegate responsibility, lack of management skills, or shortage of seed money.

Figure 2. New business



Source: Sathe, 2003: 6

New business creation is moving away from known territories – from existing products and existing markets – to unknown. Thus, management faces very different challenge from those of stretching established products and established markets. It usually requires new skills, new techniques, and new facilities. As a result it almost invariably leads to physical and organizational changes (Christensen, 2003) putting the firm’s stake at risk. By contrast, market or product extensions build on the same technical, financial, and merchandising resources used for the original product line.

In case of corporate venturing, failure to innovate seems to be attributable to organizational inertia (Floyd & Wooldridge, 1999). While existing capabilities provide the basis for the organization’s current competitive position, without renewal, the same capabilities become rigidities constraining the firm’s future ability to compete. It is inherently difficult for top managers to successfully create new business because they are simultaneously responsible for the health and growth of existing business (Sathe, 2003:6). In independent entrepreneurship, by contrast, new business creation gets the founder’s undivided attention.

2.1.2. Process

This process is dynamic, since new opportunities rarely if ever emerge in a rational and predictable fashion but rather in the context of much uncertainty (Busenitz et al, 2003) as well as unexpected problems and barriers may arise along the way (Gartner, et al. 1989). While most business activities involve time, Bird and West (1997) argue that temporal issues uniquely and explicitly characterize the entrepreneurial process, thus high-speed decisions and action are typically required for success (Eisenhardt, 1989). In addition, entrepreneur used to act with ambition beyond the resources currently under his or her control, in relentless pursuit of opportunity (cf.: Stevenson 2006; Timmons, 1994).

Time and resources are both important dimensions of the opportunity exploration and exploitation process, hence it became imperative for researchers to better understand the role of cognition and social capital in the entrepreneurial process (Hatch & Dyer, 2004). Organizational sociologists including Howard Aldrich (1979) and John Freeman (1996) developed the theory further by conducting research on entrepreneurship as a social process. According to Byers et al (1997) Aldrich was amongst the firsts who proposed that entrepreneurship is embedded in a social context, channeled and facilitated (or inhibited) by a person's position in a social network. Not only can social networks facilitate the activities of potential entrepreneurs by introducing them to opportunities they would otherwise have missed or not have pursued, but social networks are also essential to providing resources to exploit opportunities.

Byers et al. (1997) agrees that it is certainly correct to give founders the lion's share of credit in young, small organizations. When the organization is small, the founder can devote more time to influencing each member; and some evidence implies that founder personality has a stronger impact on structure in small and young organizations than in old and big organizations. However, entrepreneurial success doesn't depend just on the initial structural position of the entrepreneur, but also on the personal contacts he or she establishes and maintains throughout the process (Cooper, 1981; Katz, 1992). Strong evidence supports that other people are also involved in opportunity exploitation, people who play not less important roles and are hardly replaced (Roure & Maidique, 1986; Byers et al, 1997; Floyd & Wooldridge, 1999; Evald & Klyver, 2006).

As suggested by Landström (2005) three main phases can be identified during the entrepreneurial process: each phase calls for different activities and thus involves different compositions of the personal network. The first phase – firm emergence – focuses on what happens before a venture is legally established. This phase starts when an entrepreneur, or a group of entrepreneurs, decides to establish a business. The second phase – the newly established firm – is concerned with what happens early after the venture has been legally formed. The last phase – mature firm – starts when the firm is well established.

Figure 3. Changing networking patterns during entrepreneurial process



Source: Evald & Klyver (2006: 17)

Freeman (1996) emphasizes another distinctive behavior of entrepreneurs: successful entrepreneurs found to be especially skilled at using their time to develop relationships with people who are crucial to the successful realization of their perceived opportunity. According to Byers et al. (1997) even in case of a start-up, the new venture may start as the brainchild of one or very few people, but it takes many more people to put together the pieces of the puzzle that constitute a successful firm. The first few pieces of the puzzle usually come from and through the existing network of the entrepreneur or “insiders”: such as friends, family and co-founders.

As the creation of the venture progresses, however, entrepreneurs need to reach beyond their individual social network and involve “outsiders” like banks, venture capitalists, lawyers, accountants, strategic partners, customers, and industry analysts and influencers.

In addition and perhaps more importantly, Tsoukas (1996) concludes that entrepreneurship is an intensely social activity based on culture. Culture is viewed as an open-ended process of communication that shapes economics, politics, and social institutions. It follows that entrepreneurs are skilled at joining, reading, as well as influencing the “conversations of mankind” (Lavoie, 1991: 49). Since entrepreneurial vision is created out of the tension between what is and what might be (Wickham, 2006), hence opportunity discovery and the selection are both rooted in social integration and on close understanding of the local culture (O’Reilly et al, 1989).

For example, a sensitivity to language that could be usefully in accumulation of support for entrepreneurial visions through use of metaphor, dramatic skills, integrity, audience involvement, and local knowledge (Downing, 2005).

2.1.3. Context

Advocates of context specificity argue that scholars place too much emphasis on entrepreneurs' individual characteristics (especially personality) as causes of firm performance, and not enough emphasis on factors outside the entrepreneur, such as structural opportunities and constraints. Byers et al. (1997) for example criticized academic writings on entrepreneurship for being especially prone to romanticizing individual founders and CEOs when firms turn to be successful.

Much notable research on establishment and early years of innovative organizations found a strong association between environmental conditions and the creation of a new, highly innovative organization – firms that were founded to produce a new product or service, to employ a new technology or to experiment with fundamentally new organizational arrangements (e.g. Kimberly, 1979). The birth of an organization via an innovation introduces variation into the population. Though innovation provides an advantage, the organization's survival ultimately depends on its ability to acquire an adequate supply of resources. Each environment, however, has a finite amount of resources, a "fix carrying capacity" (Mintzberg et al, 1998:292). As the industry gets crowded, the struggle for resources drives out of competition the less fit organizations. The criteria of fit are set by the environment. The "power of environment" was confirmed by numerous studies (e.g: Zahra, 1993; Miller & Friesen, 1983) which documented that evolution of a firm takes place in a dynamic context only partly under the control of the entrepreneur. Key environmental factors can profoundly influence the success associated with entrepreneurial activity (Davidsson et al, 2006:3). Based on the available information, entrepreneurs might make correct or incorrect decisions but regardless, external circumstances could lead to unanticipated outcomes potentially reversing what was anticipated.

Evolutionary economics uses the natural selection model to explain the variety of, survival of and changes within economic populations emphasizing the evolutionary dynamics of processes influencing organizational diversity (Singh & Lumsden, 1990). The focal point of the research (c.f.: Baum & Singh, 1996) is set on either (a) effects of exogenous changes in the technical and institutional environment on founding and failure rates within an organizational population, (b) the effects of organizational age and size on organizational mortality, or (c) the consequences of niche width for organizational mortality. Evolutionary economics embraces four types of theories (Johnson and Van de Ven, 2002 quoted in Wickham, 2006: 135) which differ in the extent to which they allow for (a) individual organizations to change themselves – *organizational inertia* and (b) the extent to which the individuals can change their environment – *environment exogenicity*.

Table 3. Evolutionary Theories

		Ability to change firm	
		High	Low
Ability to change environment	High	Industrial community theory	New institutional economics
	Low	Organizational evolution theory	Population ecology Theory

Source: Wickham, 2006:135

Population ecology theory proposes markets act as the major selection vehicles: the variety of competing firms is both in their products and practices are matched against markets (Hannan & Freeman, 1977). The process is Darwinian in nature; the organization that is not fit well into its environment might not survive. As organizations compete for valuable resources, unsuccessful rivals fail to capture an appropriate market share, go bankrupt and have to exit. Hence, business environment acts as an ecosystem that both sustains, and threatens certain forms of organizations.

In population theory, the source of variation can be any variation-generating mechanism, there is no more weight given to planned, than unplanned change. A great deal of variation is introduced into an organization or a population of organizations through error and random variation, rather than through conscious generation of alternatives (Aldrich, 1979:107). The environment selects the fittest organizations. While the individual units are relatively powerless to affect that process, not all selection results from the working of an impersonal “invisible hand”. According to Aldrich, selection criteria may be the result of political decisions influenced by dominant organizations with socioeconomic power.

Consequently, the entrepreneur is quite limited according to population ecology model. Aside from some founding character (e.g. selection of market in which to operate; the choice of cooperation with other firms, etc.) the entrepreneurial success largely depends on the fate. The entrepreneur has to bet on future and choose between “specialism” and “generalism”. The former engages in a narrow range of activities and emphasizes efficiency via maximizing fit with the environment while the latter covers a much broader range of activities remaining flexible via holding certain resources – slacks – in reserve for future emergencies (Mintzberg et al, 1998:292). In case of shocks produced by environmental instability, specialists will typically run out of stocks. Generalists, however, survive, although they tend to do so inefficiently and only by carrying a great deal of excess capacity (Aldrich, 1979:115). Since the choice once made becomes difficult to change, depending on how the conditions play out, it may increase or decrease the chances of survival (Hannan & Freeman, 1977).

In keeping with the basic selection metaphor, organizational properties are often seen in terms of “liabilities”. The “liability of smallness” predicts that larger organizations are more endowed with resources and thus less likely to fail; by contrast the “liability of aging” holds that initial advantage become a source of inertia as the organization grows older; and the “liability of adolescence” maintains that the greatest danger is in the transition between organizational infancy and maturity. Birth is accomplished with innovative ideas; maturity is characterized by considerable resources and power. In between, the organization may have exhausted the innovation while not yet accumulated resources.

Population ecology is criticized by entrepreneurship scholars for treating organizations as black boxes, closed to an inspection of their inner workings, whereas the entrepreneur inside that box is crucial. Second limitation of the theory is that it fails to make predictions about individual firms, only about population of firms. But even its “probabilistic” predictive power for populations has never been proven; and “the most critical test of any model or theory, however, is its ability to predict future outcomes with accuracy” (Bygrave & Hofer, 1991: 18).

Institutional economics focuses on understanding the role of human-made institutions in shaping economic behavior. Because one institutional framework always “nested” inside other broader institutional frameworks, the clear demarcation is always depends on actual situations (Williamson, 2000). The institutional framework of a society provides the incentive structure that directs economic (and political) activity and shapes the world-views of their members (North, 1990). Based on a slightly different assumption, both Selznick (1957) and Stinchcombe (1965) argued that organizations tend to take on the characteristics of people and environments that surround their early establishments. Ultimately, an entrepreneur is not just the creator of firms but also the architect of a new institutional system of beliefs and values. Selznick emphasized the influence of organizational founders on characteristics of the early organization, although he recognized that the decisions of the founders are constrained by environmental conditions.

New institutional theory, like population ecology theory, maintains that firms are limited in the degree to which they are able to modify their internal constitution, but does suggest that firms can modify their environment, their legitimacy. Similarly to Mintzberg et al.’s (1998) Environmental School, environment is regarded as the interactions of investors, customers, employees, suppliers beyond to government and society as a whole, and of course, competitors. Over time, these interactions develop increasingly complex and powerful set of rules, norms, conventions, and beliefs embodied in constitutions, property rights, and informal constraints that in turn determine economic activity (North, 1990; North, 1997). To be successful, an organization must meet and master these norms.

An entrepreneur – moving into a new sector – shall not focus so much on the fit with the environment as was the case in population ecology, but will seek to build legitimacy with key stakeholders. According to the view of North (1997) when entrepreneurs seek to alter some aspect of economic performance, their actions are limited not only by the standard constraints of technology and income, but also by the prevailing institutional system. The historically derived constraints are supported not only by the existing organizations that will oppose change, but also by the belief system that has evolved to produce those constraints. The rate and direction of change will be determined by the “strength” of the existing organizations and belief system. Although manifesting itself differently than in modern times, the success of entrepreneurship in ancient and medieval times also depended on overcoming institutional constraints (Hebert and Link, 1988:15) and Baumol (1990) posits that entrepreneurship has been always present in communities and societies but its manifestation was always contingent on varying dominant logics and reward systems.

Organizational evolution theory regards the unit of evolution as the individual firm. The environment is given; managers cannot change it in any way. But firms can, and do, change themselves. In hostile environments, which are characterized by high levels of competitive intensity, a paucity of exploitable market opportunities, tremendous competitive-, market-, and/or product-related uncertainties, and a general vulnerability to influence from forces and elements external to the firm’s immediate environment (Zahra & Covin, 1995: 48).

According to Quinn (1978) entrepreneurs are facilitators of organizational learning. An effective entrepreneur is not one who, from the outset, is able to plan a particularly effective organizational form, but one who is able to make an organization responsive to new information and reactive towards new opportunities. Because firms can change, the selection is between organizations that can learn and those that cannot learn to modify themselves in light of changing environmental conditions. Organizational ecologists (e.g. DiMaggio, 1988; DiMaggio & Powell, 1983; Nelson & Winter, 1982) in general have described important policy implications of new organizational forms for both government agencies and corporate managers.

One of the major contributions to the emerging field has been the publication of *An Evolutionary Theory of Economic Change* by Nelson and Winter (1982). They focused mostly on the issue of changes in technology and routines, suggesting that industries where innovation emerges from knowledge are not of a routine nature and therefore they are rejected by hierarchical bureaucracies. Nelson and Winter hence, proposed that there exist two distinct technological regimes: the entrepreneurial and the routinized.

Industrial community theory allows for firms to change both themselves and their environments. The environment – similarly to new institutional theory – is perceived as a set of complex inter-relationship among organizations. Organizations co-evolve: they influence, and are influenced by each others. This theory places heavy reliance on active learning (Aldrich, 1979:107). Variations are generated, selected or discarded on the basis of their contribution to the organization's goals.

This approach gives the richest picture of how entrepreneurs compete, but with some loss of theoretical specificity (Wickham, 2006). Firms are regarded as heterogeneous: every firm is individual and firms may vary in terms of their industry position and their internal capabilities. This perspective views variations in organizational forms as cumulative interactions of entrepreneurs and organizations toward the establishment of a new industry (Romanelli, 1991). Organizations actively adapt to their environments by forming mutually supporting coalitions, "organization communities". The organizational community is defined as a set of interrelated organizations which provide key resources such as productive labor, financing, and information to their members; and the entrepreneur's key role is to build and maintain this network of relationships (Carrol, 1984; Astley, 1985). Van de Ven and Garud (1989) argued that new environmental niches do not pre-exist, rather they are socially constructed through the opportunistic and collective efforts of interdependent actors in common pursuit of a technological innovation. If existing organizations are stable, in both their forms and their relationships to one another, they will tend not to exploit any new resources that may become available in the environment at large. Thus new spaces open.

According to Romanelli (1991) the process begins with the entrepreneur perceiving an opportunity. The entrepreneurs begin to accumulate the social and material resources

that are necessary to exploit the opportunity. Over time, as the independent entrepreneurs seek resources they will tend to approach similar sources (e.g. trade shows, conferences or industry associations) their path begin to intersect. Interdependencies get established that benefit actors directly through sharing information and resources, which speeds the efforts of entrepreneurs by providing legitimacy. By being legitimate the newly established organizations compete over alternative technological paths. Over time, a new industry emerges.

Van de Ven and Garud (1989) argued that such interdependencies help members isolate from direct competitors, or others whose vested interest might be threatened, by reducing the needs of the new firms to draw resources from existing organizations. While, Astley (1985) emphasized technological innovation as the crucial space-creating variable, Romanelli (1989) argued that virtually any event or development can fundamentally alter existing flows of resources; e.g. changes in social values, changes in the demography, economic growth or decline, and so on.

The practical implications of this perspective are twofold (Romanelli, 1991:98). First, innovation may not be taken as a given incident around which new forms of organizations evolve. Rather it is a dynamic social process which, as it unfolds, creates the resource space that will support the new firms reflecting new organizational forms. Research shall identify, at least initially, the human networks that enact the evolution of a new organizational form. Second, the context is merely a resource pool from which individuals and their interactions create new organizational forms.

Putting all parts together the conclusion is that researchers by breaking the complex phenomenon of entrepreneurial success into smaller parts gain better understanding of it. Studying the output draws attention to economic aspects; the process view improves the comprehension of the behavioral aspects, while the context view appreciates the evolutionary aspects of the overall phenomenon. Present thesis work hence takes a stand and follows the processes focus and consequently aims to contribute to the behavioral aspects of entrepreneurial activity.

2.2. Research focuses according to level of analysis

2.2.1. *The individual level*

Academic researchers have spent considerable time on the quest to predict who will succeed as an entrepreneur and who will fail (Gartner et al, 2006). These diverse writings emphasize certain traits seem to be associated with entrepreneurs; as such are necessary for effective entrepreneurial behavior. Collins and Moore (1970) studied 150 entrepreneurs and concluded that they are tough, pragmatic people driven by needs of independence and achievement. They seldom are willing to submit to authority. Based on the study of 2994 entrepreneurs Timmons (1994) for example in analyzing more than 50 studies found a consensus around six general characteristics of entrepreneurs: (1) commitment and determination; (2) leadership; (3) opportunity obsession; (4) tolerance of risk, ambiguity and uncertainty; (5) creativity, self-reliance and ability to adapt; and (6) motivation to excel.

A related stream of research examines how individual demographic and cultural backgrounds affect the chances that a person will become an entrepreneur and be successful at the task. A great deal of research on the socio-cultural backgrounds of successful entrepreneurs was conducted in the 1980s and 1990s (Byers et al, 1997). As a result, Bianchi (1993), for example, concluded that a person is more likely to be successful as an entrepreneur if have a background including (1) being an offspring of self-employed parents; (2) being fired from more than one job; (3) being an immigrant or a child of immigrants; (4) having previous employment in a firm with more than 100 people; (5) being the oldest child in the family and (6) being a college graduate. In addition, many researchers commented upon the common – but not universal – thread of childhood deprivation and early adolescent experiences as typifying the entrepreneur.

Such trait-based theories of entrepreneurship – when taken as a whole – are inconclusive and often in conflict (Stevenson, 2006), hence their validity is increasingly being called into question. There is no real evidence supporting one generally applicable entrepreneurial personality; and personality testing does not provide a good indicator who will, or will not, be a successful entrepreneur. Gartner in 1988 had critiqued the „long-

held and tenacious viewpoint in the entrepreneurship field” and set the research focus toward a new direction: „what the entrepreneur does, not who the entrepreneur is” (Sharma & Chrisman, 1999:26). The research question shifted from areas such as the determination of the psychological characteristics of entrepreneurs toward an assessment of the cognitive and behavioral aspects of the entrepreneur with an increased emphasis on context and on the entrepreneurial process (Cornelius et al. 2006).

Entrepreneurs as they engage in entrepreneurial activity must assess the prerequisites for success. The question “How do entrepreneurs perceive their chances of success?” was a turning point from typologies of entrepreneurs toward the study of psychological traits. Cognitive psychology provides new and profound insights into the thinking of entrepreneurs and how they engage with the entrepreneurial process. The research about entrepreneurs’ cognitions (perception, memory, experience, intuition, and judgment) has focused on thinking about the future (e.g., intentions and vision) and decision making. Entrepreneurs seem to be prone to insights, brainstorming, deceptions, and ingeniousness (Bird, 1992; Shaver & Scott, 1991; Hornsby et al, 2002). In addition, entrepreneurs exhibit extreme optimism in their decision-making processes and are prone to overconfidence (Busenitz & Barney, 1997; Hatch & Dyer, 2004; Shepherd & DeTienne, 2005).

In summary, researchers note that first, entrepreneurs hold intense mental visions of desirable futures to maintain their long term goals through surprises, shortages and barriers, and second, they utilize heuristics to cope with the uncertainty and urgency they face (Wickham, 2003). These processes produce fast, perhaps biased, decision making.

Davidsson et al. (2006) however argues that entrepreneurial behavior is fundamentally influenced by perceived ability, need, and opportunity. The right question is not to predict the success in an entrepreneurial career given a personality type along with other individual characteristics like demographic and cultural background; but how cognition influences motivation and the entrepreneur’s perception and validation of entrepreneurial options compared with conventional employment alternatives (e.g.: Campbell, 1992; Katz, 1992; Eisenhauer, 1995). The assumption of whether or not entrepreneurs in general have a cognitive skill that is different from non-entrepreneurs is not justified yet, however.

It is probably premature to insist that entrepreneurs, as a group, share any particular set of cognitive approach. The cognitive approach for spotting new business opportunities is found to be dependent of the particular situations (Minniti & Bygrave, 1999; Wickham, 2006).

Researchers encountered that for the question, who becomes an entrepreneur, often the context as a stimuli plays great role. Hence, it is also fruitful to look at the broader life experiences and events which encouraged or forced a person to make a move into entrepreneurship (Delmar & Davidsson, 2000). The motivations of entrepreneurs are many and varied, hence Wright et al. (1997) have suggested that entrepreneurs might be classified as singular- (running a single venture); sequential- (after exit starts running a new business) or portfolio entrepreneurs (run more than one business at one time).

There is growing evidence that, some people start entrepreneurial career because no other career option is available to them; ethnic and religious minorities, as well as unfulfilled and displaced managers including gender issues are well documented (Oslo & Currie, 1992; Shaver et al, 2001). This is not because such people are inherently entrepreneurial; rather it is because, for a variety of social, cultural, political, and historical reasons, they do not form part of the established network of individuals and organizations. As a result they may form their own internal networks, trading among themselves. Historically it can be shown that in modern capitalist societies entrepreneurship is also a major avenue for upward social mobility, for example, among marginal groups such as immigrants (Landström, 2005).

While research shows similarities in the personal demographics of men and women entrepreneurs, there are differences in business and industry choices, financing strategies, growth patterns, and governance structures of female led ventures. These differences provide compelling reasons to study female entrepreneurship – looking specifically at women founders, their ventures, and their entrepreneurial behaviors as a unique subset of entrepreneurship. Observable differences in their enterprises reflect underlying differences in their motivations and goals, preparation, organization, strategic orientation, and access to resources.

Regarding their motivations for business entry, both women and men in comparative studies indicate the primary reason for tuning to self-employment was in order to have

more control over their working lives. In comparative studies (e.g.: Hisrich & Brush, 1986; Scott, 1986). The drive of women to quest for personal autonomy and self-determination, however, was strongly associated with sex-related disadvantages (Stevenson, 1986:35). Many women entrepreneur reported that they had gone into business for themselves because of the negative forces (e.g: lack of promotion opportunity, lack of power to act) that they had experienced working for others (Stevenson, 1986).

Ownership allows them with both material independence and opportunity to control the products of their own labor (Scott, 1986). In addition to autonomy Stevenson (1986) pointed to another decisive factor: the desire for greater flexibility. Flexibility allows women to harmonize their family lives with work; it permits the convenience of caring for children while at the same time operating a business.

In addition to motives, a substantial body of research examines operational differences between women and men entrepreneurs providing arguments that even though men and women operate under the same institutional and economic rules, the business world is largely constructed and dominated by men (Landström, 2005). Hisrich and Brush (1986), for example, reported that women business owners tend to encounter several obstacles not encountered by their male peers in access to capital. This is a crucial issue, because Balnchflower and Oswald (1998) in their far-reaching study found no correlation between life events and entrepreneurial inclination, however, they found that access to initial capital was a key event in the entrepreneurial process. Elaborating this issue Aldrich et al. (1989) concluded that it is reasonable to believe that women and men belong to different types of networks that influence their entrepreneurship – women inhabit a female world that only partially overlaps with the male world.

2.2.2. Start-ups and promising small firms

It was in the mid-1970s that the world economy first began to show signs that large systems were not always superior in promoting technological development. Cornelius et al. (2006) pointed to the “twin oil” crises which triggered an appraisal of the role of small firms. Many large companies were hit by severe economic difficulties, and unemployment became a major problem in many Western societies. In addition, large companies were increasingly seen as inflexible and slow to adjust to new market conditions and embrace break-through innovations. Carlsson (1992) found two explanations for a greater interest

in smaller firms: (1) a fundamental change in the world economy, related to the intensification of global competition, the increase in the degree of uncertainty, and greater market fragmentation, and (2) changes in the characteristics of technological progress.

David Birch, in his “path-breaking report” *The Job Generation Process* (cf. Cornelius et al. 2006:381), pointed out that the majority of employment opportunities in the United States were created by small and young firms – not large companies. Entrepreneurship became known by its role undertaking in industrial dynamics and job generation (Carlsson, 1989). Small firm is defined in terms of the presence of paid employees and receipt of payments from customers in independent businesses. To be entrepreneurial, however, small firms have to be promising; that is, the organization needs to be envisioned as achieving significant economic impact in terms of sales, employment, and profit growth (Bhide, 2000). This does not mean that a small firm is not doing something new, but small firm’s output is likely to be produced in established way and is unique only in terms of location (Carland et al, 1984).

Thus, entrepreneurial small firm by definition does not include solitary self-employment, life-style firms, and “mom and pop” firms. Mintzberg et al. (1998) also consider the Entrepreneurial School relevant to start-up and turn-around situations (the detailed discussion on turn-around situations comes in the next chapter).

A number of studies have examined whether the initiation process is relatively consistent or varies across different ventures (Carter et al, 1996). Alsos and Kolvereid (1998) found significant differences between novice, serial, and portfolio entrepreneurs in their way to prepare the launch of the venture. Complementing this, Hansen and Bird (1997) distinguished between ventures that develop and sell before taking on employees and those that take on employees, then develop and sell.

Regarding the performance of start-up and promising small firms the issue is their survivals. Timmons (1994) reviewed the works of over two dozen authors and noted several ingredients of successful venture creation, such as the importance of a lead entrepreneur, building a team with complementary skills, a triggering idea for a product or service, a well developed business plan, a network of people and resources and appropriate financing. In entrepreneurship, however, uncertainty and risk are always

present, and entrepreneurs are always faced with the possibility of failure. No matter how carefully the new venture is developed ultimate decision is brought by the market in the form of sufficient demand.

Even though their contribution is so strong, the majority of family businesses do not survive beyond the third generation (Upton and Heck, 1997). One explanation for the high mortality rate of family businesses may be a decrease in the entrepreneurial orientation displayed by successive generations of owner-managers.

Failure forms a fundamental component of entrepreneurship (McGrath, 1999). While many scholars strive to understand and thereby avoid failure (e.g. Romanelli, 1989), others argue that failure provides an important learning opportunity for continued entrepreneurship (McGrath & Cardon, 1997), and acts as a catalyst for further economic and business development (McGrath, 1999). Yet failure is not a simple notion (Wickham, 2003). It implies the absence of success, and like success, it can only be understood in relation to people's goals and expectations. Failure happens when expectations are not met; the question is the degree of failure (e.g.: 'the business fails to perform as planned, hence additional financial support is needed' more severe issue than 'the business fails to achieve strategic objectives').

The perception of and/or tolerance for failure may significantly impact whether would-be or nascent entrepreneurs pursue opportunities of which they are aware, despite the high risk and effort involved in starting a new business. These cultural perceptions may also impact the attributions individual entrepreneurs make for setbacks they experience, and how they change their behaviors accordingly in decisions to continue to develop the business despite hardship or to cut their losses and close the business immediately (Cardon & McGrath, 1999). More broadly, cultural perceptions of failure may profoundly influence the allocation of resources towards risky ventures.

Failures might be caused by circumstances the entrepreneur could not control, such as a poor economy. This is in contrast with mistakes, which are seemingly due to avoidable errors, or the inability of entrepreneurs to properly steer their ventures. Most of the young and small firms spend efforts to stabilize their activity, for example engaging in strategic planning is no longer the privilege of bigger ones (Papp, 2006; Szabó, 2005; Nagy, 1996).

Social network theory focuses on the relationships between actors (individuals or groups) who are assumed to be embedded within a network of interrelationships with other actors. According to Granovetter (1973), relationships “ties” between actors may be classified as strong or weak. The “strength” of interpersonal ties depends on “a combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie” (Granovetter 1973:1361). Strong ties are developed between close friends, family and associates, while weak ties represent casual contacts with acquaintances. In this paper, family ties are introduced as a separate category of strong ties. Family ties are “stronger” than the strong ties analyzed by Granovetter (1973).

Family ties are connections between individuals born within the same family group (Barney et al, 2003), for example siblings, parents and other close relatives. The “strength” of family ties increases the likelihood that any opportunity discovered or resource required will be made available (Aldrich & Cliff, 2003). However, the informational content of these ties is also more likely to be redundant.

Once the business is established, however, family business founders and their successive generations will shift their emphasis to family issues, resulting in decreasing entrepreneurial orientation. The loss of entrepreneurial orientation and conservatism for the sake of protecting family business is associated strongly with the cause that impedes the long-term survival of the family business. Maintaining good family relationship overruns the importance of profitability (Sharma et al. 1997; 2003); and the relationships within the family have the single greatest impact on successful intergenerational transfer within family-owned businesses (Morris, et al., 1997). Family firms are also likely to be more concerned about the family’s name and about caring for the needs including job security of family members and employees, hence they typically demonstrate less organizational initiative (Shanker and Astrachan, 1996). These factors suggest that, in successive generations, attempts to prioritize the family and maintain control of the business for the sake of the family may be a dominant factor in decisions about how to manage the firm.

One of the major conclusions from studies about entry is that the process does not end with the entry. Early studies (cf. Audretsch, 1991) indicate that not only is the likelihood

of a new entrant surviving quite low but also that the likelihood of survival is positively related to firm size and age. Audretsch & Ács (1990) found for example, that the majority of start-ups are very small – in most cases too small to survive within the industry. According to the authors, the reason for the survival of these firms can be found in their learning strategy. Even if companies tend to be below optimum size they can survive and grow by continuous learning and adaptation. Many of the new firms will of course fail, but the results indicate that industry dynamics is positively related with the success of new entrants.

In addition, while small firms appear to have a higher growth rate, they also have a tendency to exit the industry more rapidly (Szerb & Ulbert, 2002; Vecsenyi, 2002; Román, 1991). In most industries these two tendencies offset each other, which provides explanation for why small businesses do not exhibit a higher growth rate than large companies (Landström, 2005).

2.2.3. Firm-level behavior

As the firm grows it develops processes and systems, and the people within embrace distinct roles. The entrepreneur begins to delegate certain amount of responsibility and specialist functions start taking over some aspects of the entrepreneur's initial role. In this way entrepreneurial ventures quickly take on a life of their own and they become quite distinct from the entrepreneur who established them. Entrepreneurial posture, however, can be applied to corporate renewal processes as well as to new independent ventures, even if there may be different dynamics within these two contexts (Covin & Slevin, 1993).

There has been a growing interest for the implications of conceiving entrepreneurship as a set of firm-level behaviors. The concept of corporate entrepreneurship has been around for at least 20 years, marked with the seminal works of Burgelman and Sayles (1985), Burgelman (1984), Covin and Slevin (1989, 1991), and Lumpkin and Dess (1996) and since then it has grown in both extent and depth (Gregoire et al, 2006). Amongst researchers, however, there is still no consensus on what are the underlying assumptions and objectives. Broadly speaking, corporate entrepreneurship refers to the development of new business ideas and opportunities within established corporations (Birkinshaw, 2003).

In this regard, entrepreneurial firms are those in which the top managers have entrepreneurial management styles, as evidenced by the firm's strategic decisions and operating management philosophies (Covin & Slevin, 1986; 1989). The entrepreneurial firm is generally distinguished in its ability to innovate, initiate change, and rapidly react to change flexibly and adroitly (Dess et al, 1999; Zahra, 1993; Miller, 1983). It seeks ways to accentuate and perpetuate the strengths of innovation flexibility, and responsiveness while providing more sophisticated and efficient management (Guth & Ginsberg, 1990).

Corporate entrepreneurship is assumed to result in various outcomes, though. Due to its emphasis on innovation, it may result in a new product, service, process or business models. Ideally entrepreneurial activity shall yield improvement in both financial performance and corporate culture; such as enhanced morale of employees and greater extent of collaboration (Hayton, 2005). It may result in "new" organizations being created as "spin-off ventures" (Hornsby et al, 1993; Altman and Zacharckis, 2003) or it may involve the restructuring and strategic renewal within an existing enterprise (Volberda et al, 2001).

Thus, corporate entrepreneurship is a multi-dimensional phenomenon where three basic schools of thought can be identified. The three basic schools are corporate venturing, intrapreneurship, strategic renewal (also referred to as "entrepreneurial transformation") (Gartner et al, 2007; Birkinshaw, 2003; Hisrich & Peters, 1986; Sandberg, 1992; Covin & Slevin, 1989).

Corporate Venturing

In the context of firm level behavior corporate venturing refers to entering a market for the first time, as opposed to introducing new or existing goods and services into a familiar market that is one where the firm is already doing business (Dess et al, 1999: 92). In addition, it is the creation of an organization as the outcome: either as an organizational unit, or as a corporate spin-off. The more recent works tend to focus on determinants of new venture development, new venture strategies, and the performance of new ventures (cf. Gartner & Brush, 2007; Burgelman, 1983a and 1983b; Galbraith, 1982; Drucker, 1970). These studies, however, differs in their focus, such as the different forms of

corporate venturing units (Chesbrough, 2002) spin-offs and corporate venture capital operations (Hamel, 1999; Zahra, 1995) as well as insights into how companies should manage disruptive technologies (Christensen, 2003).

Corporate venturing is classified into four generic forms by the focus of entrepreneurship and the presence of investment intermediation: (1) direct-internal venturing; (2) direct-external venturing; (3) indirect-internal venturing; (4) indirect-external venturing. The internal-external distinction in the focus of venturing typology comes from the recognition that venture activity could be originated inside as well as outside of the firm. The presence of investment intermediation between the parent company and the venture is another variable of relevance, since the involvement of financial investment mechanisms operating outside of the parent company is largely depend on the parent's level of commitment to entrepreneurial initiatives; preferred degree of control over the initiatives; and ability to accept and manage entrepreneurial risks (Miles & Covin, 2002:22).

Researchers argue that new business ventures need to be managed separately from the firm's mainstream businesses, or else the initiatives will not survive long enough to deliver benefit to the sponsoring company. Recent research into corporate venturing units and corporate incubators concluded that less than 5 per cent of internal corporate venturing ideas were taken up by the parent company. In addition, most parent companies failed to make any positive contribution (Birkinshaw & Campbell, 2004). Established organizations – despite the environmental pressures, financial and value creation benefits of corporate entrepreneurship – find corporate venturing to be very difficult.

The start-ups financed by corporate venture capital funds are largely independent from the parent company (Elfring, 2002); and hence freed from the tough challenge to align the new venture with the company's existing activities, resources, and capabilities. New and emerging markets are too small to embrace by existing businesses in the very beginning. The organization screening system tend to drop growth initiatives that fall outside the range of the measures of existing business, because top managers are primary responsible for the health and growth of existing business (Sathe, 2003:6). The key challenge, according to Elfring (2002), is to create and maintain links between the

startups and the parent company, in order to ensure competences developed in the start-ups are linked and combined with the existing resources of the parent.

An organization that seeks to apply its competencies to a new market or business, or needs to acquire new competencies to respond to potentially disruptive innovation has three options (Tidd et al, 2005: 425; Christensen 2003):

1. Attempt to change the competencies and culture within the existing organizational structure and processes;
2. Acquire or form a strategic alliance with the organization that have the necessary competencies;
3. Develop a separate organization within itself, with different structures, processes, and cultures.

Intrapreneurship

Another trend in corporate entrepreneurship research is to study the discovery and exploitation of opportunities by organizational members. The term *intrapreneurship* was introduced by Pinchot (1985), but this line of thinking has also been discussed by other proponents such as Kanter (1982) and Birkinshaw (1997). This approach focuses on the individual and his or her propensity to act in an entrepreneurial way; taking into account the personalities and styles of individuals who make good corporate entrepreneurs.

The long-run success of established firms largely based on their flexibility and responsiveness to new and unmet customer demands. Such flexibility can be lost as the business grows. All organizations develop an inertia or resistance to change over time. Entrepreneurs and the organizations they create are not immune to this. While the entrepreneurial organization is founded on innovation, however, there is no guarantee that it will remain innovative (Wickham, 2006) because the initial role of the entrepreneur transforms from acquiring resources into creating and maintaining structures that manage resources.. Often, the innovation sets a pattern of strategic activity which the venture attempts to repeat in another sector. The initial success may not always translate to other sectors.

The strategic decisions made early in a firm's history generally affect its strategy for years afterward (Sandberg, 1992). Romanelli (1989) found little change in strategies following the third year after founding. Not only do such decisions lock a firm into a strategy, but they also affect its structure and systems (Dobák, 1999). The structures and processes have become part of an integrated whole over the years in which it is difficult to change one element without unraveling the whole (Eisenhardt, 1988).

Hence, the job of senior executives is to develop a set of corporate systems and processes that promote such entrepreneurial culture and behavior throughout the organization. It is about creating an organizational climate of controlled freedom in which, the senior executives do their jobs by getting out of the way of those they empower to execute strategy (Aldrich & Algeria Martinez, 2001:44). In keeping the organization entrepreneurial, the intrapreneur's role would be parallel that of the entrepreneur. According to Pinchot (1985) an intrapreneur must be responsible for developing and communicating organizational vision; identifying new opportunities for the organization; and challenging existing ways of doing things and breaking down bureaucratic inertia. The intrapreneur should do all this with an entrepreneurial approach to using power, leadership and motivation, and an ability to overcome organizational resistance to change.

Strategic Renewal

Operating at firm level, this school is concerned more with the structural changes that shall be made to encourage entrepreneurial behavior and foster "fit" with both internal and external environment (e.g. Naman, 1993; Christensen, 2003). This cluster of firm level research includes not only older works that defined the so-called configuration approach (e.g., Miller, 1983; Miller & Friesen, 1982, 1983), but also more recent works that focused on contextual influencers on corporate entrepreneurship-performance relationship (eg. Zahra & Covin, 1995; Zahra, 1991, 1993; Stopford & Baden-Fuller, 1990).

Premised on the assumption that large firms can and should adapt to their ever-changing environment, entrepreneurial transformation suggests that such adaptation can best be achieved by manipulating the firm's culture and organization systems, thereby inducing

individuals to act in a more entrepreneurial way. Based on Burgelman's conceptualization (1983a, 1991, 1996) major changes in an organization's strategy need not be completely governed by external selection processes. Successful renewal is likely to be preceded by internal experimentation and selection processes. An organization's escape from the forces of environmental selection is possible only if the internal selection environment generates a sufficient variety of autonomous strategic initiatives. These autonomous initiatives provide "early warning signals" of the need for change and simultaneously lay the foundation for the organization's response (Burgelman, 1991:258). By adopting the variation-selection-retention framework of population ecology (see for more details Hannan & Freeman, 1989) to the intra-organizational environment, the transformation process is viewed as evolutionary associated with the accommodation and utilization of new knowledge and innovative behavior (Vecsenyi, 2003; Floyd & Lane, 2000; Tushman & O'Reilly, 1996).

2.2.4. Aggregate level

Aggregate level refers to the study of a cluster of firms; it might concern a region, a nation state, a collection of nations states, or the entire global economic system. It may aim to address differential development within a particular region – say rural versus urban – or target the development of a specific industrial sector – manufacturing or retailing, for example.

The aim of analyzing entrepreneurship as an aggregate level phenomenon is two fold. First, it examines the prevailing opportunity structures and legitimacy issues facing entrepreneurs in pursuing opportunities across time, industry, social position and location (cf. Román, 2002; Shane & Venkataraman 2000; Aldrich 1999). For example, Sandberg and Hofer (1987) found that industry structure and venture strategy constitute more important influences on venture performance than internal factors, such as the entrepreneur and the founding team. Second, it discovers how social, political, regulatory, legal, and technological changes create and eliminate entrepreneurial opportunities (Shane, 2001).

The growing number of start-ups per year however does not ensure dynamic macroeconomic growth. Unfortunately, the exit rate of start-ups is still high, far beyond the exit rates of established and bigger firms (Ács et al, 2004). First of all, there are such cultural factors in Europe which inhibit entrepreneurship. The negative discrimination of failed entrepreneurs is one typical example, hence the entrepreneurship supportive European culture is a common issue amongst member states (Source: European Portal for SMEs, http://ec.europa.eu/enterprise/sme/promoting_hu.htm accessed 30 March 2008.)

According to Landström (2005) Ács and Audretsch have made a number of significant contributions on the subject of evolution of the small firms and regional aspects of small business and innovation. In their book, *Innovation and Small Firms*, Ács and Audretsch (1990) based their reasoning on the paradox that small businesses more and more are the drivers of the economy at the same time as technological change appears to demand the investment of large resources in R&D to an increasingly greater extent in order to capitalize on the global market – something that ought to be the preserve of large companies. They found that the contribution of small businesses to technological change in society is significant but there seems to be no single firm size that is optimum. Large companies tend to have some advantage in capital intensive industries characterized by strong concentration. Consequently, the R&D intensity of an industry has a negative impact on start-up frequency, for example in industries where innovative activity is dominated by existing companies; the establishment of small businesses is less frequent. On the other hand, when external knowledge is crucial for innovation, the industry will be targeted by new start-ups, which induce an increase in industry dynamics. Moreover, the results also indicate that the propensity of new firm formation largely influenced by both macro economic and industry specific conditions. For example, start-ups are stimulated by low capital costs. Since start-ups are important for the introduction of new products as a result of high-level of innovative activities as well as reemploying people who become redundant, there is every reason for policy makers to focus on creating conditions that act as a catalyst for the establishment of new firms.

The choice of location, however, seems to be extremely influential for the success of a new venture. Cooper (1984, 1985) found that most new firms did start geographically

close to their incubator organizations, which reinforced the view that entrepreneurship in a given region is largely dependent on the existing pool of people. Entrepreneurs tend to start their firms within commuting distance from their homes and previous places of employment. This indicates that they are relatively restricted in their decision about where to locate their start-ups (Landström, 2005:274).

The intense competition among local governments to attract new economic activities to their locations highlights the importance of the geography of new enterprise entry (Gertler, 1995). The supply of entrepreneurship perceived as critical for sustained economic activity, hence the major goal of regional economic development policies is to increase job creation and economic growth. Their biggest concern is the identification of what triggers entrepreneurial activity (Mazzarol et al, 1999; Morrison, 2000); what characteristics of regulatory environment enhance entrepreneurial orientation (Tan, 1996).

A number of empirical analyses studying the relationship between start-up activity in a region and subsequent employment change yielded diverse, sometimes contradictory findings (cf. Audretsch & Fritsch 1994; 2002; Feldman, 1996; Sternberg, 1996). Davidsson et al (1994) through analyzing the rate of new firm formation in Sweden across different regions also showed that the majority of variations could be explained by structural characteristics of the regions. This suggest that regional diversity accounts for a greater attention, hence tailored regional economic policies are more appropriate for than a singular approach. There are multiple policy paths for growth generation - instruments triggering growth in one region may be very different from those applicable in another region. Cooper (in Landström, 2005:287) concluded that government policies seem to be more useful and applicable at regional level than in national level.

Hence, Cowling & Bygrave (2003) calls for the comprehensive investigations of similarities and disparities as well as patterns and deviations that would enable researcher to recommend policies to the governments and business communities in order to increase the overall supply of entrepreneurship.

Considerable progress has been made by Global Entrepreneurship Monitoring and Entrepreneurship Research Consortium by comparing institutional and cultural differences (Landström, 2005).

In addition to the comparison of economic opportunities offered by each location in various sectors, there are local forces that may influence opportunity recognition processes and the implementation of selected options (Gertler, 1995). During the early years of industrialization in the 19th century, the dominant view among economists was that the factory system was most efficient where the manufacturing processes were concentrated under one roof with a high degree of vertical integration (Máriás et al. 1981; Marosi, 1981). With the rise of the Italian industrial districts in North-East Italy, Brusco (1982) recognized that small firms with modern technology could be as efficient as large firms – it is only a question of numbers. Due to the social conventions of the local community, one can have low transaction costs which may replace the internal economies of scale of the large companies. The most significant point is that these small firms, often with less than 10 employees, have very low degree of vertical integration and the production process is carried on through the collaboration of a number of firms (Brusco, 1982:169).

Another Italian researcher Becattini (1990:38) concluded these industrial districts are characterized with the active presence of both a community of people and a population of firms in one natural and bounded area, where community and firms tend to merge. The most important trait of the local community is its relatively homogeneous value system, expressed for example in reciprocity. There is a process of learning and utilization of knowledge that includes the experience sharing and the use of analogies and metaphors which are particularly suitable for codifying tacit knowledge. Studying knowledge clusters, Getler (1995) arrived to similar conclusions by pointing out in his research that geographic proximity promotes knowledge transfer, and improves innovation capability of the members. This view was confirmed by other scholars, for example Nonaka (1994); Castells (2000); and Chirstensen (2003).

In addition to employment, the question whether regional economic development policy should be targeted towards fostering new firm start-ups or nurturing larger, established organizations is another dilemma policy makers face. Based on their empirical evidence collected from Germany, Audretsch and Fritsch (2002) found that regional growth seems to be result in regions focusing on both large enterprises and new enterprises.

Finally, aggregate level of analysis directs attention to key factors in business environment that may have an impact on the rate of novice and nascent entrepreneurs to catalyze the further economic and business development (McGrath, 1999). Taking it one step further, some researchers (e.g.: Audretsch and Acs, 1990; Audretsch, 1991) have moved on to the even more specialized but related area of investigating the role and impact of knowledge clusters, such as industrial parks on entrepreneurial outcomes.

2.3. Summary

Based on the literature review, some common patterns within the entrepreneurship literature have been identified. Most of the contributions are coming from studies interested in assessing entrepreneurial outcomes, in particularly to compare the growth and the performance of entrepreneurial ventures to their traditional competitors. Besides entrepreneurial performance, some contributions are coming from process studies which investigate the entrepreneurial activity; that is how entrepreneurs use knowledge, networks, and resource to exploit opportunities. Finally, context studies enhance our understanding by exploring the effect of factors outside the control of the entrepreneur, such as structural opportunities and constraints.

In recognition to the complexity and the diverse nature of the phenomenon, table 4 attempts to summarize the most typical research questions raised at the intersections of intersection of the various research streams.

Table 4. Summary of key research questions

Level of Analysis	Outcome	Process	Context
Individual	Who is the entrepreneur?	What does the entrepreneur?	Why becomes an entrepreneur?
Start-ups and Small Firm	How can start-ups survive?	How consistent different entrepreneurs are in their approach?	What drives the choice of location?
Corporate	Corporate Venturing: In or Out? Direct or Indirect? What are the causes of failure?	How to build and maintain entrepreneurial orientation?	What forces encourage/inhibit? What are the contingencies?
Aggregate	Do entrepreneurial firms perform better?	What are the networking patterns?	Where do opportunities come from?

As the table reveals, there are two possible branches investigating the very same phenomenon. In the study of international entrepreneurship, for example (Oviatt and McDougall, 2005:540), one branch focuses on the study of cross-national-border behavior and the performance of entrepreneurial actors (see “accelerated internationalization” over the horizontal axis); while the other focuses on the comparison of domestic entrepreneurial systems, cultures, and circumstances in which they are embedded across national borders (cf. “social milieu” over the vertical axis).

In their review of 416 articles published in the mainstream entrepreneurship journals during the previous decade, Chandler and Lyon (2001:107) found that 35% of the published studies analyzed entrepreneurship on the level of individuals, 53% on a corporate level, and 14% either on an industrial or on a macro level. Research studies can be further classified depending on the way they interpret entrepreneurship as a phenomenon (economical, social or evolutionary phenomenon).

Despite the number of published papers that might be considered related to the theory of entrepreneurship, there exists no powerful unifying paradigm (Brown et al., 2001; Busenitz et al, 2003; Gartner, 2001). After comparing research papers published before 1995, Aldrich and Baker (1997) concluded that the body of entrepreneurship research is stratified and eclectic. In spite of the potential for richness such a diverse mix of

disciplines may bring, in many cases, the problems and issues addressed by researchers are fundamentally different from each other. More importantly, the progress toward coherence in paradigm development tends to be rather slow and limited (Murphy et al, 2006; Shane and Venkataraman, 2000) and solid and testable theoretical bases are still missing (Sexton and Landström, 2000).

Entrepreneurship is simply a too broad area for scholars to address meaningfully; hence, the field would be greatly strengthened if scholars chose sites that identify with one of the core research streams and engage in discussion with scholars carrying out similar research with that particular focus (Gartner and Brush, 2007). Accepting their recommendation, my PhD investigates the intersection of individual and process dimensions of Table 1 by focusing on the entrepreneurial management practices.

Entrepreneurs move the market forward and drive economic growth, that is why the understanding of what distinguishes their value-creation activities from the conventional management practices is a globally appealing challenge, especially because of the recently experienced economic downturns in many countries. Consequently, with the dissertation my aim was to resolve the contemporary challenge of theory development and contribute to the field by investigating the behavioral aspects of entrepreneurial activity. The central research question addressed in my dissertation is: What can we learn from the entrepreneurial management practices of SMEs that has implications for both practitioners and policy makers?

3. Review of entrepreneurial management research

3.1. Definition of entrepreneurial management

The Achievement of the right balance between change through continuous innovation and stability through efficiency is one of the biggest managerial challenges today. Entrepreneurial management by definition is opportunity driven without regards of availability of resources and potential obstacles, which requires a great level of propensity to change. The critical question is then how these individuals manage to create and sustain successful organizations? The research question of present thesis work is related to the understanding what distinguish the characteristics of entrepreneurial management from the conventional management. It aims to investigate what applications can we learn about entrepreneurial behavior by studying Hungarian small and medium sized organizations?

Contemporary definitions of entrepreneurial management tend to center around the pursuit of an opportunity (e.g. Brazeal, 1999; Shane and Venkataraman, 2000; Venkataraman, 1997); their common characteristics are that they define entrepreneurial management as a “mode of management” that is proactive, opportunity-driven, and action-oriented. In this regard, entrepreneurial management style is evidenced by the firm’s strategic decisions and operating management philosophies.

An entrepreneurial management tries to establish and balance the innovation abilities of the organization with the efficient and effective use of resources. It can both initiate changes and react to changes quickly and flexibly. In the course of the entrepreneurial process, the entrepreneurial manager creates new value through identifying new opportunities, attracting the resources needed to pursue those opportunities, and building an organization to manage those resources (Bhave, 1994; Wickham, 2006).

An entrepreneurial manager seizes any promising business opportunity irrespective of the level and nature of resources currently controlled (Brazeal & Krueger, 1994; Stevenson, 2006). Consequently, an entrepreneurial manager is someone who acts with ambition beyond that supportable by the resources currently under his or her control, in relentless pursuit of an opportunity (Stevenson 1983, 2006; Timmons, 1994).

In spite of the fact that the concept of entrepreneurial management has been explored since long ago, and its scope and depth were have been enhanced by prolific authors like Burgelman (1984), Stevenson and Gumpert (1985), and Timmons (1994), the empirical study of the phenomenon is still in its infancy (Sexton and Landström, 2000).

Our knowledge about entrepreneurial practices cannot be extended without a valid and reliable measurement, analysis, and interpretation of the key variables. Unfortunately, only a few explicatory variables have been validated until now (Brown et al., 2001:953), although some remarkable studies have already been published.

3.2. Advancements in empirical research

Historically, Miller (1983) developed a scale to measure empirically firms' degree of entrepreneurship on the basis of their entrepreneurial orientation (EO) score. A high EO score refers to management that is characterized by a propensity to take risks, innovate, and act proactively. This measurement instrument was subsequently further developed by Covin and Slevin (1986, 1989) and enriched with two new dimensions: growth orientation and competitive aggressiveness. The measurement scale of Covin and Slevin has been in use ever since as a baseline by several other researchers (just to mention a few, cf. Barringer and Bluedorn, 1999; Stopford and Baden-Fuller, 1994), even though Zahra (1993) criticized it several times.

Zahra (1993) then Brown et al. (2001) expressed their doubts regarding the validity of the variables. In their opinion, the questionnaire focuses on measuring partly overlapping factors, while the most significant features of entrepreneurship, i.e. the metrics of opportunity-driven, ambitious behavior, are left out of consideration and not measured at all. In particular, In particular, Zahra pointed out that while these measurement instruments do not measure at all explicitly and directly the extent to which managers are committed to the exploitation of an opportunity. The definition of the entrepreneur as a creative or innovative individual is not sufficient. There are innovative thinkers whose business ideas are never implemented.

Since the early works of Mintzberg (1975), several entrepreneurial roles have been identified in the literature. These include the technology innovator (cf. Block and MacMillan, 1993; Maidique, 1980), the innovation champion (cf. Shane, 1994), the top

executive sponsor (cf. Rothwell et al., 1974), and the knowledge broker (cf. Hargadon, 1998, 2002; Hargadon and Sutton, 2000). Although all these roles describe essential aspects, they do not fully characterize the expected behavior of entrepreneurial managers. These roles do not capture the essence of creative, “true-blood” entrepreneurs who not only recognize the opportunity but try to implement it in all cases – even if there are burdens and difficulties along the way, when resources do not fit and are incomplete.

Similarly, Brown et al. (2001) consider this insufficiency as the greatest obstacle to be eliminated by the scientific community. A theory development is calling for a return to opportunity-based definition when designing surveys.

Because of this, Brown et al (2001) argue that the lack of empirical testing of opportunity-based entrepreneurship is a major impediment to the further development of entrepreneurship theory given its importance to firm- and societal-level value creation.

Table 5. Summary of previous studies on entrepreneurial orientation

Author(s)	Year	Country	Firm size	Industry	Sample size	Factor analysis
Covin and Slevin	1986	USA	Large	Manufacturing	200+	<input checked="" type="checkbox"/>
Covin and Slevin	1989	USA	Small	Manufacturing	344	<input checked="" type="checkbox"/>
Lumpkin and Dess	1996	USA	Medium to large	Heterogeneous	131	<input checked="" type="checkbox"/>
Antoncic and Hisrich	2001	Slovenia / USA	Medium to large	Manufacturing	141/50	<input checked="" type="checkbox"/>
Brown et al.	2001	Sweden	n.a.	n.a.*	1233	<input checked="" type="checkbox"/>
Kemelgor	2002	Netherlands / USA	Large	Manufacturing	4/4	<input checked="" type="checkbox"/>
Wiklund and Shepherd	2005	Sweden	Small	Heterogeneous	413	<input checked="" type="checkbox"/>

* No data is available

Several constructive remarks can be made for improving future research on the basis of Table 5, which summarizes the main aspects of the most influential studies on entrepreneurial orientation:

- There is a trend in entrepreneurship research to collect data primarily from manufacturing companies. Service companies, which represent one of the fastest-growing sectors in the global economy, have received only modest attention (Zahra et al., 1999). The negative effect of focusing on one single industry is that the studies are missing the chance to capitalize on inter-industrial differences in structures and competitive dynamics.
- Second, all of them relied on the methodology of factor analysis when testing the hypotheses. There are controversies regarding the applicability of factor analysis, for the condition of normality is not met in the case of the variables. In connection with the methodology, Chandler and Lyon (2001:108) also pointed out that the application of up-to-date mathematical/statistical methods does not typically imply improvements in the reliability and quality of research work. When evaluating the comparison of 45 publications assessing the preconditions and consequences of entrepreneurial management on a firm level, Zahra et al. (1999) criticized their methodologically unilateral character and called attention to the fact that methodological creativity is indispensable when testing research models.

According to the standpoint of Aldrich and Martinez (2001:53), the underdeveloped character of the scientific area is also shown by the fact that research on entrepreneurship is dominated by inductive studies that rely on qualitative methodologies. Arriving at a similar conclusion, Oviatt and McDougall (2005:40) call for a more sophisticated research design and for the use of more appropriate analytical techniques. The next step in entrepreneurial research is to move away from exploratory studies towards causality in order to generate theoretically derived hypotheses, develop measures, and apply state-of-the-art statistical techniques (Aldrich and Martinez, 2001:53).

- Third, the validation of constructs is overwhelmingly performed upon American databases. Even though Europe is characterized by large differences between regions and countries, and there are various institutional settings that influence entrepreneurship (Huse and Landström, 1997), only a few attempts have been made to highlight differences in firm-level entrepreneurial activity in emerging markets.

- Finally, the critical question posed by Gartner (1988) – and what distinguishes the characteristics of entrepreneurial management work from that of conventional management – has not yet been answered. Hence, the understanding of why some entrepreneurs succeed in exploiting opportunities despite severe obstacles has remained a major challenge for the entrepreneurship research community today.

Based on the above, my purpose is to fill the “gaps” identified in the literature through empirically gauging the practices of entrepreneurial managers and testing them on a large sample of firms working in different industries, including the service sector.

The theoretical contribution of my thesis is to be the first to test the managers’ entrepreneurial activity in a new context, on an emerging market, i.e. in Hungary. Finally, the relationships among variables proposed by my research model are tested by a statistically more reliable technique, the multidimensional scaling (MDS). I believe the introduction of MDS to the field of entrepreneurship can contribute to the further development of the theory.

3.3. Hypotheses development on entrepreneurial management practices

In this dissertation, there are two important underlying assumptions.

1. First, the entrepreneurship can be viewed as a characteristic of organizations therefore is not conditioned by age, structure, size, or life-cycle requirements. An organization is entrepreneurial, when its management acts entrepreneurially. When approached as a process, entrepreneurial management may be found in a variety of settings that may not have been traditionally seen as entrepreneurial (Gartner & Brush, 2007). Consequently, entrepreneurial management is not an exclusive characteristic of new ventures or small businesses (Miles & Covin, 2002; Gartner, 2001; Naman & Slevin, 1993; Block & MacMillan, 1993) but the characteristic of organizations where those with decision making authority act entrepreneurially.
2. Second, since every organization is run and led by individuals, entrepreneurship is a form of management approach that is defined as the pursuit of opportunity irrespective to the level and nature of resources currently controlled (Stevenson, 2006; Brazeal & Krueger, 1994). It has been argued that the provision of resources is not part of entrepreneurship, since resources – including capital – can be obtained from markets (Noteboom, 2005). Consequently, an entrepreneurial manager is someone who acts with ambition beyond that supportable by the resources currently under his or her control, in relentless pursuit of an opportunity (Timmons, 1994).

The notion of entrepreneurial management also lessens the ownership criteria, since it allows entrepreneurs to be hired managers. The perspective taken is consistent with previous research (cf. Foss et al, 2006; Burgelman, 1983b; Kanter, 1989, 1985) pointing out that in modern firms are increasingly encouraging entrepreneurship at all levels of the organization in order to facilitate the resolution of the organizational capability-rigidity paradox.

The recognition of opportunities together with value creation via new combinations of resources is entrepreneurial, whether it actually involves ownership or not (Foss et al, 2006). In any case, the entrepreneurial management approach taken here shifts the

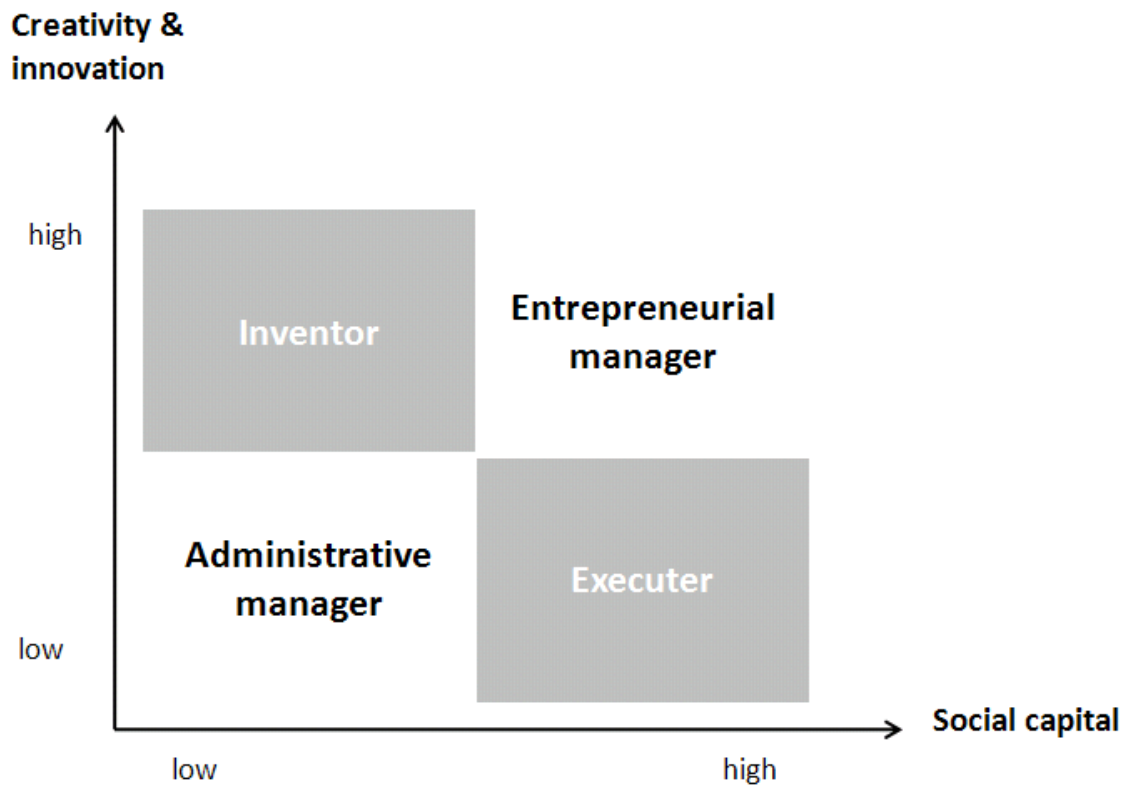
emphasis away from the question of “who” the individual entrepreneur is, focusing instead on the process itself and the part that individuals play within it.

The behavioral approach challenged research community to decide where entrepreneurship ends (Vesper, 1980); and what distinguish the characteristics of entrepreneurial management work from that of administrative management (Gartner, 1988).

The nature of managerial work had been studied quite thoroughly. Mintzberg (1975) for example concluded that managerial work is made up of a series of activities, and managers perform these activities in ways that are predictable and different depending on their respective social identities, and roles. Consequently, the difference between entrepreneurial and administrative managers can be traced back to the difference in their role expectations of enabling their organizations to explore and exploit opportunities. One way to address the question of entrepreneurial management practices is to look closely at the entrepreneurial roles. In order to understand the phenomenon in depth, the hypotheses will be formulated on the basis of entrepreneurial roles derived from the literature.

The biggest difference between administrative and entrepreneurial managers is their behaviour in different situation. While entrepreneurial managers have a strong action orientation, they also need to be differentiated from innovators (who are very creative but typically low in action orientation) and exectuors (who are typically not creative, but very active). Figure 4. Visualizes the differences on the basis of creativity versus active use of social capital.

Figure 4. Who is the entrepreneurial manager?



Source: on the basis of Vecsenyi (2003: 32)

The starting point is the model suggested by Timmons (1994), which proposed that the entrepreneurial process is opportunity-driven, led by a team, and characterized by parsimonious resources.

Table 6. Hypotheses development

Timmons's model	Proposed model
Opportunity-driven	Commitment
Parsimonious resources ¹	Resource gaps
Entrepreneurial team	Social capital

¹ Parsimony is taken as the concept of "less is better"

Taking Timmons's original model one step further, I propose that entrepreneurial managers are firmly committed to the exploitation of a given opportunity, to do so they need to overcome severe resource gaps (as opposed to "parsimonius"), and finally, they also need to move beyond their close, initial core team if they are to overcome the encountered resource gaps.

3.3.1. Entrepreneurial management and commitment

First, the existing literature has already highlighted that entrepreneurial managers pursue their vision firmly and resolutely even despite initial odds. According to the evolutionary theories of entrepreneurial action (cf. Weick, 1979), market opportunities in general are not readily available out there; rather, opportunities are enacted in an iterative process of actions, evaluations, and reactions (Berger and Luckmann, 1967; Mosakowski, 2002). When entrepreneurs act, they interact with the environment and they test the viability of the opportunity. Consequently, entrepreneurs are rarely able to see "the end from the very beginning". This is so, because there is no "end" until the opportunity unfolds. Failure, hence, is part of the trial-and-error learning process.

As the missing elements of the pattern take shape, the original idea may take new directions. One important insight is, however, that entrepreneurs are devoted to the exploitation of an opportunity. The way an opportunity finally will be exploited is the result of a learning process. Christensen (2003) for example argues that emerging markets requires watching how people use products, since no one – not the firms, not the existing customers – can know in advance that finally who or how will value the differentiating advantage of the new product. In a study of technology development in the disk drive industry, Christensen and Rosenbloom (1995) found that incumbents led the industry in developing and adopting new technologies – incremental and radical – as long as the technology addressed the needs of their existing customers. Entrepreneurial attackers were better by contrast in developing and adopting technologies which addressed user needs in different, emerging markets.

In order to succeed in commercializing such disruptive products, entrepreneurs must “invent the right kind of customers” for whom their products’ value proposition is the most appealing and valuable.

Entrepreneurial managers show a remarkable degree of confidence along the way the opportunity unfolds. They are confident in assuming that the missing elements of the pattern will take shape, and in expecting that the return envisioned from pursuing an opportunity is certainly worth the sacrifices, the investments, and even the short-term losses. To summarize, entrepreneurial commitment is characterized by firmness of purpose and relentless pursuit of an opportunity.

Hypothesis 1: The level of opportunity commitment will be significantly greater in the case of high-level entrepreneurial management than in case of low-level entrepreneurial management.

As an illustration of H1 hypothesis consider the following case example:

“As one promise after another ended up in smoke, my colleagues became increasingly panicked because of their personal finances. Some of them already regretted their recklessness in leaving their safe government jobs for the uncertain waters of private enterprise. I did everything to raise their spirits and convince them that we must continue developing our programs – even without a client in sight, because soon or later a client would materialize and then at least we would have something ready for them... That was the time when we had discovered another genius, and I wanted him to join our company right away. My co-workers, who have suffered much more than I from our hand-to-mouth existence during the firm’s precarious early days, felt that it was too soon to expand. This disagreement was the first sign that our objectives were fundamentally at odds. My co-workers wanted to be assured of a living wage, while I envisioned an expanding company” (Bojár, 2005:22-23).

3.3.2. Entrepreneurial management and resource gaps

Irrespective of their age and size, the supply of the required quality and quantity of resources could be a problem in nearly all organizations – mainly because it is difficult to estimate in advance the actual resource needs of the organization. Opposed to parsimonious resources, most entrepreneurial processes are characterized by severe resource constraints and scarcity. That is so because entrepreneurial managers act with ambition beyond the resources currently under control, in relentless pursuit of opportunity (cf. Stevenson 1983; Timmons, 1994). Consequently, resources definitely constitute a bottleneck in the course of implementation. A resource gap may take various forms: a lack of information, knowledge, inputs and physical assets, or even working capital.

Prior research has implicitly assumed that more resources are usually better than fewer resources in promoting firm expansion. This assumption overlooked the possibility that keeping slack resources may be inefficient. On the contrary, Penrose (1959) argued that redundant productive resources are wasted, if they are not used. Wiseman and Bromiley (1996), for example, found that slacks negatively influenced performance, and both March and Simon (1958) and Simon (1957) suggested that slack may encourage suboptimal firm behavior, and often lead to sub-optimal organizational behavior. In addition, the resource-rich firm is not always at a competitive advantage vis-à-vis the resource-poor firm (Mishina et al., 2004).

Resource constraints can be enabling in certain conditions (Jarillo, 1989; Rao and Drazin, 2002). Furthermore, Katila and Shane (2005) revealed that innovation capacity in general is greater in markets that are crowded, resource-poor, and small. Katila and Shane hence cracked the conventional wisdom that low-competition, resource-rich, and high-demand environments support innovation. On the contrary, such environments typically support incremental innovations.

In addition, resource may serve as important starting points, however, the scarcity of skills, time, and resources imply constraints in certain contexts, while not in others. Resource constraints can be enabling when the management develops resource acquisition strategies to overcome these constraints (Agarwal et al, 2002; Rao & Drazin, 2002). Current research has pointed out that resource scarcity or inadequacy (often

referred to as resource gaps) may act as catalysts of entrepreneurial activities and innovation, as entrepreneurs in their attempt to overcome a serious resource gap tend to discover new ways of production and operations which provide a competitive edge over incumbents (Christensen, 2003). While resource gaps induce the discovery and exploitation of new strategic positions and new value propositions, they may also induce change in industry competition rules (Markides, 1999:172).

Entrepreneurial managers often overcome resource gaps by not playing “the game better than competition but to develop and play an altogether different game”. Instead of attacking the established competitors in their existing, well-protected positions, entrepreneurial managers spot emerging strategic positions in the map of their industry. Changing conditions – such as the smaller hardware capacity requirement in case of Graphisoft’s technology – are giving rise to new customer segments, new products and services, or new ways of manufacturing or delivering existing products (Markides, 1997). Kirzner (1979: 181) for example argued that “entrepreneurship reveals to the market what the market did not realize was available, or indeed, needed at all” (Foss et al, 2006).

Breaking the rules depends on the firm’s strength and weaknesses. The company identifies gaps in the industry positioning map, decides to fill them, and the gaps grow to become the new mass market. Redefining either explicitly or implicitly the definition given long time ago to the business – like: who is the target customer segment? What are our core capabilities and what specific need can we best satisfy? Then who will be the right customer to approach? – not just improves resilience but also helps to spot gaps in the market.

As the literature pointed out, entrepreneurial managers in their effort to overcome these constraints often turn the initial drawbacks into competitive advantage (Christensen, 2003) by not playing “the game better than competition” but developing an altogether different game.

Hypothesis 2: The problem of temporary resource gaps will be significantly more frequent in the case of high-level entrepreneurial management than in the case of low-level entrepreneurial management.

As an illustration of H2 hypothesis, consider the following two case examples:

Graphisoft was first on the market introducing three dimensional modeling on personal computers in the mid 1980s. During the cold war an embargo on Western exports to East Bloc countries was established. At that time Hungary was amongst the CoCom (an acronym for Coordinating Committee for Multilateral Export Controls) countries hence technology sanctions applied to Hungarian computer imports. Consequently, the founders of Graphisoft simply could not acquire big capacity computers to work on. The initial drawback compared to their western competitors turned to be a big hit, as they were forced to work on small computers, their products eventually could be run on PCs too.

Another Hungarian entrepreneurial company called Kürt Ltd. also suffered from the import embargo of the CoCom system. Since the supplies of computer spare parts was in great shortage, the two brothers in 1989 started to repair computing devices. They were ready to undertake the repair and manufacturing of any kind of devices, first physical damages and later on damages caused by IT disasters. The challenges faced everyday eventually lead them to invent step-by-step a new, leading edge technology for Information Security and Data Recovery that became their distinctive competitive advantage. (downloaded from www.kurt.hu September, 2007).

3.3.3. Entrepreneurial management and social capital

Entrepreneurial firms, however, follow a resource-intensive strategic posture (Wiklund and Sheperd, 2005). From the point of view of entrepreneurial practices the important question is to ask how the resources gaps will be overcome. In their studies, Mangham and Pye (1991) observed that entrepreneurial managers heighten their awareness and sharpen their focus through the mobilization of their social capital.

The interpersonal relationships of entrepreneurs – as agents of the firm – with other individuals and organizations can provide “the conduits, bridges, and pathways through which the firm can find, access, and mobilize external opportunities and resources” (Hite 2005:113). Woo et al. (1992) observed that entrepreneurs utilized personal and professional sources of information to a greater extent than public sources of information. Uzzi (1997) also observed that personal networks are especially favorable for long-term economic success.

Entrepreneurial managers are found to be skilled at using their time to develop relationships with people who are crucial to the successful exploitation of their perceived opportunity (Cook, 1992; Larson and Starr, 1993). Moreover, they are described as calculative. They make strategic choices regarding their network; they add new ties, upgrade weak ties to strong ties, or drop ties according to the changing needs (cf. Elfring and Hulsink, 2007; Hite, 2005; Larson and Starr, 1993; Szabó, 2007). Moreover, social networks are best viewed dynamically, not statically. Entrepreneurs are ready to move beyond their close, initial core networks if they are to meet their changing resource needs (Hite & Hesterly, 2001; Eisenhardt & Schoonhoven, 1996). If entrepreneurs find themselves closed off in clusters without indirect ties to the resources and opportunities they need, they can actively engage in breaking out of clusters.

Finally, Pescosolido and Rubin (2000) argue that modern groups are so transitory and contingent that they do not really give people a basis for stable ties. Instead, people experience serial, short-term, and contingent relations with others, mostly through indirect rather than face to face contacts in contemporary social life. Entrepreneurs will turn to similar alters as long as these provide the necessary supply of resources, including information. When a tie stops providing the information and resources what needed, entrepreneurs may decide to drop the tie (Elfring & Hulsink, 2007).

In summary, people with the “right” mix of embedded ties can more effectively mobilize their network’s resources to achieve their goals than people or groups with less influential social connections can.

Hypothesis 3: The strategic development of social capital in order to access missing resources and information will be significantly greater in the case of high-level entrepreneurial management than in the case of low-level entrepreneurial management.

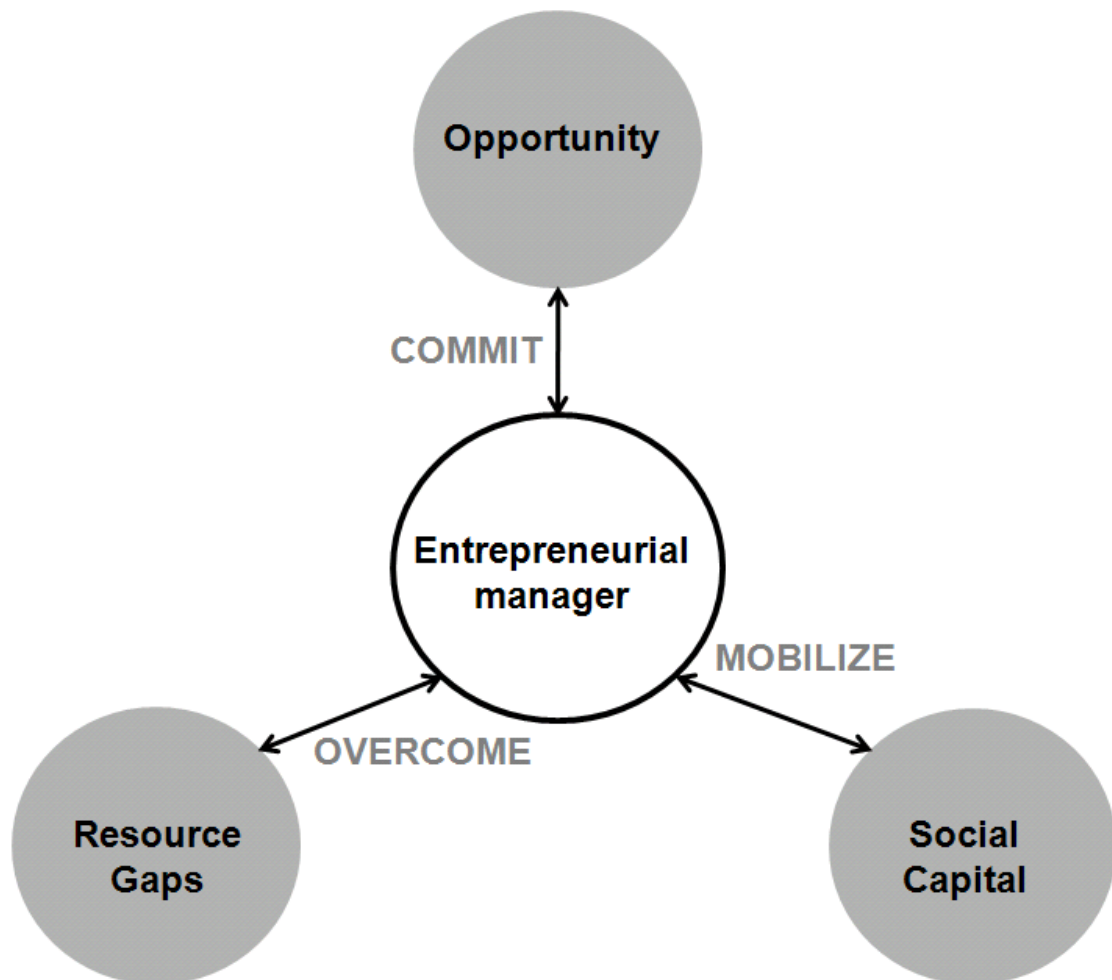
As an illustration of H3 hypothesis, consider the following case example:

At the time Graphisoft management was looking for customers, Apple Inc. was about boosting its sales on the personal computer market by attracting software developers and programmers to work on their machine. New software running on Apple hardware meant generating demand for Apple PCs. By the fall of 1983, the Munich Systems Exhibition was where Graphisoft eventually joined Apple in a strategic alliance. Apple was willing to patronize the Hungarian start-up for adapting the software prototype to Apple computers, while the ownership of the program remained at the founders. This was more than a strategic alliance, since generously provided four of its newest Lisa computers to the young team in addition to introducing them to its distributors (Bojár, 2005). According to the founder Bojár, “these contacts later formed the backbone of [Graphisoft’s] international distribution system ... to build up such a network of [their] own if they had even been capable of doing so, would have cost many millions of dollars” (Bojár, 2005: 40). The alliance was beneficial for both parties, since Graphisoft was the biggest draw within the Apple exhibit at CeBIT in Hannover. “It is true that most visitors came to see Macintosh, but the Mac could only run a few very simple applications. In contrast, our Lisa machine, displaying 3D image of the cardboard pipeline model, was an eye-catcher. In fact, our program was the first 3D modeling software for a PC-category machine” (Bojár 2005: 40).

3.4. Summary of hypotheses

In the center of the model there is the entrepreneurial manager, who is committed to the exploitation of an opportunity despite any initial odds. The opportunity itself unfolds during the process the entrepreneurial manager tries to overcome the resource gaps she or he encounters. One way to overcome resource gaps is to mobilize the social capital of the entrepreneurial manager. Social capital may provide valuable resources, even information or access to customers and suppliers.

Figure 5. Roles of entrepreneurial managers in the context of the dissertation



Hypothesis 1: The level of opportunity commitment will be significantly greater in the case of high-level entrepreneurial management than in case of low-level entrepreneurial management.

Hypothesis 2: The problem of temporary resource gaps will be significantly more frequent in the case of high-level entrepreneurial management than in the case of low-level entrepreneurial management.

Hypothesis 3: The strategic development of social capital in order to access missing resources and information will be significantly greater in the case of high-level entrepreneurial management than in the case of low-level entrepreneurial management.

4. Empirical study of entrepreneurial management

My goal in gathering empirical data was twofold. The first goal was to enrich our understanding by testing constructs on an emerging market. I have designed and conducted an online survey research to test my hypotheses on a large sample of small- and medium-sized organizations. The survey process was rigorously designed and I applied the selection criteria of SME defined on the basis of their size between 10 and 250 employees. From a random sample of 1000 firms, only 587 non-agricultural firms, with at least of 3 years of existence were selected.

In order to accomplish the second goal, a new methodology – multidimensional scaling – was introduced. In their review, Chandler and Lyon (2001) pointed out that scholars increasingly tend to employ sophisticated methodology in entrepreneurship research; however, only 20% of the 416 articles reviewed used no statistical analysis beyond simple descriptive statistics. Arriving at a similar conclusion, Oviatt and McDougall (2005:540) called for a more sophisticated research design and for the use of more appropriate analytical techniques.

4.1. The entrepreneurial management measured along a continuum

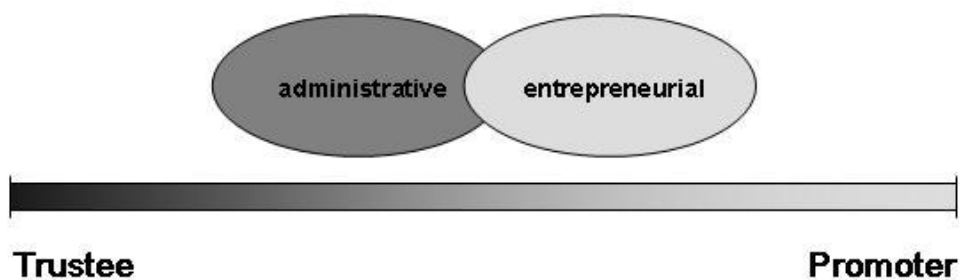
The notion of entrepreneurial management allows entrepreneurs to be hired managers. The perspective taken is consistent with previous research (cf. Foss et al, 2006; Burgelman, 1983b; Kanter, 1989, 1985) pointing out that in modern firms are increasingly encouraging entrepreneurship at all levels of the organization in order to facilitate the resolution of the organizational capability-rigidity paradox. The recognition of opportunities together with value creation via new combinations of resources is entrepreneurial, whether it actually involves ownership or not (Foss et al, 2006).

This implies that entrepreneurship is a behavioral phenomenon, and it seems natural to treat entrepreneurship not as a dichotomous variable but to assume that all firms fall along a conceptual continuum that ranges from highly conservative to highly entrepreneurial (c.f. Barringer & Bluedorn, 1999; Davidsson, 2003).

At one extreme, the truly “promoter” firms are risk-taking, innovative, and proactive while in contrast with the opposite extreme, the conservative “trustees” are risk-averse, less innovative, and adopt a ‘wait and see’ posture (Stevenson, 2006).

While promoter and trustee define the conceptual end points of the spectrum, empirical observations which contrasted trustees with promoters (cf. Nyström, 1979; Miller, 1983; Busenitz & Barney, 1997; Barringer & Bluedorn, 1999; Hortoványi & Szabó 2006a; Hortoványi, 2007) have confirmed that some firms show more entrepreneurship than others. A firm’s position on this continuum is determined by the level of its entrepreneurial orientation, as visualized in Figure 4. below.

Figure 6. Continuum of entrepreneurial orientation



The entrepreneurially behaving firms are generally distinguished from administrative firms in their ability to innovate, initiate change, and perpetuate the strengths of flexibility and responsiveness (Guth & Ginsberg, 1990). The classification scheme is an ideal one, in the sense that it emphasizes and highlights features that are less pronounced in the extremes. It does not imply that either type of firm by definition is better or worse from a strategic point of view. Thus, entrepreneurial management is not an idealistic example, but rather a range of behavior that consistently falls closer to the promoter’s end of the spectrum.

4.2. Measures of entrepreneurial orientation

As mentioned in the introduction, the vast majority of scholars agree with the view that the degree of CE can be measured by three dimensions: innovativeness, proactiveness and risk-taking, as mentioned in the introduction (Knight, 1997; Covin & Slevin, 1991; Miller & Friesen, 1983). However some authors, such as Lumpkin and Dess (1996) argue that five dimensions, not three should be used to measure entrepreneurship; namely autonomy, competitive aggressiveness, proactiveness, innovativeness and risk-taking. In contrast with their views, Morris et al. (2006) critiqued the inclusion of competitive aggressiveness as a separate dimension, because in its content, competitive aggressiveness largely overlaps if not part of proactiveness. Following the suggestion of Kreiser et al, (2002) present study includes growth orientation as the fifth, independent measurement of entrepreneurial management. The description of each of these dimensions follows in more detail:

4.2.1. Autonomy

Autonomy refers to the independent action of an individual or a team in bringing forth an idea or a vision. In general, it means the ability and will to pursue opportunities, even though factors such as resource availability, actions by competitive rivals, or internal organizational considerations may change the course of the initiative, but not sufficient to extinguish it (Lumpkin & Dess, 1996). As a consequence of delegating authority to operating units (Szabó, 2005) in entrepreneurial firms, the impetus for new initiatives stems from lower levels of the hierarchy.

Modern firms are increasingly encouraging entrepreneurship at all levels of the organization (e.g., Day and Wendler, 1998; Lynskey & Yonekura, 2002). To foster entrepreneurial attitudes and behavior managers must give significant discretion to employees. Employees holding decision authority can be described as “proxy entrepreneurs,” exercising delegated or *derived judgment* on behalf of their employers. Such employees are expected to apply their own judgment to new circumstances or situations that may be unknown to the employer rather than just to carry out routine instructions in a mechanical, passive way. This type of arrangement is typically seen in the management literature as a form of empowerment, encouraging employees to utilize the

knowledge best known to them and giving them strong incentives to do so (Foss et al, 2006). As previous studies (see Nyström, 1979) described it is principally a decentralized, curious and open-minded organization culture that enables firms to meet the challenge of discovering and forming new possibilities and application areas. Corporations do not carry out their innovation activities in isolation of their research labs, but building and tightening the co-operation with their consumers or even competitors have become ever important (Christensen, 2003).

This view is confirmed by Castells (2000) who points out that corporations in Silicon Valley were able to conquer the borderlands of technology because they continuously fertilized each other by spreading knowledge via exchange of their employees and experts. The friendships between these people remained regardless of the changes in the jobs and the discontinuance of the daily work connections: the frequent midnight professional disputes in Mountain View, in the grill bar of Walker's Wagon Wheel have made much more for the spread of technological innovations than the most seminars in Stanford. The synergic combination of decentralized organizational structure and customer oriented business strategy promotes the productive use of internal and external knowledge.

Granting such latitude to employees brings both benefits and costs presenting managers with a tradeoff between encouraging beneficial entrepreneurship and facilitating harmful entrepreneurship inside the firm (Foss et al, 2006). As subordinates become less constrained, they are also likely to engage in "destructive" proxy-entrepreneurship as well, referring to those activities that reduce joint surplus. The most important function of organizational design, hence Foss et al. (2006) argue, is to balance productive and destructive proxy-entrepreneurship by selecting and enforcing the proper constraints.

4.2.2. Innovativeness

Based on Schumpeter's concept of entrepreneurship, *innovativeness* refers to the creation of new products, services, processes, technologies and business models (Morris & Kuratko, 2002). Economically, innovation is the combination of resources in a new and original way. Entrepreneurially, it is the discovery of a new and better way of doing things. Knight (1997) and Kreiser et al. (2002) expanded the definition that by regarding innovativeness as the capability, capacity and willingness of an enterprise to support creativity and experimentation to solve recurring customer problems. Innovation is not

simply about generating creative ideas, but also involves the commercialization, implementation and the modification of existing products, services and new ways to meet market demand via new resource combinations.

Antoncic and Hisrich (2001) linked the innovativeness dimension with technological leadership, supported by research and development (R&D), in developing new products, services and processes. The goal of innovation, however, is the creation of a marketable competitive advantage rather than a pure technological invention. An invention (a new way of doing something) becomes an innovation only if it meets with an opportunity (a demand for a new way of doing something). Thus, technical-technological, organizational, financial and commercial activities are equally present, and they – in interaction with one another, in an integrated way – determine the way of materializing an idea. Innovation as such demands extensive information processing capability across projects and organizational boundaries (Brown & Eisenhardt, 1997) and across organizational disciplines (Volberda, 1996).

Innovation is not something that happens at some point in time. It is a process. Accordingly, innovation lays at the heart of the entrepreneurial process and is a means of opportunity exploitation. Innovation is not a characteristic of the individual entrepreneurs, but of their actions (Gartner, 1988).

4.2.3. Proactiveness

Proactiveness reflects an action-orientation with a forward-looking perspective reflected in actions taken in anticipation of future demand (Covin & Slevin, 1989; Lumpkin & Dess, 2001). Kreiser et al. (2002:78) defines proactiveness as the aggressive execution and follow-up actions to drive an enterprise toward the achievement of its objectives by whatever reasonable means required. Proactive firms constantly seek new opportunities by anticipating future demand and developing products and services in regards of unmet customer needs. They tend to be industry leaders in regards of developing new products, procedures, or technologies (Lumpkin and Dess, 1996). Consequently, they are also likely to be initiators in the creation or discovery of new attributes that lead to an increase in value creation (Foss et al, 2006). As such, proactiveness has certain underlying attributes like the anticipation and quick reaction to opportunities; the attitude to being a pioneer

or fast follower; and the high regard for employee initiatives (Knight, 1997; Stevenson & Jarillo, 1990).

Being the first-mover rather than being the follower is not an exclusive characteristic, though. A firm can be novel, forward thinking, and fast without always being the very first (Lumpkin & Dess, 1996). Proactiveness reflects a willingness to be unconventional rather than rely on traditional methods of competing, for example via challenging competitor's weaknesses (Lumpkin & Dess, 1996).

4.2.4. Risk-management

Before elaborating risk-management, the term propensity to take risk needs to be defined. Risk-taking refers to the willingness to commit significant resources to opportunities that involve a reasonable chance of costly failure. Brockhaus (1980) has found that some entrepreneurs may be cautious and risk averse under some circumstances and risk-taking in others. While risk bearing is an important element of entrepreneurial behavior, entrepreneurial managers found to be „carefully brave” that is they tend to take risk grudgingly and only after they have made valiant attempts to spread their risks on capital sources and resource providers (Stevenson, 2006).

Risk-taking is assumed to be inherent nature of entrepreneurial behavior, since entrepreneurs need to act under conditions of uncertainty. Because there are few if at all, previous experiences as well as no other organizations to imitate, knowledge about possible successful strategies is very limited. Although all venturing attempts face uncertainty and the possibility of painful mistakes such problems take a more acute form for entrepreneurial managers vis-à-vis small business founders (Aldrich & Martinez, 2001). Hence, the measurement of the extent to which individuals differ in their willingness to take risk is fraught with difficulty, especially when it is based on subjective evaluation. This is so, because what one person regards as “calculated” approach another may regard as “aversion”. The problem of subjectivity, however, can be overcome by cross-checking the growth-plans of the firm with to CEO's self-evaluation.

Moreover, research has showed that entrepreneurs in general seem to prefer taking moderate level of risk, thus tend to avoid both low-risk and high-risk situations (Sandberg, 1992). Predominantly, they avoid low-risk situations because the easily attained success is

not a genuine achievement. In contrast, the outcome of high-risk projects is regarded a matter of chance irrespectively of invested own efforts. The risks hence are typically assessed, calculated and managed (Hortoványi & Szabó, 2006a; Morris & Kuratko, 2002). Instead of committing significant amount of resources at one, entrepreneurs aim to invest only small amount of resources as long as future contingencies unfold. By delaying substantial resource commitments, their potential loss is kept at minimum in case a certain idea, however, does not come up to the expectations.

4.2.5. Growth Orientation

A considerable body of literature has demonstrated that growth orientation in itself represents an entrepreneurial characteristic (Cooper et al, 1989). Vesper (1980) for example pointed out in his study of venture types, that many business owners never intend their business to grow over what they consider to be a controllable size. Hence, it is necessary to go beyond the notion of corporate life cycles and stages to conceive of an entrepreneurial firm (Carland et al. 1984:357). Glueck (1980) distinguished between entrepreneurial ventures and what he termed family businesses by focusing on the needs and preferences opposed to those of the business. Glueck found that when in conflict, the needs of the family will override those of the business. In contrast, an entrepreneurial firm would opt for pursuit of growth and the maintenance of the firm's distinctive competence through obtaining the best personnel available.

Consequently, not all new ventures are entrepreneurial in nature; and entrepreneurial firms may begin at any size level. The critical factor in distinguish entrepreneurial managers from non-entrepreneurial ones, and in particular small business owners, is the presence of a sound and articulated growth objective (Davidsson et al, 2004; Carland et al, 1984). Moderate growth expectations however, are more typical (Hortoványi & Szabó, 2006a) in accordance with the observation that entrepreneurial managers are carefully brave, and hence they gradually test the viability of ideas.

4.2.6. Independence of the five dimensions

Traditional school of thought views these dimensions as contributing equally and in the same direction to the degree of corporate entrepreneurship (Barringer & Bluedorn, 1999; Zahra, 1991). Although all of these attributes of entrepreneurial orientation may be exhibited by highly entrepreneurial firms, Kreiser et al. (2002) and Lumpkin and Dess

(1996) argue that these dimensions vary independently of one another and researchers shall not restrict entrepreneurial behavior to only those cases in which all the five extensively present. While several firms may be entrepreneurial in one or a few respects, few are entrepreneurial throughout the spectrum. It is conceivable, however, that in many situations a firm would have to excel along all or most of these dimensions in order to achieve the ability to create superior value (Brown et al 2001).

Consequently, there may be many different routes to achieve high entrepreneurial performance, depending on the type of opportunity a firm pursues; the combination of these five attributes must be present.

4.3. Data collection

In order to produce generalizable results I have utilized a simple random sample obtained from the Central Statistics Office (Budapest, Hungary) in October, 2008. The random sample of 1000 non-agricultural firms registered in Hungary, however, needed to be further reduced by eliminating those firms which failed to match the following two criteria: firms must have been in business at least since 2006 and the minimum number of their employees respectively must be at least 10. The imposed sampling frame yielded a sample of 587 firms. The survey took place in between March 2009 and April 2009. Out of the 587 firms we managed to collect 203 responses yielding a response rate of 34.58%. I believe that the considerable high response rate is sufficient enough to eliminate non-response bias.

4.3.1. Online survey

Data collection was done through a structured online survey, where the respondents – founders or senior managers (mainly CEOs) – were asked a series of questions to compare and judge their own management style's similarity as well as dissimilarity relative to pairs of statements representing the opposite ends of the entrepreneur-administrator continuum. One potential advantage of this perceptual approach is the relatively high level of validity because it allowed me to pose questions that directly addressed the underlying nature of the constructs.

Entrepreneurship researchers frequently use the self-reported perceptions of business owners and executives because those individuals are typically quite knowledgeable about company strategies and business circumstances (Hambrick, 1981).

For example Lumpkin and Dess (1996) refer to a study by Chandler and Hanks (1994) that found a correlation between the owner and the CEO's assessment of business volume (earnings, sales etc.) and archival sales figures.

In order to reduce the occurrence of response contamination, I mixed the pairs of questions from time to time, so that each type – entrepreneurial as well as administrative – of statement could appear on both sides. Mixing the questions was derived from Davidsson (2004) who suggested that the “higher” the level of measurement is for the operationalizations of a variable, the better.

Finally, I also decided to take advantage of modern technology by designing a 100-point equal-length scale from both ends of the continuum instead of the generally applied 7-point Likert scale. The respondents, however, were not expected to work with numbers; rather, they were asked to use a visual scale by placing the pointer between minus 100 and plus 100 including zero in accordance with their personal judgment about the opposing pairs. By working with a 201-point scale (from -100 to +100 including 0), I also believe that the MDS algorithm could better explain the underlying dimensions.

4.3.2. Testing the data

Based on the five measures of entrepreneurship (namely autonomy, innovation, proactiveness, risk-taking, and growth orientation), I generated eleven pairs of statements (variables).

Analyzing previous studies that aimed to operationalize and validate entrepreneurial orientation (without claiming a complete list: Antoncic and Hisrich, 2001; Barringer and Bluedorn, 1999; Brown et al. 2001 etc.) I found that researchers run factor analysis using principal components analysis and varimax rotation. The items in those research papers were usually measured on a five- to ten-point scale; however, the researchers did not enclose information about testing the normality of their data. According to Kovács (2006), the data suitable for factor analysis should have a bivariate normal distribution for each pair of variables, and observations should be independent.

While factor analysis requires that the underlying data are distributed as multivariate normal, and that the relationships are linear, multidimensional scaling (MDS) imposes no such restrictions. MDS (PROXSCAL) attempts to reduce the data by finding the structure in a set of proximity measures between objects or cases. This is accomplished by assigning observations to specific locations in a conceptual space. Since MDS is relatively free of distributional assumptions, it is the most common technique used in perceptual mapping. In addition, factor analysis tends to extract more dimensions than MDS. Consequently, the dimensions obtained by MDS tend to be readily interpreted. Because of these advantages, I decided to run MDS on the database.

4.3.3. [The sample characteristics](#)

One half of the respondents (97 firms, 47.8%) are falling into industrial sector, while the other half of the respondents (106 firms, 52.2%) are falling into service sector on the basis on their primary activity (For more detail see Table 7).

Table 7. Sample distribution by sector

Sector	N	%
Processing industry	15	7.4%
Machine manufacturing	21	10.3%
Construction industry	36	17.7%
Other industry	25	12.3%
Retail and wholesale trade	42	20.7%
Transportation and logistics	16	7.9%
Other services	48	23.6%
Summary	203	100%

There are 37 firms established before 1989 (18.4%). Twice as many (74 firms, 36.8%) were established between 1990 and 1995. Between 1996 and 2000, 39 firms were established (19.4%), while established after 2001 there are 51 firms (25.4%).

Based on the employment size, there are 123 small firms, out of which 70 firms (34.5%) have more than 10 but less than 20 full-time employees on the basis of their year-end employment data in 2008. In the sample, there are 70 medium-sized firms (34.5%), however, there are missing employment data in case of 10 firms (4,9%).

The majority of respondents (104 out of 203, representing 51.2%) have got ownership stake in the firm, a bit smaller portion of the respondents (97 out of 203) are employed managers. There are missing data in 2 cases.

With regards of age distribution, 70% of the respondents are somewhere between 31 and 52 years of old (142), only 4 of them are older than 60. The majority of the respondents are male managers (147 out of 203, 72,4%), while one quarter of the respondents are female managers (54, 26,6%).

The educational background of the respondents is quite evenly distributed as well. Half of the respondents have a degree in engineering (101 persons), while other half of the respondents (102 persons) have a degree in economics. There are 2 persons with a PhD degree. The majority of the respondents did not spend more than 3 months abroad (cumulatively), and only 10.4% spent 3 to 6 months, 6.5% spent 1 to 3 years, and finally 8% spent more than 3 years abroad with studying and/or working.

Finally I have also checked the formal experiences of the respondents. 79 persons (38.9% of the respondents) have never managed other organization or firm, while 117 persons (57.6% of the respondents) never started a venture before this one. Only 47 respondents reported to start one venture before this one (23.2%). Finally, 22 respondents (10.8%) reported to start 2 or more ventures before. In case of 17 response, the data is missing.

5. Findings

By running MDS, I revealed three dimensions, two of which remained hidden in previous studies. The first dimension was “entrepreneurial orientation” besides “speculation” and “product push” orientations. The three dimensions were named as:

- Entrepreneurial orientation [EO]
- Speculation orientation [SPO]
- Product push orientation [PPO]

Each of the new dimensions also represents a conceptual continuum, just like entrepreneurial orientation does. Speculation orientation ranges from high risk tolerance to high risk avoidance. In the case of product push, the range is between a single product and highly diversified product lines.

Accordingly, firms in the sample were distributed due to their orientation level in each dimension. A firm’s position on any of the three continuums is determined by the level of its orientation. For example, in the case of the second dimension, a high speculative orientation means that the manager perceives innovation to be marginally important; however, she or he is rather speculative in the form of taking significant risk in the hope of high returns in the short-term. Similarly, high risk avoidance refers to a preference for safe, low risk, and easily reachable ideas.

With regard to the third dimension, product push orientation signals an aggressive attitude toward scaling up product lines and using promotions and advertising in promoting sales growth. Innovation efforts tend to be directed toward potential marketable improvements to an existing product or service. Hence innovation is perceived as an incremental, clearly defined, and time-tested process designed to prove or disprove its value to the company. In the case of poor results, the management prefers to abandon the activity quickly.

On the other hand, however, the single-product orientation implies that the manager is committed to the development of a single but radically innovative product idea. Innovation is perceived as a sporadic process, with starts and stops, dead ends and

revivals. Persistence is a key element of the processes. A low level of product push orientation is also characterized by a relatively high level of uncertainty tolerance and a simultaneous effort to reduce risks to a manageable level. Finally, it is also associated with the aim of breaking traditional ways of conducting business.

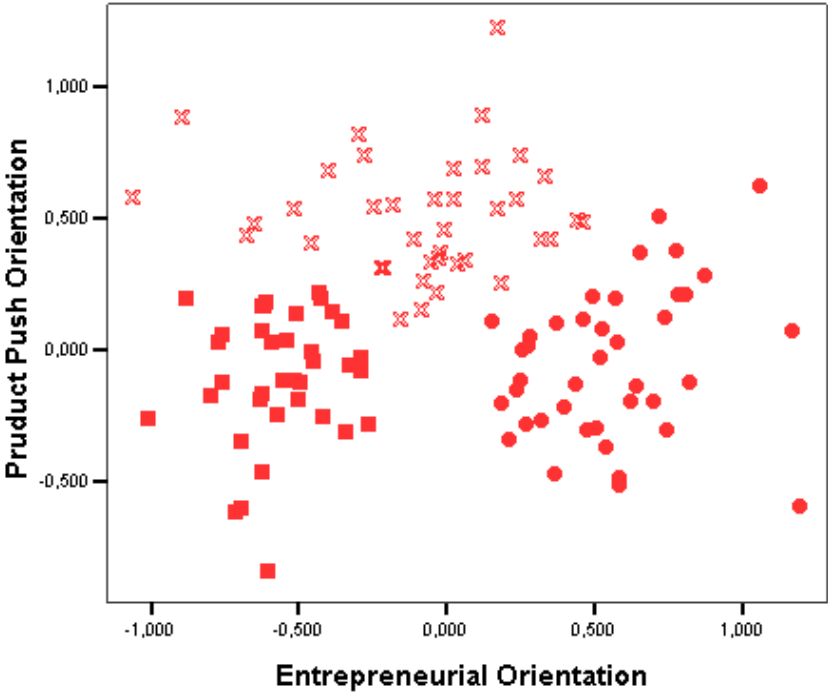
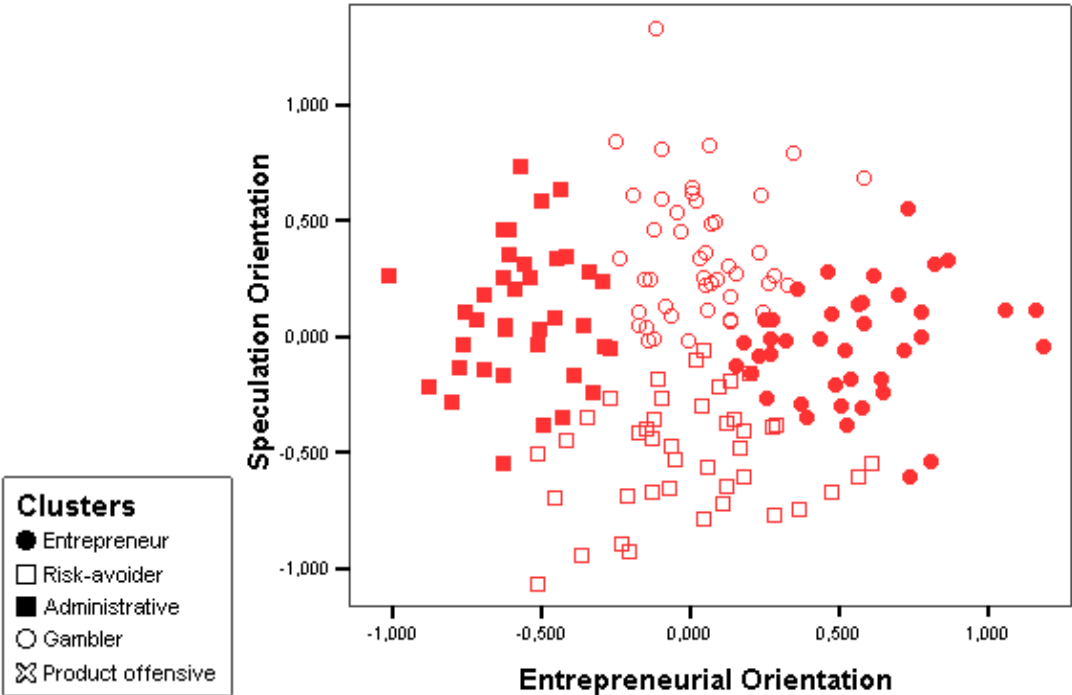
For the identification of managerial behaviors in the sample, I applied a two-step cluster analysis. The advantage of this method over both the hierarchical and the non-hierarchical k-means cluster analysis is that two-step cluster analysis is based on its selected Schwarz Bayesian information criterion (BIC); hence, it suggests the ideal number of clusters.

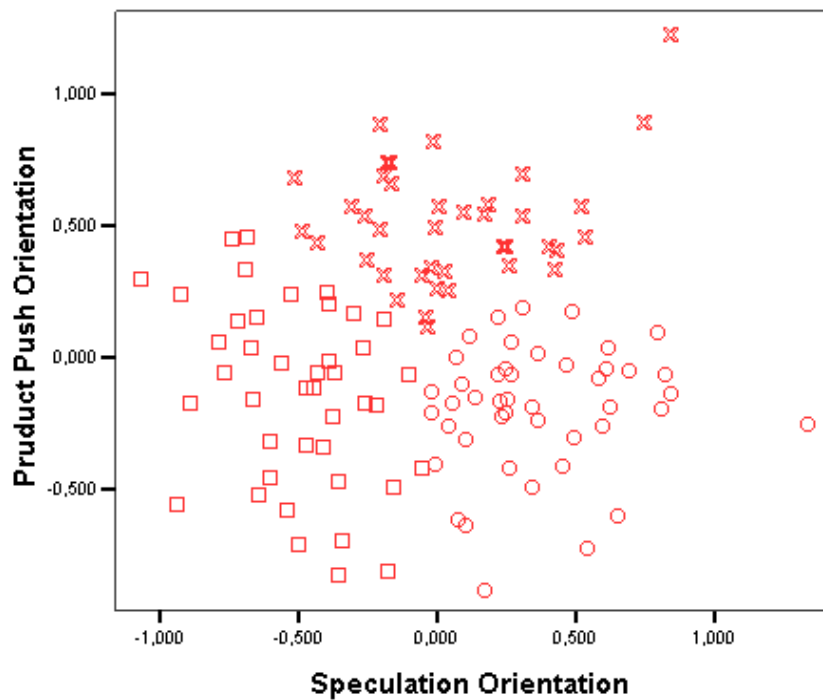
All the cases were used to in the 2-step cluster analysis. As a result, 5 clusters were obtained. Each and every cluster is easily separable from the others; the distribution of the clusters is also well balanced. Out of the 203 respondents, 40 fall into C1, the entrepreneurial manager cluster. There are 42 administrative managers in cluster C2, while 37 managers were identified as risk-avoiders representing cluster C3. The largest cluster, C4, is made up by 45 gamblers. Finally, 39 respondents are associated with the product offensive management style (C5).

Table 8. Interpretation of clusters

	EO	SP	PO	Cluster names	Distribution
C1	+	0	0	Entrepreneurial management style	19.7%
C2	–	0	0	Administrative management style	20.7%
C3	0	–	0	Risk-avoider management style	18.2%
C4	0	+	0	Gambler management style	22.2%
C5	0	0	+	Product offensive management style	19.2%

Figure 7. Cluster distributions along dimensions





I have controlled the management style for size (full-time employees), industry, age of the firm, and ownership, as well as for age, educational background, international experience and gender of the CEO. I have also confirmed that there is no relationship between the above-mentioned characteristics and the market behavior of the firm.

For testing the hypotheses, the most appropriate method was testing the correlation between the independent variable (management style) and the dependent variables (opportunity, network, and resource gap) by using cross-tabulation and Pearson correlation to measure the association between the variables.

Table 9. Test of Hypotheses

Hypothesis	EO	SPO	PPO
H1 – Persistence	+	☒	–
H2 – Social Capital	++	–	☒
H3 – Resource Gaps	++	☒	–

With regard of the entrepreneurial dimension, the results indicate that entrepreneurial managers tend to consider learning as part of the opportunity exploitation. Interestingly, however, they do not differ significantly from administrative managers. Both management styles tend to be persistent in testing the viability of business ideas and pursuing them despite of initial odds. The second hypothesis was strongly supported implying that entrepreneurial managers are indeed more strategic in developing their social capital in accordance with their changing resource needs. By contrast, administrative managers – just like gamblers – are rather spontaneous in developing their networks. Finally, hypothesis 3 was also strongly supported because entrepreneurial managers perceived that they experience a greater frequency of resource gaps than their counterpart, administrative managers.

In case of gamblers and risk-avoiders, none of the hypotheses were supported. By definition, neither of the two management styles is considered as entrepreneurial. In the case of product offensive management style, however, there was a weak negative correlation with persistence. This is in line with my expectations, since product offensive managers have a short-term orientation: in the case of poor early results, they prefer to abandon the activity quickly. They also prefer to have slack resources.

6. Scholarly and managerial implications

I believe that my research makes three main contributions for scholars and entrepreneur educators. First, the research has justified the adequacy of multidimensional scaling technique in testing constructs of entrepreneurial management. According to our findings, multidimensional scaling is proven to equip us with statistically more correct and more valid results.

Second, the empirical study has advanced the understanding of corporate entrepreneurship by revealing two hidden dimensions: speculation and product push. The former is an important step in advancing theory since, without the exclusion of gamblers, testing hypotheses may lead to misleading results. Gambling over the last two decades has demonstrated extensive growth. Societies, like those in emerging markets, tend to allow a wide array of gambling opportunities. Some of these opportunities are often associated with less reputable activities with links to the grey economy. It is for future research to test whether speculation and gambling are a contextual factor or not; and whether it is an independent dimension for both; emerging and developed economies.

Third, I managed to highlight a third dimension – product push. The research confirmed that the number of new products is not a measure per se of entrepreneurial innovation. The number of new products is indicative only if the products are extensively built on innovation.

The findings have implications for practitioners by highlighting that the behavior of entrepreneurial managers differs from that of administrative managers by the use of social capital and resource scarcity.

I also believe that the results have implications for policy makers, too, drawing their attention to the speculation dimension. Supporting SMEs in times of crisis runs the risk of inefficient distribution of financial aids since the targeted entrepreneurs only make up roughly 20% of the sample. In addition, SMEs can be the engine of regional growth only if they have innovation and long-term orientation; however, a preference for the product offensive management style works against it.

7. References

- Ács, Z & D Audretsch (1988): Innovation in large and small firms: An empirical analysis. *American Economic Review*
- Ács, Z & D Audretsch (1990): *Innovation and Small Firms*. MIT University Press: Cambridge, MA
- Ács, Z; Szerb L; Ulbert J & Varga A (2001): GEM 2001 Magyarország: Vállalkozások Magyarországon globális összehasonlításban. Pécsi Tudományegyetem, Közgazdaságtudományi Kar, Pécs
- Ács, Z; Szerb L; Varga A, Ulbert J & Bodor É (2004): Új vállalkozások gazdaságra gyakorolt hatásainak vizsgálata nemzetközi összehasonlításban. *Papers on Entrepreneurship, Growth and Public Policy*, #2404
- Adizes, I (1992): *Vállalatok életciklusai*. HVG: Budapest
- Agarwal, R; M Sarkar & R Echambadi (2002): The conditioning effect of time on firm survival: An industry life cycle approach. *Academy of Management Journal*, **45**, pp: 971-994.
- Aides, R (2005): *Entrepreneurship in Transition Countries: Review*, working paper **61**, Centre for the study of economic and social change in Europe, School of Slavonic and East European Studies & University College: London
- Aldrich, HE (1979): *Organizations and environments*. Prentice Hall: Englewood Cliffs, NJ
- Aldrich, HE & C Zimmer (1986): Entrepreneurship through social networks. In Sexton, D & R Smilor (eds): *The Art and Science of Entrepreneurship*, Ballinger: New York, pp: 3-23.
- Aldrich, HE; PR Reese & P Dubini (1989): Women on the verge of a breakthrough: networking among entrepreneurs in the United States and Italy. *Entrepreneurship and Regional Development*, **1**, pp: 339-356.
- Aldrich, HE & T Baker (1997): Blinded by the cities? Has there been progress in entrepreneurship research. In DL Sexton & RW Smilor (eds): *Entrepreneurship 2000*, Upstart: Chicago, pp: 377-401.

- Aldrich, HE & MA Martinez (2001): Many are called, but few are chosen: An Evolutionary Perspective for the Study of Entrepreneurship. *Entrepreneurship Theory and Practice*, **25**(2), pp: 41-56.
- Aldrich, HE & JE Cliff (2003): The pervasive effects of family on entrepreneurship: toward a family embeddedness perspective. *Journal of Business Venturing*, **18**(5), pp: 573-596.
- Aldrich, HE & PH Kim (2007): Small worlds, infinite possibilities? How social networks affect entrepreneurial team formation and search. *Strategic Entrepreneurship Journal* **1**(1), pp: 147-165.
- Alsos, GA & L Kolvereid (1998): The business gestation process of novice, serial and parallel business founders. *Entrepreneurship Theory and Practice*, **22**(2), pp: 101-114.
- Altman, J & A Zacharakis (2003): An integrated model for corporate venturing. *Journal of Private Equity*, **6**(4) pp: 68-76.
- Alvarez, SA & JB Barney (2007): Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal* **1**(1), pp: 11-26.
- Amit R & P Schoemaker (1993): Strategic assets and organizational rent. *Strategic Management Journal*, **14**, pp: 33-46.
- Angyal Á (2005): A kisvállalkozás. In Szintay István & Szilágyiné Fülöp Erika (szerk): *Tanulmányok Czabán János tiszteletére*.
- Antal-Mokos, Z; K Balaton; Gy Drótos & E Tari (1997): *Stratégia és szervezet*. Közgazdasági és Jogi Könyvkiadó: Budapest.
- Antoncic, B & RD Hisrich (2001) Intrapreneurship: Construct Refinement and Cross-Cultural Validation. *Journal of Business Venturing*, **16**, pp: 495-527
- Antoncic, B; M Ruzzier & T Bratkovic (2007): Linking strategic utilization of the entrepreneurial resource-based social capital to small firm growth. SMS 27th Annual International Conference, San Diego (CA)
- Arrow, H; JE McGrath & JL Berdahl (2000): *Small groups as complex systems: Formation, coordination, development and adaptation*. Sage: Thousand Oaks, CA.
- Astley, WG (1985): The two ecologies: population and community perspectives on organizational evolution. *Administrative Science Quarterly*, **30**, pp: 224-241.

- Audretsch, D & Z Ács (1990): The entrepreneurial regime, learning and industry turbulence. *Small Business Economics*, 2(2), pp: 119-128.
- Audretsch, D (1991): New-firm survival and the technological regime. *The Review of Economics and Statistics*, **73**(3), pp: 441-450.
- Audretsch, D & M Fritsch (1994): On the measurement of entry rates. *Empirica*, **21**, pp: 105-113.
- Audretsch, D & M Fritsch (2002): Growth Regimes over Time and Space. *Regional Studies*, **36**(2), pp: 113-124.
- Audretsch, D (2004): *Entrepreneurship, Innovation and Economic Growth*. Edward Elgar: Cheltenham, UK
- Audretsch, D & M Kleinbach (2004): Entrepreneurship Capital and Economic Performance. In Audretsch, D (2004): *Entrepreneurship, Innovation and Economic Growth*. Edward Elgar: Cheltenham, UK, pp: 293-303.
- Bakacsi, Gy (1996): *Szervezeti Magatartás*. Közgazdasági és Jogi Könyvkiadó: Budapest
- Baker, T & R Nelson (2005): Creating something from nothing: resource construction through Bricolage. *Administrative Science Quarterly*, **50**, pp: 329-366.
- Balaton, K (2005): Attitude of Hungarian companies towards challenges created by EU-accession. *Journal for East European Management Studies*, **10**, pp: 247-258
- Bantel, KA & SE Jackson (1989): Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, **10**, pp: 107–124.
- Barabási, A-L (2003): *Linked – How everything is connected to everything else and what it means for business, science, and everyday life*. Plume: New York.
- Barney, J; DN Clark & S Alvarez (2003): When do family ties matter? Entrepreneurial market opportunity recognition and resource acquisition in family firms. *Frontiers of Entrepreneurship research-2003*, Babson College: Wellesley, MA
- Baron, RA (1998): Cognitive mechanisms in entrepreneurship: why and when entrepreneurs think differently than other people. *Journal of Business Venturing*, **14**(4), pp: 275-294.

- Baron, RA (2007): Behavioral and cognitive factors in entrepreneurship: Entrepreneurs as the active element in new venture creation. *Strategic Entrepreneurship Journal* **1**(1), pp: 167-182.
- Barringer, BR & AC Bluedorn (1999): The Relationship between Corporate Entrepreneurship and Strategic Management. *Strategic Management Journal*, 20: 421-444
- Baum, JAC & JV Singh (1996): Evolutionary Dynamics of Organizations. *Administrative Science Quarterly*, **41**(3), pp: 543-550.
- Baumol, WJ (1968): Entrepreneurship in economic theory. *American Economic Review*, **58**, pp: 64-71.
- Baumol, WJ (1990): Entrepreneurship: Productive, unproductive and destructive. *Journal of Political Economy*, **58**, pp: 64-71.
- Baumol, WJ (2002): *Free market innovation machine: Analyzing the growth miracle of capitalism*. Princeton University Press: Princeton.
- Becattini, G (1990): The industrial district as a creative milieu. In Benko, G. & Dunford, M (eds): *Industrial change and regional development: the transformation of new industrial spaces*, Belhaven Press: London
- Bettis, RA & CK Prahalad (1995): The dominant logic: Retrospective and Extension. *Strategic Management Journal*, **16**(1), pp: 5-14.
- Bhave, MP (1994): A process model of entrepreneurial venture creation. *Journal of Business Venturing*, **9**(3); pp: 223-242.
- Bhide, AV (1999): *How entrepreneurs craft strategies that work*. Harvard Business School Press: Boston, MA.
- Bhide, AV (2000): *The origin and evolution of new business*. Oxford: New York.
- Bianchi, A (1993): Who's most likely to go it alone? *Inc.Com* <http://www.inc.com/magazine/19931201/3823.html> [Accessed: 4.11.2007].
- Birch, D (1979): *The Job Generation Process*. M.I.T. Program on Neighborhood and Regional Change: Cambridge, MA.
- Bird, BB (1992): The Roman god mercury: An entrepreneurial archetype. *Journal of Management Enquiry*, **1**(3), pp 442-453.

- Bird, BB & West (1997):
- Birkinshaw, J (1997): Entrepreneurship in multinational corporations: The characteristics of subsidiary initiatives. *Strategic Management Journal*, **18**, pp: 207-229.
- Birkinshaw, J (2003): The paradox of corporate entrepreneurship. *Strategy & Business*, **30**, <http://www.strategy-business.com/enewsarticle>, [Accessed: 20.08.2007].
- Birkinshaw, J & A Campbell (2004): Know the limits of corporate venturing. *Financial Times*, 9 August 2004, p. 11.
- Blanchflower, DG & A Oswald (1998): What makes an entrepreneur? *Journal of Labour Economics*, **16**(1), pp: 26-60.
- Blanchflower, DG; A Oswald & A Stutzer (2001): Latent entrepreneurship across nations. *European Economic Review*, **45**(5), pp: 680-691.
- Block, Z & I MacMillan (1993): *Corporate venturing: Creating new businesses within the firm*. Harvard Business School Press: Boston, MA.
- Bógel, Gy (2005): Dinamikus stratégiaalkotás. *CEO Magazin*, **6**(3), pp: 13-16.
- Bojár, G (2005): *The Graphi-story*. HVG Kiadói Rt: Budapest.
- Brazeal, DV & NF Krueger, Jr. (1994): Entrepreneurial potentials and potential Entrepreneurs. *Entrepreneurship Theory and Practice*, **18**, pp: 91-104.
- Brazeal, DV & TT Herbert (1999): The Genesis of Entrepreneurship. *Entrepreneurship: Theory and Practice*, **23**(3), pp: 29-45.
- Brockhaus, RH (1980): Risk taking propensity of entrepreneurs. *Academy of Management Journal*, **23**, pp: 509-520.
- Brown, TE; P Davidsson & J Wiklund (2001): An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behavior. *Strategic Management Journal*, **22**, pp: 953-968
- Brusco, S (1982): The Emilian model: productive decentralization and social integration. *Cambridge Journal of Economics*, **6**, pp: 167-184.
- Burgelman, RA & Sayles (1985): *Inside corporate innovation*. Free Press, NY
- Burgelman, RA (1983a): A model of the interaction of strategic behavior, corporate context, and the concept of strategy. *Academy of Management Review*, **8**, pp: 61-70.

- Burgelman, RA (1983b): A process model of internal corporate venturing in the diversified major firm. *Administrative Science Quarterly*, **28**, pp: 223-244.
- Burgelman, RA (1984): Designs for corporate entrepreneurship in established firms. *California Management Review*, **26**(3), pp: 154-166.
- Burgelman, RA (1991): Intraorganizational ecology of strategy making and organizational adaptation: Theory and field research. *Organizational Science*, **2**, pp: 239-262.
- Burgelman, RA (1996): A process model of strategic business exit: Implications for an evolutionary perspective on strategy. *Strategic Management Journal*, **17**(special issue), pp: 2193-214.
- Bourgeois, LJ III. (1981): On the measurement of organizational slack. *Academy of Management Review*, **6**(1), pp: 29-39.
- Burt, RS (1992): *Structural holes: The social structure of competition*. Harvard University Press: Cambridge, MA.
- Busenitz, LW & J Barney (1997): Difference between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision making. *Journal of Business Venturing*, **12**(1), pp: 9-30.
- Busenitz, LW; PG West; D Sheperd; T Nelson; GN Chandler & A Zacharakis (2003). Entrepreneurship research in emergence: Past trends and future directions. *Journal of Management*. **29**(3), pp: 285-308.
- Byers, T; H Kist & RI Sutton (1997): Characteristics of the Entrepreneur: Social creatures, not solos heroes. In Dorf, R. C. (ed): *The Handbook of Technology Management*, CRC Press: Boca Raton, FL.
- Bygrave, WD & CW Hofer (1991): Theorizing about entrepreneurship, *Entrepreneurship Theory and Practice*, **15**(4), pp: 13-22.
- Campbell, AC (1992): A decision model for entrepreneurial acts. *Entrepreneurship Theory and Practice*, **16**(1), pp: 21-28.
- Cantillon, R (1759): *Essai sur la Nature du Commerce in Général*. Institut National d'Etudes démographiques: Paris.

- Cardon, MS & RG McGrath (1999): When the going gets tough... Toward a psychology of entrepreneurial failure and re-motivation. In Reynolds, PD et al (eds): *Frontiers of Entrepreneurship Research-1999*. Babson College: Wellesley, MA
- Carland, JW; F Hoy & JAC. Carland (1984): Differentiation entrepreneurs from small business owners: a conceptualization. *Academy of Management Review*, **9**(2), pp: 345-359.
- Carland, JW; F Hoy & JAC. Carland (1988): Who is an entrepreneur is a question worth asking. *American Journal of Small Business*, **12**(4), pp: 33-39.
- Carlsson, B (1989): Flexibility and the theory of the firm. *International Journal of Industrial Organization*, **7**(2), pp: 179-204.
- Carlsson, B (1992): The rise of small business: Causes and consequences. In Adams, William James (ed): *Singular Europe: Economy and polity of the European community after 1992*, University of Michigan Press: Ann Arbor, MI.
- Carrol, GR (1984): Organizational ecology. *Annual Review of Sociology*, **10**, pp: 71-93.
- Carter, N; WB Gartner & P Reynolds (1996): Exploring start-up event sequences. *Journal of Business Venturing*, **11**(3), pp: 151-166.
- Castells, M (2000): *The Rise of the Network Society*, 2nd edition, Blackwell Publishers: MA
- Chandler, AD (1990): *Strategy and structure*. MIT Press: Cambridge, MA
- Chandler, GN & SH Hanks (1994): Market attractiveness, resource-based capabilities, venture strategies, and venture performance. *Journal of Business Venturing*, **9**, pp: 331-349.
- Chandler, GN & SH Hanks (1998): An examination of the substitutability of founders' human and financial capital in emerging business ventures. *Journal of Business Venturing*, **13**, pp: 353-369.
- Chandler, GN & DW Lyon (2001): Issues of research design and construct measurement in entrepreneurship research: The past decade. *Entrepreneurship Theory & Practice*, **25**(2), pp: 101-113.
- Chesbrough, W (2002): *Open Innovation: The new imperative for creating and profiting from technology*. Harvard Business School Press: Boston, MA

- Chesbrough, W (2006): *Open business models: How to thrive in the new innovation landscape*. Harvard Business School Press: Boston, MA
- Chikán A & Czakó E (2005): *Versenyben a világgal kutatási tervtanulmány*. A „Versenyben a világgal 2004-2006 – Gazdasági versenyképességünk vállalati nézőpontból” című kutatás 1. sz. műhelytanulmány, BCE, Budapest
- Child, J (1972): Organizational structure, environment and performance: the role of strategic choice. *Sociology*, **6**, pp. 2-22
- Christensen, CM (2003): *The Innovator's Dilemma*, Harper Business Essentials: New York
- Christensen, CM & RS Rosenbloom (1995): Explaining the attacker's advantage: technological paradigms, organizational dynamics, and the value network. *Research Policy*, **24**(2), pp: 133-257.
- Christensen, CM & ME Raynor (2003): *The Innovator's Solution*, Harvard Business School Press: Boston, MA
- Cole, AH (1959): *Business enterprise in its social setting*. Harvard University Press: Cambridge, MA.
- Coleman, J (1988): Social Capital in the Creation of Human Capital. *American Journal of Sociology*, **94**, pp: 95-120.
- Collins, OF & DG Moore (1970): *The Organization Makers: A Behavioral Study of Independent Entrepreneurs*. Appleton-Century-Crofts.
- Cook, WM (1992): The buddy system. *Entrepreneur*, (Nov), pp: 52.
- Cooke, P (2001): Regional Innovation Systems, clusters, and the knowledge economy. *Industrial and Corporate Change*, **10**(4), pp: 945-974.
- Cooper, AC (1981): Strategic Mangement: New ventures and small businesses. *Long Range Planning*, **14**(5), pp: 66-86.
- Cooper, AC (1984): Contrasts in the role of incubator organizations in the founding of growth-oriented companies. In Hornaday, JA et al (eds): *Frontiers of Entrepreneurship Research – 1984*, Babson College, Wellesley, MA, pp: 159–174.
- Cooper, AC (1985): The role of incubator organizations in the founding of growth-oriented firms. *Journal of Business Venturing*, **1**(1), pp: 75-86.

- Cooper, AC (2007): Behavioral characteristics of entrepreneurial activity (The moderator comments). *Strategic Entrepreneurship Journal* **1**(1), pp: 145-146.
- Cooper, AC; CY Woo & WC Dunkelberg (1989): Entrepreneurship and initial size of firms. *Journal of Business Venturing*, **4**, pp: 317-332.
- Cooper, AC; FJ Gimeno-Gascon FJ & CY Woo (1994): Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing*, **9**, pp: 371–395.
- Cornelius, B; H Landström & O Persson (2006): Entrepreneurial studies: the dynamic research front of a developing social science. *Entrepreneurship Theory and Practice*, **30**(3), pp: 375-398.
- Covin, JG & MP Miles (1999): Corporate Entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship Theory & Practice*, **23**(1) pp: 47-63.
- Covin, JG & DP Slevin (1986): The development and testing of an organizational-level entrepreneurship scale. In Ronstadt, R et al (eds): *Frontiers of Entrepreneurship Research-1986*, Babson College: Wellesley, MA, pp: 628-639.
- Covin, JG & DP Slevin (1989): Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, **10**, pp: 75-87.
- Covin, JG & DP Slevin (1991): A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, **16**(1) pp: 7-25.
- Covin, JG & DP Slevin (1993): A response to Zahra's "Critique and Extension" of the Covin-Slevin entrepreneurship model. *Entrepreneurship Theory and Practice*, **17**(1) pp: 23-30.
- Cowling, M & WD Bygrave (2003): Relationship between Entrepreneurship and unemployment in 37 nations participating in GEM 2002. *Frontiers of Entrepreneurship Research-2003*, Babson College: MA
- Csapó, K (2006): From student to entrepreneur – from entrepreneur to millionaire? *Erenet Profile*, **1**(4), pp: 53-55.
- Curran, J & R Blackburn (2001): *Researching the small enterprise*. Sage Publications: London

- Cyert, RM & JG March (1963): *A Behavioral Theory of the Firm*. Englewood Cliffs: New York, NJ
- Dahmeén, E (1970): *Entrepreneurial activity and the development of Swedish industry*. Ill: Irwin, Homewood.
- Davidsson, P (2003): The domain of entrepreneurship research: Some suggestions. In Katz, J & D Shepherd (2003): *Advances in Entrepreneurship, Firm Emergence and Growth*, Volume 6, Elsevier JAI: Amsterdam
- Davidsson, P (2004): *Researching entrepreneurship*. Springer: Boston.
- Davidsson, P; F Delmar & J Wiklund (2006): *Entrepreneurship and the growth of firms*. Edward Elgar: Cheltenham, UK
- Davis, AE; LA Renzulli & HE Aldrich (2006): Mixing or matching? The influence of voluntary associations on the occupational diversity and density of small business owners' networks. *Work and Occupations*, **33**(1), pp: 42-72.
- Delmar, F & P Davidsson (2000): Where do they come from? Prevalence and characteristics of nascent entrepreneurs. *Entrepreneurship and Regional Development*, **12**(1), pp: 1-23.
- Dess, GD; GT Lumpkin, & JE McGee (1999): Linking CE to strategy, structure, and process: Suggested research directions. *Entrepreneurship Theory and Practice*, **23**(3), pp: 85-102.
- DiMaggio, PJ & WW Powell (1983): The Iron Cage revisited: Institutional Isomorphism and Collective Rationality in Organization Fields. *American Sociological Review*, **48**: 147-160
- DiMaggio, PJ (1988): Interest and agency in institutional theory. In Zucker, LG (ed): *Institutional patterns and organizations: Culture and Environment*. Ballinger: Cambridge, MA, pp: 3-22.
- Dobák, M (1988): *Szervezetalkítás és szervezeti formák*. Közgazdasági és Jogi Könyvkiadó: Budapest.
- Dobák, M (1999): Folyamatok fejlesztése és változásvezetés. *Harvard Business Manager*, **1**(3), 2-20.
- Donaldson, G & JW Lorsch (1983): *Decision making at the top*. Basic Books: New York

- Dowling, W ed. (1978): *Effective management and the behavioral sciences*. Amacom: New York
- Downing, S (2005): The social construction of entrepreneurship: Narrative and dramatic processes in the co-production of organizations and identities. *Entrepreneurship Theory and Practice*, **29**(3), pp: 185-204.
- Drayton, W (2004): The citizen sector transformed. In Parrish, G. (Ed): *Leading Social Entrepreneurs (preface)*, Ashoka: Innovators for the Public: Arlington, VA
- Drucker, PF (1970): Entrepreneurship in business enterprise. *Journal of Business Policy*, **1**(1), pp: 3-12.
- Dubini, P & H Aldrich (1991): Personal and extended networks are central to the entrepreneurial process. *Journal of Business Venturing*, **6**(5), pp: 305-313.
- Elfring, T (2005): Dispersed and focused entrepreneurship: ways to balance exploitation and exploration. In Elfring, Tom (ed): *Corporate Entrepreneurship and Venturing*, Springer: US, pp: 1-21.
- Elfring, T & W Hulsink (2007): Networking by Entrepreneurs: Patterns of Tie Formation in Emerging Organizations. *Organization Studies*, **28**(10), forthcoming
- Elfring, T & W Hulsink (2003): Networks in Entrepreneurship: The case of high-technology firms. *Small Business Economics*, **21**, pp: 409-422.
- Eisenhardt, K (1988): Agency- and Institutional-Theory Explanations: The case of retail sales compensation. *The Academy of Management Journal*, **31**(3), pp: 488-511.
- Eisenhardt, K (1989): Making fast strategic decisions in high-velocity environments. *The Academy of Management Journal*, **32**(3), pp: 543-576.
- Eisenhardt, K & CB Schoonhoven (1990): Organizational growth: Linking founding team, strategy, environment, and growth among U. S. semiconductor ventures, 1978–1988. *Administrative Science Quarterly*, **35**, pp: 504–529.
- Eisenhauer, JG (1995): The entrepreneurial decision: economic theory and empirical evidence. *Entrepreneurship Theory and Practice*, **19**(2), pp: 67-79.
- Ensley, M; JW Carland & JC Carland (1998): The Effect of Entrepreneurial Team Skill Heterogeneity and Functional Diversity on New Venture Performance. *Journal of Business & Entrepreneurship*, **10**, pp: 1–11.

- Evald, MR; K Klyver & SG Svendsen (2006): The changing importance of the strength of ties throughout the entrepreneurial process. *Journal of Enterprising Culture*, **14**(1), pp: 1-26.
- Evans, DS (1987): Test of alternative theories of firm growth. *Journal of Political Economy*, **9**(4); pp: 657-674.
- Feldman, F (1996): Introduction to special issue on geography and regional economic development: the role of technology-based small and medium sized firms. *Small Business Economics*, **8**, pp: 71-74.
- Floyd, SW & B Wooldridge (1999): Knowledge creation and social networks in corporate entrepreneurship: The renewal of organizational capability. *Entrepreneurship Theory and Practice*, **23**(3), pp: 123-143.
- Floyd, SW & PJ Lane (2000): Strategizing throughout the organization: Managing role conflict in strategic renewal, *Academy of Management Review*, **25**(1), pp: 154-177.
- Freeman, LC (1978/79): Centrality in Social Networks: Conceptual clarification. *Social Networks*, **1**, pp: 215-239.
- Freeman, J (1996): Venture capital as an economy of time. Working paper, Haas Business School, University of California at Berkeley.
- Freser H & G Willard (1990): Founding strategy and performance: A comparison of high and low growth high-tech firms. *Strategic Management Journal*, **11**, pp: 367-386.
- Foss, K; NJ Foss & PG Klein (2006): Original and Derived Judgment: An entrepreneurial theory of economic organization, CEMS reading list
- Galbraith, JK (1982): Strategy and organizational planning. *Human resource management*, **22**, p. 63-77
- Gartner, WB (1985): A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, **10**(4), pp: 696-706.
- Gartner, WB (1988): „Who is an entrepreneur?“ Is the wrong question. *American Journal of Small Business*, **12**(4), pp: 11-32.
- Gartner, WB; TR Mitchell & KH Vesper (1989): A taxonomy of new business ventures. *Journal of Business Venturing*, **4**(3), pp: 169-186

- Gartner, WB (1990). What are we talking about when we talk about entrepreneurship? *Journal of Business Venturing*, **5**(1), pp: 15–23.
- Gartner, WB; BB Bird & JA Starr (1992): Acting as if: differentiating entrepreneurial from organizational behavior. *Entrepreneurship Theory and Practice*, **16**(3), pp: 13-31.
- Gartner, WB (1993): Word leads to deeds: Towards an organizational emergence vocabulary. *Journal of Business Venturing*, **8**(4), pp: 231-239.
- Gartner, WB (2001): Is There an Elephant in Entrepreneurship? Blind assumptions in theory development. *Entrepreneurship Theory and Practice*, **25**(2), pp: 27-39.
- Gartner, WB; P Davidsson & SA Zahra (2006): Are you talking to me? The nature of community in entrepreneurship scholarship. *Entrepreneurship: Theory and Practice*. **30**(3), pp: 321-332.
- Gartner, WB & CG Brush (2007): Entrepreneurship as Organizing: Emergence, Newness and Transformation. In Habbershon, T. & Mark Rice (eds.) *Praeger Perspectives on Entrepreneurship, Volume 3*. Praeger Publishers: Westport, CT, pp: 1-20.
- Garud, R & P Karnoe (2003): Bricolage versus breakthrough: distributed and embedded agency in technology entrepreneurship. *Research Policy*, **32**, pp: 277-300.
- Global Entrepreneurship Monitor, <http://www.gemconsortium.org/> Data for 2002 and 2003 is currently being formatted for public release and will be made available in August 2007. [Accessed: 23.08.2007]
- Glueck, WF (1980): *Business policy and strategic management*. McGraw-Hill: New York.
- Göblös, Á & Gömöri K (2004): A vállalati életciklus-modellről. *Vezetéstudomány*, **35**(10), pp: 41-50.
- Granovetter, M (1973): The strength of weak ties. *American Journal of Sociology*, **78**, pp: 1360-1379.
- Gregoire, DA; MX Noel, R Dery & JP Bechar. (2006). Is there conceptual convergence in entrepreneurship research? A co-citation analysis of Frontiers of Entrepreneurship Research, 1981-2004. *Entrepreneurship Theory and Practice*, **30**(3), pp 333- 374.
- Hambrick, DC (1981): Strategic awareness within top management teams. *Strategic Management Journal*, **2**, pp: 263-279.

- Hambrick, DC & PA Mason (1984): Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, **9**, pp: 193-206.
- Hamel, G & Getz (2004): 'Erfindungen in Zeiten der Sparsamkeit'. *Harvard Business Manager*, Nov 2004, pp: 10-24.
- Hannan, MT & JH Freeman (1977): The population ecology of organizations. *American Journal of Sociology*, **82**, pp: 929-963.
- Hannan, MT & JH Freeman (1984): Structural inertia and organizational change. *American Sociology Review*, **49**, pp: 149-164.
- Hannan, MT & JH Freeman (1989): *Organizational ecology*. Harvard University Press: Cambridge, MA.
- Hansen, EL (1991): Structure and process in entrepreneurial networks as partial determinants of initial new venture growth. *Frontiers of Entrepreneurship Research-1991*, Babson College: Wellesley, MA, pp: 320-334.
- Hansen, EL & B Bird (1997): The stages model of high-tech venture founding: Tried but true? *Entrepreneurship Theory and Practice*, **21**(2), pp: 111-122.
- Hansen, MT (1999): The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. *Administrative Science quarterly*, **44**(1), pp: 82-111.
- Hargadon, AB (1998): Firms as knowledge brokers: Lessons in pursuing continuous innovation. *California Management Review*, **40**(3), pp: 209-227.
- Hargadon, AB (2002): Brokering knowledge: Linking learning and innovation. *Research in Organizational Behavior*, **24**, pp: 41-85.
- Hargadon, AB & RI Sutton (1997): Technology brokering and innovation in a product development firm. *Administrative Science Quarterly*, **42**, pp: 716-749.
- Hargadon, AB & RI Sutton (2000): Building an innovation factory. *Harvard Business Review*, **78**(3), pp: 157-166.
- Harper, SC (1995): *The McGraw-Hill guide to managing growth in your emerging business*. McGraw-Hill: New York.
- Harryson, SJ (2006): *Know-who based entrepreneurship: From knowledge creation to business implementation*. Edward Elgar: Cheltenham, UK

- Hatch, NW & JH Dyer (2004): Human capital and learning as a source of sustainable competitive advantage. *Strategic Management Journal*, **25**, pp: 1155–1178.
- Hayek, FA von (1976): *Individualism and economic order*, Routledge & Kegan: London, GB.
- Hayton, JC (2005): Promoting corporate entrepreneurship through human resource management practices: A review of empirical research. *Human Resource Management Review*, **15**, pp: 21-41.
- Hayton, JC & DJ Kelley (2006): A competency based framework for promoting corporate entrepreneurship. *Human Resource Management*, **45**(3), pp: 407-427.
- Helfat, C & M Lieberman (2002): The birth of capabilities: Market entry and the importance of pre-history. *Industrial and Corporate Change*, **11**, pp: 725-760.
- Helfat, C & M Peteraf (2003): The dynamic resource-based view: Capability life-cycles. *Strategic Management Journal*, **24**, pp: 997-1010.
- Herbert, RT & AN Link (1988): *The entrepreneur*. Praeger Publishers: New York
- Hippel, E von (1994): Sticky information and the locus of problem solving: Implications for innovation. *Management Science*, **40**(4), pp: 429-439.
- Hisrich, RD & M O'Brien (1981): The woman entrepreneur from a business and sociological perspective. In Vesper, KH (ed): *Frontiers of entrepreneurial research*, pp: 21-39. Babson College: Boston, MA
- Hisrich, RD & M O'Brien (1982): The woman entrepreneur as a reflection of the type of business. In Vesper, KH (ed): *Frontiers of entrepreneurial research*, pp: 54-67. Babson College: Boston, MA
- Hisrich, RD & MP Peters (1986): Establishing a new business venture within a firm. *Journal of Business Venturing*, **1**, pp: 300-332.
- Hisrich, RD & C Brush (1986): Characteristics of the minority entrepreneur. *Journal of Small Business Management*, **24**(4), pp: 1-8.
- Hisrich, RD & J Vecsenyi (1990): Entrepreneurship and the Hungarian economic transformation. *Journal of Managerial Psychology*, **5**(5), pp: 11-16.
- Hisrich, RD & Gy Fülöp (1994): The role of women entrepreneurs in Hungary's Transition Economy. *International Studies of Management & Organization*, **24**, pp: 11-16.

- Hite, J (2005): Evolutionary processes and paths of relationally embedded network ties in emerging entrepreneurial firms. *Entrepreneurship Theory and Practice*, **29**, pp: 113-144.
- Hite, J & WS Hesterly (2001): The evolution of firm networks: From emergence to early growth of the firm. *Strategic Management Journal*, **22**(3), pp: 275-286.
- Hoang, HA & B Antoncic (2003): Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing*, **18**, pp: 165-187.
- Hornsby, JS; DW Naffziger, DF Kuratko & RV Montagno (1993): An interactive model of the corporate entrepreneurship process. *Entrepreneurship Theory and Practice*, **17**(1) pp: 28-39.
- Hornsby, JS; DF Kuratko & SA Zahra (2002): Middle managers' perception of the internal environment for corporate entrepreneurship: Assessing a measurement scale. *Journal of Business Venturing*, **17** pp: 253-273.
- Hortoványi, L & ZR Szabó (2006a): The Impact of Management Practices on Industry-level Competitiveness in Transition Economies, In Terziowsky, M (ed): Energizing Management Through Entrepreneurship and Innovation" (contributor), Routledge, forthcoming
- Hortoványi, L & ZR Szabó (2006b): Knowledge and Organization: A Network Perspective. *Society and Economy*, **28**(2), pp: 165-179.
- Hortoványi, L (2007): Revising Barringer & Bluedorn Strategy Framework. In: XXVIII. National Scientific Student Conference, Doktorandusz Konferencia, Kiemelt minősítést elnyert dolgozatok, published full paper: ISBN 978-963-661-774-5, University of Miskolc, Hungary
- Jack, SL (2005): The role, use and activation of strong and weak network ties: A qualitative analysis. *Journal of Management Studies*, **42**(6), pp: 1233–1259.
- Jackson, SE; JF Brett; VI Sessa; DM Cooper; JA Julin & K Peyronnin (1991): Some differences make a difference: Individual dissimilarity and group heterogeneity as correlates of recruitment, promotion and turnover. *Journal of Applied Psychology*, **79**(5), pp: 675–689.
- Jarillo, JC (1989): Entrepreneurship and growth: The strategic use of external resources. *Journal of Business Venturing*, **4**(2), pp: 133-147.

- Johnson, BR (1990): Toward a multidimensional model of entrepreneurship: The case of achievement motivation and the entrepreneur. *Entrepreneurship Theory and Practice*, **14**(1), pp: 39-53.
- Johnson, S & A Van de Ven (2002): A framework for entrepreneurial strategy. In Hitt, MA; RD Ireland; SM Camp & DL Sexton (eds): *Strategic entrepreneurship: Creating a new mindset*. Blackwell: Oxford.
- Johnson, S; D Kaufman & A Shleifer (1997): Politics and entrepreneurship in transition economies. *Working Papers Series 57*, William Davidson Institute at the University of Michigan Stephen M. Ross Business School.
- Kanter, RM (1982): The middle manager as innovator. *Harvard Business Review*, **60**(4), pp: 95-106.
- Kanter, RM (1985): Supporting innovation and venture development in established companies. *Journal of Business Venturing*, **1**, pp: 47-60.
- Kanter, RM (1989): *When Giants learn to dance*. Simon and Schuster: New York.
- Katila, R & S Shane (2005): When does lack of resources make new firms innovative? *Academy of Management Journal*, **48**(5), pp: 814-829.
- Katz, JA (1992): A psychological cognitive model of employment status choice. *Entrepreneurship Theory and Practice*, **16**(3), pp: 29-37.
- Katz, JA & DA Shepherd (2003): *Cognitive approaches to entrepreneurship research*, Advances in Entrepreneurship, Firm Emergence and Growth, Volume 6, Elsevier JAI: Amsterdam
- Kay, J (1993): *Foundations of corporate success: How corporate strategies add value*. Oxford University Press: Oxford.
- Kim, WC & R Mauborgne (2005): *Blue Ocean Strategy*. Harvard Business School Press: Boston, MA
- Kimberley, JR (1979): Issues in the creation of organizations: Initiation, innovation, and institutionalization. *Academy of Management Journal*, **22**, pp: 437-457
- Kirzner, IM (1973): *Competition and entrepreneurship*. University of Chicago Press: Chicago

- Knight, FH (1921): *Risk, uncertainty and profit*. Houghton Mifflin Company: Boston, MA.
(<http://www.econlib.org/LIBRARY/Knight/knRUP.html>) [Accessed: 3.11.2007]
- Knight, KE (1967): A descriptive model of the intra-firm innovation process. *Journal of Business*, **40**(4), pp: 478-496.
- Kovács, S (1996): Adalékok a szervezeti izomorfia institucionalista értelmezéséhez. *Acta Universitatis Szegediensis de Attila József Nominata, Acta juridical et politica* (49/20), JATE ÁJK: Szeged, pp: 303-313.
- Kuratko, DF; RV Montagno & JS Hornsby (1990): Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. *Strategic Management Journal*, **11**, pp: 49-58.
- Ladó L & Magyar Beck I (1986): A szervezetfejlesztésről. *Ipargazdaság*, 8-9.
- Landström, H (2005): *Pioneers in entrepreneurship and small business research*. ESEN, Springer: New York
- Larson, A & JA Starr (1993): A network model of organization formation. *Entrepreneurship Theory and Practice*, **17**(4), pp: 5-18.
- Lavoie, D (1991): The discovery and interpretation of profit opportunities: Culture and Kirznerian entrepreneur. In Berger, B (ed): *The culture of entrepreneurship*, ICS Press: San Francisco, pp: 33-51.
- Leavitt, HJ (1987): *Corporate path finders*. New York: Penguin Books, pp: 47-75.
- Leifer, R; CM McDermott; GC O'Connor, LS Peters; M Rice & RW Veryzer (2000): *Radical innovation: How mature companies can outsmart upstarts*. Harvard Business School Press: Boston (MA)
- Leonard-Barton, D (1992): Core Capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, **13**(special issue: summer), pp: 111-125.
- Lévi-Strauss, C (1966): *The savage mind*. University of Chicago Press: Chicago (IL)
- Low, MB & IC MacMillan (1988): Entrepreneurship: Past Research and Future Challenges, *Journal of Management*, **14**(2), pp: 139-161.
- Lumpkin, GT & GG Dess (1996): Clarifying entrepreneurial orientation construct and linking it to performance.' *Academy of Management Review*, **21**(1) pp: 135-172.

- MacMillan I & RG McGrath (1997): What is strategy? *Harvard Business Review*, **75**(1), pp: 154-155
- Madarász, A (1980): *A gazdasági fejlődés elmélete*. Közgazdasági és Jogi könyvkiadó: Budapest
- Mahoney, JT & JR Pandian (1992): The resource-based view within the conversation of strategic management. *Strategic Management Journal*, **13**, pp: 363-380.
- Maidique, MA (1980). Entrepreneurs, champions, and technological innovation. *Sloan Management Review*, **21**(2), pp: 59–76.
- Mair, J (2005): Entrepreneurial behavior in a large traditional firm: Exploring key drivers. In Elfring, T (ed): *Corporate Entrepreneurship and Venturing*, Springer: New York, NY pp: 49-72.
- Mangham, I & A Pye (1991): *The doing of managing*. Blackwell Publishing: Oxford (UK)
- Máriás A; Kovács S; Balaton K; Tari & Dobák M (1981): Kísérlet ipari nagyvállalataink ipari szervezetelemzésére. *Közgazdasági Szemle*, 7-8.
- Markides, C (1997): Strategic Innovation. *Sloan Management Review*, **38**(3), pp: 9-24.
- Marosi, M (1981): *A célszerű vállalati szervezet*. Közgazdasági és Jogi Könyvkiadó, Budapest.
- Markóczy, L (1989): Erőforrás-függőség és vállalati magatartás. *Közgazdasági Szemle*, 7-8.
- Mazzarol, T; T Volery, N Doss & V Tien (1999): Factors influencing small business start-ups. *International Journal of Entrepreneurial Behavior and Research*, **5**(2), pp: 48-63.
- McClelland, D. (1961): *The Achieving Society*, Van Nostrand: Princeton, NJ.
- McGrath, RG & MS Cardon, (1997): *Entrepreneurship and the functionality of failure*. Paper presented at the Seventh Annual Global Entrepreneurship Research Conference, Montreal, Canada (<http://www.babson.edu/entrep/fer> [Accessed: 3.11.2007])
- McGrath, RG (1999): Falling forward: real options reasoning and entrepreneurial failure. *Academy of Management Review*, **24**(1), pp: 13-30.
- McEvily, B & A Zaheer (1999): Bridging ties: A source of firm heterogeneity in competitive capabilities. *Strategic Management Journal*, **20**(12), pp: 1153-1156.

- McPherson, JM & L Smith-Lovin (1987): Homophily in voluntary organizations: status distance and the composition of face-to-face groups. *American Sociological Review*, **52**(3), pp: 370-379.
- Mészáros, T (1984): *A sikeres vállalati tervezés szervezési feltételei*. Közgazdasági és Jogi Könyvkiadó: Budapest
- Midgley, DF & GR Dowling (1978): Innovativeness: The concept and its measurement. *Journal of Consumer Research*. **4**, pp: 229-242.
- Miles, R & C Snow (1978): *Organizational strategy, structure, and process*. McGraw-Hill: New York
- Miles, MP & JG Covin (2002): Exploring the practice of corporate venturing: Some common forms and their organizational implications. *Entrepreneurship Theory and Practice*, **26**(3) pp: 21-40.
- Miller, D (1983): The correlates of entrepreneurship in three types of firms. *Management Science*, **29**, pp: 770-791.
- Miller, D & PH Friesen (1983): Strategy making and environment: The third link. *Strategic Management Journal*, **4**, pp: 221-235.
- Miller, D & PH Friesen (1982): Innovation in conservative and entrepreneurial firms. *Strategic Management Journal*, **3**, pp: 1-25.
- Minniti, M & W Bygrave (1999): The microfoundations of entrepreneurship. *Entrepreneurship Theory and Practice*, **23**(4), pp: 93-104.
- Mintzberg, H (1975): The Manager's Job: Folklore and Facts, Harvard Business Review, July-August
- Mintzberg, H, B Ahlstrand & J Lampel (1998): *Strategy Safari*, Prentice Hall: London
- Morrison, A (2000): Entrepreneurship: what triggers it? *International Journal of Entrepreneurial Behavior and Research*, **6**(2), pp: 59-71.
- Morris, MH; RO Williams, JA Allen & RA Avial (1997): Correlates of success in family business transitions. *Journal of Business Venturing*, **12**(5), pp: 385-401.
- Mosakowski, E (2002): Overcoming Resource Disadvantages. In Hitt, Michael et al (eds): *Strategic entrepreneurship: Creating a new mindset*, Blackwell Publishing: Malden, MA. pp: -126

- Murphy, PJ; Jianwen L & HP Welsch (2006): A conceptual history of entrepreneurial thought. *Journal of Management History*, **12**(1), pp: 12 – 35.
- Nagy, A (1996): A vállalkozások stabilizációs előfeltételei. *Ipargazdasági Szemle*, **27**, pp: 15-21.
- Naman, JL & DP Slevin (1993): Entrepreneurship and the concept of fit: A model and empirical tests. *Strategic Management Journal*, **14**, pp: 137-153.
- Nelson, RR & SG Winter (1982): *An evolutionary theory of economic change*. Belknap Press of Harvard University Press: Cambridge.
- Nonaka, I (1994): A dynamic theory of organizational knowledge creation. *Organization Science*, **5**, pp: 14-37.
- Noteboom, B (2005): Entrepreneurial roles along a cycle of discovery. *Discussion Paper*, Tilburg University, <http://arno.uvt.nl/show.cgi?fid=53740> [Accessed: 3.11.2007]
- North, DC (1990): *Institutions, Institutional Change and Economic Performance*. Cambridge University Press: Cambridge
- North, DC (1997): Understanding Economic Change. In Nelson, JM; C Tilly & L Walker (eds): *Transforming Post-Communist Political Economies*, National Academy Press: Washington DC; pp: 13-18.
- Norušis, MJ (2003): *SPSS 12.0 Statistical Procedures Companion*, Prentice Hall, p. 382.
- Nyström, H (1979): *Creativity and Innovation*, John Wiley & Sons: West Sussex
- Nyström, H (1990): *Technological and market innovation: Strategies for product and company development*. John Wiley & Sons: Chichester, England
- Obstfeld, D (2005): Social networks, the tertius iungens orientation, and involvement in innovation. *Administrative Science Quarterly*, **50**, pp: 100-130.
- O'Reilly, CA; D Caldwell & W Barnett (1989): Work group demography, social integration, and turnover. *Administrative Science Quarterly*, **34**: 21–38.
- Oslo, SF & HM Currie (1992): Female entrepreneurs: personal value systems and business strategies in a male dominated industry. *Journal of Small Business Management*, January, pp: 49-57.
- Papp, I (2001): Kreatív és adaptív elemek a stratégia alkotásában. *Vezetéstudomány*, **32**(10), pp: 2-20.

- Papp, I (2005): The Value Of Intellectual Capital In Hungarian SMEs. Strategic Management Society - 25h Annual International Conference. Orlandó, USA
- Papp, I (2006): *Tanulás és stratégiaalkotás kis- és középvállalatoknál*. PhD disszertáció, BMGE: Budapest.
- Penrose, EG (1959): *The theory of the growth of the firm*. Wiley: New York
- Pescosolido, BA & BA Rubin (2000): The web of group affiliations revisited: Social life, postmodernism, and sociology. *American Sociological Review*, **65**(2), pp: 52-76.
- Pettigrew, AM; RW Woodman & KS Cameron (2001): Studying organizational change and development: Challenges for future research. *Academy of Management Journal*, **4**, pp: 697-713.
- Pinchot, G (1985) *Intrapreneuring*, Harper and Row, New York, 1985.
- Portes, A (1998): Social Capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, **24**, pp: 1-24.
- Priem, RL (1990): Top management team group factors, consensus, and firm performance. *Strategic Management Journal*, **11**, pp: 469–478.
- Quinn, JB (1978): Strategic Change: Logical Incrementalism. *Sloan Management Review*, **20**(1), pp: 7-19.
- Rao H & R Drazin (2002): Overcoming resource constraint on product innovation by recruiting talent from rivals: A study of the mutual fund industry, 1986-1994. *Academy of Management Journal*, **45**, pp: 491-507.
- Robbins, SP (2001): *Organizational Behavior*. Prentice Hall: Upper Saddle River, NJ
- Román, Z (1991): Entrepreneurship and small business. *Journal of Business Venturing*, **6**(6), pp: 447-465.
- Román, Z (2002): Vállalkozáserősítő (és/vagy) kisvállalat-politika? *Vezetéstudomány*, **33**(7-8), pp: 18-26.
- Romanelli, E (1989): Environments and strategies of organization start-up: Effects on early survival. *Administrative Science Quarterly*, **34**, pp: 369-387.
- Romanelli, E (1991): The Evolution of New Organizational Forms. *Annual Review of Sociology*, **17**, pp: 79-103.

- Roure, JB., & MA Maidique (1986): Linking prefunding factors and high-technology venture success: An exploratory study. *Journal of Business Venturing*, **1**(3), pp: 295–306.
- Salamonné Huszty, A (2002): Magyarországi kis- és középvállalkozások életútjának modellezése. *Competitio*, március, pp: 2-18.
- Sandberg, WR (1992): Strategic management's potential contribution to a Theory of Entrepreneurship. *Entrepreneurship Theory and Practice*, **16**(1), pp: 73-90.
- Sarasvathy, SD (2001): Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, **26**(2), pp: 25-40.
- Sathe, V (2003): Corporate Entrepreneurship: Top Managers and New Business Creation, Cambridge University Press, Cambridge, UK
- Schendel, DE & CW Hofer (1979): *Strategic Management: A new view of business policy and planning*, Little, Brown: Boston, MA
- Schendel, DE (1990): Introduction to the special issue on corporate entrepreneurship. *Strategic Management Journal*, **11**(summer special issue), pp: 1–3.
- Schumpeter, JA (1912): *Theorie der Wirtschaftlichen Entwicklung*. Dunker and Humblot: Berlin
- Schumpeter, JA (1934): *Theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Harvard University Press (Magyar kiadás (1980): *A gazdasági fejlődés elmélete*, Közgazdasági. és Jogi Könyvkiadó: Budapest)
- Schumpeter, JA (1950) *Capitalism, Socialism, and Democracy*, 3rd edition, Harper and Row: New York
- Scott, CE (1986): Why more women are becoming entrepreneurs. *Journal of Small Business Management*, **24**(4), pp: 37-44.
- Selznick, P (1957): *Leadership in Administration*. Harper & Row: New York
- Sexton, DL & H Landström H (2000): Remaining issues and research suggestions. In Sexton, DL & H Landström (eds): *The Blackwell Handbook of Entrepreneurship*. Blackwell: Oxford, UK

- Shane, S (1994): Cultural values and the championing process. *Entrepreneurship Theory and Practice*, **18**(1), pp: 25–41.
- Shane, S (2000): Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, **11**(4), pp: 448-469.
- Shane, S (2001): Where is entrepreneurship research heading? Key note, National University of Singapore Conference on “Technological Entrepreneurship in the Emerging Regions of the New Millennium”, June 28-30 2001
- Shane, S & S Venkataraman (2000): The promise of entrepreneurship as a field of research (Note). *Academy of Management Review*, **25**(1), pp: 217-226.
- Shane, S & D Cable (2002): Network ties, reputation, and the financing of new ventures. *Management Science*, **48**(3), pp: 364-382.
- Shanker, MC & JH Astrachan (1996): Myths and realities: Family businesses’ contribution to the US economy – A framework for assessing family business statistics. *Family Business Review*, **9**(2), pp: 107-123.
- Sharma, P & JJ Chrisman (1999): Toward a Reconciliation of the Definitional Issues in the Field of Corporate Entrepreneurship, *Entrepreneurship Theory and Practice*, **23**(1), pp: 11-27
- Sharma, P; JJ Chrisman & JH Chua (1997): Strategic Management of the family business: Past research and future challenges. *Family Business Review*, **10**(1), pp: 1-35.
- Sharma, P; JJ Chrisman & JH Chua (2003): Predictors of satisfaction with the succession process in family firms. *Journal of Business Venturing*, **18**(5), pp: 667-687.
- Shaver, KG & LR Scott (1991): Person, process, choice: the psychology of new venture creation. *Entrepreneurship Theory & Practice*, **16**(2), pp: 23-45.
- Shaver, KG; WB Gartner; EB Crosby; & EJ Gatewood (2001): Attributions about entrepreneurship: a framework and process for analyzing reasons for starting a business. *Entrepreneurship Theory & Practice*, **25**(4), pp: 5-32.
- Shepherd, DA & DR DeTienne (2005): Prior Knowledge, Potential Financial Reward, and Opportuntiy Identification, *Entrepreneurship Theory and Practice*, **30**(1),91-112
- Simon, HA (1957): *Administrative Behavior*. Macmillan: New York.
- Simon, HA & J March (1958): *Organizations*. John Willey: New York

- Senge, P (1990): *The Fifth Discipline. The art and practice of the learning organization*, Random House: London
- Singh, J & CJ Lumsden (1990): Theory and Research in Organizational Ecology. *Annual Review of Sociology*, **16**; pp: 161-195.
- Smilor, RW (1997): Entrepreneurship: Reflections on a subversive activity. *Journal of Business Venturing*. **12**(5), pp: 341-346.
- Starr, JA & I MacMillan (1990): Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal*, **11**(special summer issue), pp: 79-92.
- Stevenson, HH (1983): A perspective on entrepreneurship. *Harvard Business School Working Paper*, 9-384-131.
- Stevenson, HH (2006): A Perspective on Entrepreneurship. *Harvard Business School*, pp: 1-13.
- Stevenson, HH & DE Gumpert (1985): The heart of entrepreneurship. *Harvard Business Review*, **63**(2), pp: 85–94.
- Stevenson, HH & JC Jarillo (1990): A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal*, **11**, pp: 17-27
- Stevenson, LA (1986): Against all odds: the entrepreneurship of women. *Journal of Small Business Management*, **24**(4), pp: 30-36.
- Stinchcombe, I (1965): Organizations and social structure. In March, G. (ed): *Handbook of Organizations*, pp: 142-193, Rand McNally: Chicago
- Stopford, JM & CWF Baden-Fuller (1990): Corporate rejuvenation. *Journal of Management Studies*, **27**(4), pp: 399-415.
- Stopford, JM & CWF Baden-Fuller (1994): Creating corporate entrepreneurship. *Strategic Management Journal*, **15**, pp: 521-536.
- Sundbo, J (1998): *The theory of innovation: Entrepreneurs, technology and strategy*. Edward Elgar Publishing Inc: Northampton, MA
- Szabó, ZR (2005): *Strategy Formulation Processes*, “In Global Competition” research program 2004-2006, working paper No. **13**, Budapest: CUB

- Szabó, ZR (2007): The effects of interpersonal connections on knowledge transfer. In: XXVIII. OTDK Doktorandusz Konferencia, published full paper: ISBN 978-963-661-768-4, University of Miskolc, Hungary
- Szanyi, M (1990): Innováció kutatás napjaink nyugati gazdaságelméletében. *Közgazdasági Szemle*, 37(3), pp: 306-322.
- Szerb, L & Ulbert J (2002): A kis- és közepes vállalkozások növekedési potenciáljának átalakulásáról. *Vezetéstudomány*, 33(7-8), pp: 36-46.
- Szerb, L; Acs, ZJ; Varga, A; Ulbert, J & Bodor E (2004): Az új vállalkozások hatásai nemzetközi összehasonlításban: A Global Entrepreneurship Monitor kutatás, 2001–2003. *Közgazdasági Szemle*, 51(július–augusztus), pp: 679–698.
- Szintay, I (2001): Globalization and strategic management. *Business Studies*, 1, pp: 201-222.
- Szirmai, P & Ránki Zs (1993): Conditions for entrepreneurship in Hungary. In Abell, DF & T Köllermeier (eds): *Dynamic entrepreneurship in Central and Eastern Europe*, Delwel: Hague; pp: 159-165.
- Szirmai, P (2002a): *A kisvállalkozások fejlődési szakaszai és a kormányzati beavatkozás lehetséges területei*. Műhelytanulmány. BKÁE Kisvállalkozás-fejlesztési Központ: Budapest
- Szirmai, P (2002b): *Fejlődési szakaszok és szakaszváltások Magyarországon a kis- és középvállalkozások körében*. Zárótanulmány. BKÁE Kisvállalkozás-fejlesztési Központ: Budapest
- Tan, J (1996): Characteristics of regulatory environment and impact on entrepreneurial strategic orientations: an empirical study of Chinese private entrepreneurs. *Entrepreneurship Theory and Practice*, 21(1), pp: 31-44.
- Tari, E (2006): A stratégiai analízis elméleti modelljei és a vállalati stratégiaalkotás. *Vezetéstudomány*, 37(9), pp: 5-17.
- Thompson, JD (1967): *Organizations in Action*. McGraw-Hill: New York
- Tidd, J; J Bessant & K Pavitt (2005): *Managing innovation*. John Wiley & Sons: Chichester
- Timmons, J (1994): *New Venture Creation* (4th edition) Irwin: Burr Ridge, IL

- Tsoukas, H (1996). The firm as a distributed knowledge system: A constructionist approach. *Strategic Management Journal*, **17**(winter special issue), pp: 11–25.
- Tushman, ML & C O'Reilly (1996): Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, **38**(4,) pp: 12-18.
- Ucbasaran, D, P Westhead & M Wright (2001): The Focus of Entrepreneurial Research: Contextual and Process Issues. *Entrepreneurship: Theory and Practice*, **25**(1), pp: 57-80.
- Upton, NB & RKZ Heck (1997): The family business dimension of entrepreneurship. In: Sexton DL & RW Smilor (eds): *Entrepreneurship: 2000*, Upstart Publishing: Chicago, IL. pp: 243–266.
- Uzzi, B (1997): Social structure and competition in interfirm networks: the paradox of embeddedness. *Administrative Science Quarterly*, **42**(1), pp: 35-67.
- Van de Ven, A (1992): Suggestions for studying strategy process: A research note. *Strategic Management Journal*, **13**, pp: 169-188.
- Van de Ven, A; R Hudson, & DM Schroeder (1984): Designing new business start-ups: Entrepreneurial, organizational, and ecologic considerations. *Journal of Management*, **10**(1), pp: 87-107.
- Van de Ven, A & R Garud (1989) A framework for understanding the emergence of new industries. *Research on Technological Innovation, Management and Policy*, **4**, pp: 195-225.
- Vecsenyi, J (1992): Management education for the Hungarian Transition. *Journal of Management Development*, **11**(3), pp.
- Vecsenyi, J (2002): A vállalkozástan alapjai. *Vezetéstudomány*, **33**(10), pp: 2-20.
- Vecsenyi, J (2003): *Vállalkozás – Az ötlettől az újrakezdésig*. Aula, Budapest
- Venkataraman, S; I MacMillan & RC McGrath (1992): Progress in research on corporate venturing. In Sexton, D. L. & J. I. Kasarda (eds): *The state of art of entrepreneurship*. PWS-Kent: Boston, MA. pp: 487-519.
- Venkataraman, S (1997): The distinctive domain of entrepreneurship research: An editor's perspective. In J. Katz and J. Brockhaus (eds): *Advances in entrepreneurship, firm emergence, and growth*. JAI Press: Greenwich, CT. pp. 119-138.

- Vesper, KH (1980): *New venture strategies*. Prentice Hall: Englewood Cliffs, NJ
- Volberda, HW (1996): Toward the flexible form: How to remain vital in hypercompetitive environments. *Organization Science*, **7**(4), pp: 359-374.
- Volberda, HW, C Baden-Fuller & FAJ Van den Bosch (2001): Mastering Strategic Renewal: Mobilising Renewal Journeys in Multi-unit Firms. *Long Range Planning*, **34**, pp.159-178.
- Weick, KE (1998): Improvisation as a mindset for organizational analysis. *Organization Science*, **9**(5), pp: 543-555.
- Weinzimmer, LG. (2000). A replication and extension of organizational growth determinants. *Journal of Business Research*, **48**, pp: 35–41.
- Wennekers, S; A van Wennekers; R Thurik & P Reynolds (2005): Nascent entrepreneurship and the level of economic development. *Small Business Economics*, **24**(3), pp: 293-309.
- Wickham, PA (2003): The representativeness heuristic in judgments involving entrepreneurial success and failure. *Management Decision*, **41**(3), pp: 156-167.
- Wickham, PA (2006): *Strategic Entrepreneurship*. Prentice Hall: Harlow, England
- Wiklund, J & D Sheperd (2005): Entrepreneurial orientation and small business performance. *Journal of Business Venturing*, **20**, pp: 71-91.
- Williamson, OE (1985): *The economic institutions of capitalism*. Free Press: New York
- Williamson, OE (2000): The new institutional economics: Taking stock, looking ahead. *Journal of Economic Literature*, **38**, pp: 595-613.
- Wiseman, RM & P Bromiley (1996): Toward a model of risk of risk, performance and decline. *Organization Science*, **7**, pp: 524–543.
- Witt, P (2004): Entrepreneurs' networks and the success of start-ups. *Entrepreneurship & Regional Development*, **16**(September), pp: 391-412.
- Wright, M; K Robbie & C Ennew (1997): Venture capitalists and serial entrepreneurs. *Journal of Business Venturing*, **12**, pp: 227-249.
- Woo, CY; AC Cooper & WC Dunkelberg (1988): Entrepreneurial typologies: Definitions and implications. *Frontiers of Entrepreneurship Research-1988*, Babson College: Wellesley, MA, pp: 165-176.

- Woo, CY; T Folta & AC Cooper (1992): Entrepreneurial search: Alternatives theories of behavior. *Frontiers of Entrepreneurship Research-1992*, Babson College: Wellesley, MA, pp: 31-41.
- Wood, R & D Hover (2007): The IBM Innovation Jam: A methodology for mobilizing intellectual capital. SMS 27th Annual International Conference, San Diego (CA)
- Zahra, SA (1991): Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, **6**, pp: 259-285
- Zahra, SA (1993): A conceptual model of entrepreneurship as firm behavior: A critique and extension. *Entrepreneurship Theory and Practice*, **17**(4), pp: 259-285
- Zahra, SA (1995): Corporate entrepreneurship and company performance: The case of management leveraged buyouts. *Journal of Business Venturing*, **10**(3), pp: 225-247.
- Zahra, SA & JG Covin (1995): Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing*, **10**, pp: 43-58.
- Zahra, SA; DF Jennings & DF Kuratko (1999a): The antecedents and consequences of Firm-level Entrepreneurship: The state of the field. *Entrepreneurship Theory and Practice*, **23**(3), pp: 45-65.
- Zahra, SA; DF Karutko; DF Jennings (1999b): Guest editorial: Entrepreneurship and the acquisition of dynamic organizational capabilities. *Entrepreneurship Theory and Practice*, **23**(3), pp: 5-10.
- Zahra, SA; AP Nielsen; WC Bogner (1999c): Corporate entrepreneurship, knowledge, and competence development. *Entrepreneurship: Theory and Practice*, **23**(3), pp:
- Zenger, TR & BS Lawrence (1989): Organizational demography: The differential effects of age and tenure distributions on technical communication. *Academy of Management Journal*, **32**, pp: 353-376.

8. Appendix

8.1. The questionnaire of entrepreneurial orientation

With the following statements we try to identify the collective management style of the top management that, of course, are determined by you. By moving the pointer of the scale, please select the statement out of the two that characterizes most your collective management style. The closer the pointer is to the statement, the more it complies with your collective management style.

1. In general, the management (including myself) prefers ...

A	sales initiatives and marketing tools on proven products and services	○○○○○○○○○○	The development of cutting-edge technology products / services (R+D and innovation)
B	Low-risk projects with a safe return	○○○○○○○○○○	Risky projects offering outstanding profits
C	First we assess how competitors act, then we react	○○○○○○○○○○	Typically we act before the other competitors
D	We have not introduced any new services / products at all	○○○○○○○○○○	We have introduced many new services / products in the past 3 years
E	New products / services are introduced only if the management comes up with the idea	○○○○○○○○○○	The management is glad to hear the proposals of the employees

F	We strive to retain our current position	○○○○○○○○○○	We continuously look for growth options
G	We focus our forces on retaining and better serving our existing customers	○○○○○○○○○○	We focus our forces on finding new customers and consumer segments
H	If we decide to implement an idea, we are ready to assign resources at once	○○○○○○○○○○	If we decide to implement an idea, we strive to retain our flexibility and assign resources only gradually, in small steps
I	We are characterized by competitive spirit: if necessary, we face to face compete with competitors and are ready to start a counter-attack	○○○○○○○○○○	We try to avoid direct confrontation: we concentrate on features that differentiate us from our competitors
J	We try to formulate realistic, easy reach ideas	○○○○○○○○○○	We strive at formulating speculative, forward-looking ideas
K	Everything has to be approved by the top management	○○○○○○○○○○	Our subordinates have significant independent decision competences

8.2. Growth orientation

To what extent is growth important for the management?

We are satisfied, no plans to grow []	We would like to grow but are not able []	Yes, to a small extent []	Yes, we have great plans []
--	--	-----------------------------------	--

2. How do you want to grow in the near future? Please answer on the basis of your realistic possibilities and expectations.

	We do not want it	Somewhat important	Important	Very important
a) Recruit new employees	[]	[]	[]	[]
b) Open new offices, points of sales	[]	[]	[]	[]
c) Increase sales revenues	[]	[]	[]	[]
d) Introduce new products	[]	[]	[]	[]
e) International expansion	[]	[]	[]	[]

8.3. Commitment

Typically...		
we prefer to invest only after the feasibility of an idea has been sufficiently proven	○ ○ ○	initial difficulties are considered as a part of the learning process
we rather look for new opportunities when the first negative signs appear in the implementation process	○ ○ ○	we keep on implementing an idea as long as there is still a slight chance to realize it
If we decide to exploit an idea or opportunity, ...		
we tend to be very committed to the implementation of our original idea (prefer not to change)	○ ○ ○	from the very beginning we are opened to modify our original idea if we need to

8.4. Social capital

Typically, our relations maintained with our business partners are ...		
close and long-term	○ ○ ○	Loose and occasional
Typically, with our business partners we are ...		
in a contractual relationship	○ ○ ○	in an informal relationship
Typically, our business partners are ...		
directly connected to each other as well	○ ○ ○	are connected to each other only through us
Typically,		
we invest into the relations we already have	○ ○ ○	we invest in establishing more and more new relations

8.5. Resource gaps

When evaluating our ideas, the primary criterion is that ...		
they should fit into our current businesses	○ ○ ○	they should open new businesses opportunities
Due to the lack of resources (e.g. financial, know-how, free capacities, information etc.)...		
we often reject good ideas	○ ○ ○	typically, we do not reject a promising idea – instead, we look for a partner who can supply the missing resources
We select the opportunities to be exploited depending on ...		
how well they fit to our resources	○ ○ ○	how valuable they are from the point of view of building our future
When we decide to exploit an idea or opportunity, this means that ...		
we already have got the resources we need to the implementation	○ ○ ○	we often have to look for new partners who will supply the missing resources

8.6. Dimensions

		Entrepreneurial orientation	Speculation orientation	Product Push
Entrepreneurial orientation	Pearson Correlation	1	,000	,000
	Sig. (2-tailed)		1,000	1,000
	N	203	203	203
Speculation orientation	Pearson Correlation	,000	1	,000
	Sig. (2-tailed)	1,000		1,000
	N	203	203	203
Product push orientation	Pearson Correlation	,000	,000	1
	Sig. (2-tailed)	1,000	1,000	
	N	203	203	203
A	Pearson Correlation	,594**	,084	-,445**
	Sig. (2-tailed)	,000	,232	,000
	N	203	203	203
B	Pearson Correlation	,636**	,385**	,067
	Sig. (2-tailed)	,000	,000	,345
	N	203	203	203
C	Pearson Correlation	,479**	-,360**	-,336**
	Sig. (2-tailed)	,000	,000	,000
	N	203	203	203
D	Pearson Correlation	,449**	-,307**	,457**
	Sig. (2-tailed)	,000	,000	,000
	N	203	203	203
E	Pearson Correlation	,339**	-,596**	,118
	Sig. (2-tailed)	,000	,000	,094
	N	203	203	203
F	Pearson Correlation	,428**	-,267**	,230**
	Sig. (2-tailed)	,000	,000	,001
	N	203	203	203
G	Pearson Correlation	,481**	-,190**	,311**
	Sig. (2-tailed)	,000	,007	,000
	N	203	203	203
H	Pearson Correlation	-,328**	-,494**	-,126
	Sig. (2-tailed)	,000	,000	,073
	N	203	203	203
I	Pearson Correlation	-,269**	-,640**	-,304**
	Sig. (2-tailed)	,000	,000	,000
	N	203	203	203
J	Pearson Correlation	,287**	,452**	-,392**
	Sig. (2-tailed)	,000	,000	,000
	N	203	203	203
K	Pearson Correlation	,489**	-,105	-,308**
	Sig. (2-tailed)	,000	,136	,000
	N	203	203	203

** significance level 0,01 * significance level 0,05

EO questions”

8.7. Hypotheses testing

		Entrepreneurial orientation	Speculation orientation	Product Push	
Entrepreneurial orientation	Pearson Correlation	1	,000	,000	
	Sig. (2-tailed)		1,000	1,000	
	N	203	203	203	
	Speculation orientation	Pearson Correlation	,000	1	,000
		Sig. (2-tailed)	1,000		1,000
		N	203	203	203
	Product push orientation	Pearson Correlation	,000	,000	1
		Sig. (2-tailed)	1,000	1,000	
		N	203	203	203
	H1 - A	Pearson Correlation	,184**	-,065	-,038
		Sig. (2-tailed)	,008	,360	,593
		N	203	203	203
H1 - B	Pearson Correlation	,134	-,055	-,150*	
	Sig. (2-tailed)	,057	,432	,033	
	N	203	203	203	
H1 - C	Pearson Correlation	,054	-,032	-,073	
	Sig. (2-tailed)	,447	,646	,301	
	N	203	203	203	
H3 - D	Pearson Correlation	,276**	-,119	,028	
	Sig. (2-tailed)	,000	,090	,691	
	N	203	203	203	
H3 - E	Pearson Correlation	,157*	-,155*	,125	
	Sig. (2-tailed)	,025	,027	,075	
	N	203	203	203	
H3 - F	Pearson Correlation	,179*	-,093	,069	
	Sig. (2-tailed)	,010	,188	,329	
	N	203	203	203	
H2 - G	Pearson Correlation	,185**	-,007	-,032	
	Sig. (2-tailed)	,008	,921	,646	
	N	203	203	203	
H2 - H	Pearson Correlation	,176*	-,125	,184**	
	Sig. (2-tailed)	,012	,075	,009	
	N	203	203	203	
H2 - I	Pearson Correlation	,312**	,095	,181**	
	Sig. (2-tailed)	,000	,176	,010	
	N	203	203	203	
H2 - J	Pearson Correlation	,212**	,094	-,151*	
	Sig. (2-tailed)	,002	,182	,032	
	N	203	203	203	

** significance level 0,01 * significance level 0,05

H1-A: testing hypothesis 1 with question "A"

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