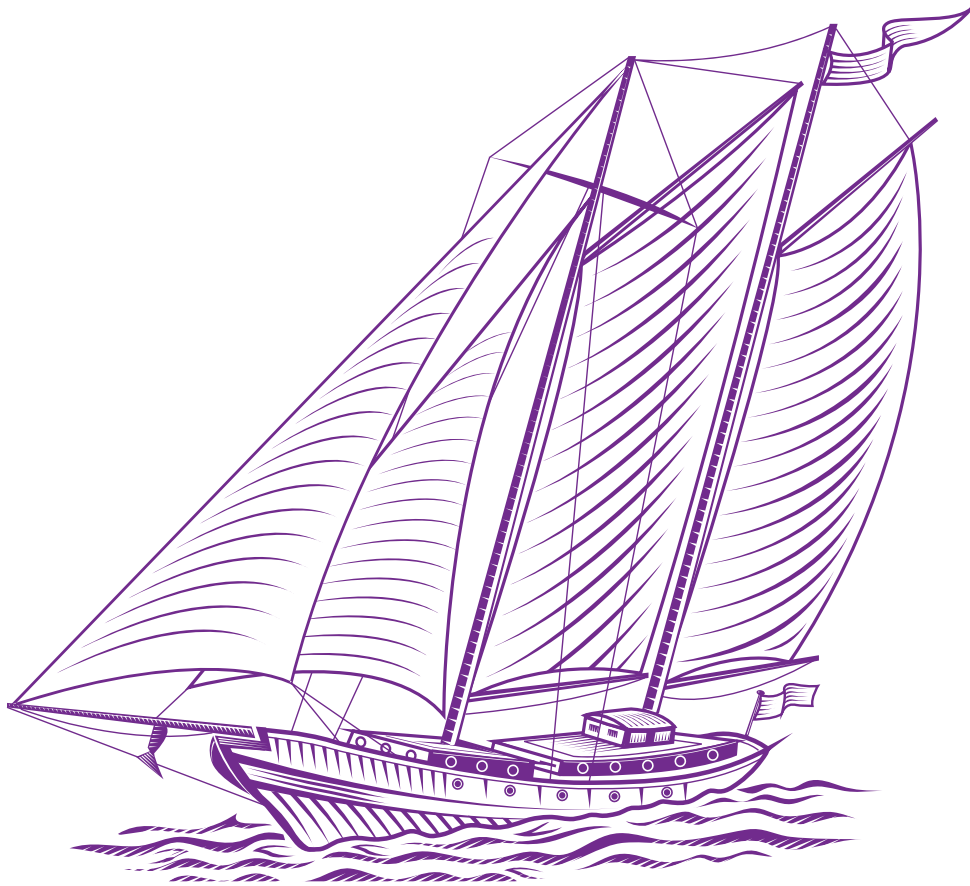




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# **S T U D I A**

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## ON THE NEED OF SME ORGANIZATIONAL ADAPTION TO THE INTERNATIONAL BUSINESS ENVIRONMENT: A COMPETENCE-BASED PERSPECTIVE

JÖRG FREILING<sup>1</sup>, SVEN M. LAUDIEN<sup>2</sup>

**ABSTRACT.** In our paper we challenge the common notion that small and medium sized enterprises (SMEs) have to adapt to the international business environment to be successful when acting in an international context. Although we believe in a need for certain adaption, we claim that the possibility that SME are to a certain extent able to proactively shape outer conditions is not adequately considered in literature. Therefore we ask how far SMEs in international business need to adapt to the environment to ensure a state of international competitiveness.

We understand SMEs as open systems (Sanchez and Heene, 1996) and employ the Competence-based Theory of the Firm (CbTF) (Foss and Ishikawa, 2007; Freiling et al., 2008) as theoretical frame of reference for our conceptual paper. Thanks to its moderate voluntaristic nature, this theory allows considering both social embeddedness and managerial discretion of firms. Besides, this perspective takes into account internal developments as well as developments in the business environment. This is particularly useful to understand interaction processes with the environment that aim at accessing so-called ‘firm-addressable assets’. Firm-addressable assets explain the resource dependence of international SMEs on third-parties. However, backed by ‘absorptive capacity’ (Cohen and Levinthal, 1990), firm-addressable assets fuel internal processes of learning as well as resource and competence building. Moreover, CbTF allows for considering the role of certain categories of resources. Following service-dominant logic (SDL) (Vargo and Lusch, 2004), the distinction between ‘operand resources’ and ‘operant resources’ becomes a centerpiece of our argument: SMEs need to adapt to the environment due to resource constraints by operand resources and shape the environment primarily driven by operant resources.

Our paper advances research in three ways: (1) we reinforce the concept of moderate voluntarism in this stream of research and challenge the predominantly deterministic view on SME environmental adaption; (2) we introduce a rather new theory (CbTF) and develop an understanding that features the managerial discretion of SME’s in international competition; (3) we depart from the quite unspecific notion that intangibles matter in case of proactive SME management and specify the resource categories in this realm with more explanatory power in this regard.

**Keywords:** *Environmental Adaption, Moderate Voluntarism, Competence-based Theory of the Firm, Service-dominant Logic; Absorptive Capacity.*

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## 1. Introduction

Whenever firms enter new international markets or, more generally, act in an international context the adaptation to the international business environment stands at the forefront. This holds particularly true for small and medium sized enterprises (SMEs) in the face of their usual constraints, e.g. *liabilities of smallness* (e.g. Aldrich & Auster, 1986) in connection with *liabilities of 'foreignness'* (Hymer, 1976; Zaheer and Mosakowski, 1997; Petersen and Pedersen, 2002; Nachum, 2003; Asmussen, 2009). This paper does not ignore the need for certain adaptations. However, it challenges the typical notion, proposed among others from the configuration and contingency school (Burns and Stalker, 1961; Miller, 1992), that (international) business is primarily a one-way street to adaptation. To question this viewpoint, the paper contrasts deterministic and more voluntaristic approaches to SME management in international business. We claim that the possibility of proactively shaping outer conditions is not sufficiently considered in international management studies. Thus, we propose a perspective based on moderate voluntarism that carefully considers social embeddedness of firms (Granovetter, 1985) on the one hand side as well as SME's entrepreneurial ambitions on the other. Competence-based theory and thinking (Teece et al., 1997; Helfat et al. 2007; Foss and Ishikawa, 2007; Freiling et al., 2008) sometimes explicitly, sometimes implicitly adopts moderate voluntarism and allows for considering power-related issues in management studies. Accordingly, we select this theoretical stream as frame of reference. In particular, we employ the Competence-based Theory of the Firm (Freiling et al., 2008) that explicitly deals with moderate voluntarism. Against this background, the *research question* of our paper is: *'How far do SMEs in international business need to adapt to the environment to ensure a state of international competitiveness?'*. To respond to this question, we employ a conceptual procedure that allows for a deeper understanding of key causalities and developing research propositions for on-going empirical work on this issue.

The structure of this paper is as follows. After a review on previous research on the topic we identify core challenges of international companies in the context of gaining managerial discretion and proactively shaping outer conditions (section 2). Next, we introduce the Competence-based Theory of the Firm (CbTF) as theoretical frame of reference (section 3). Section 4 refers to the open system view (OSV) of the firm (Sanchez and Heene, 1996) as a part of competence-based management and theory. The OSV allows for a comprehensive understanding of internal and external circumstances that frame managerial decision-making. To address our particular topic, we modify the OSV model originally introduced by Sanchez and Heene (1996). This enables us to develop a first set of research propositions. Section 5 extends this set by portraying the so-called 'service-dominant logic' (SDL). This model of inter-firm collaboration sheds light on particular resources that increase managerial discretion. Moreover, SDL allows for identifying cornerstones of business transactions that are decisive in case of making and implementing proactive moves in competition. Thus, more research propositions are developed. In section 6 we discuss the findings of our paper and give a short outlook.

## 2. International Business, Managerial Discretion, and Moderate Voluntarism

It is not unusual to think in terms of constraints when accessing international markets. This holds particularly true in case of small businesses as the anchor point of this paper. In fact, there are lots of obstacles to trade when entering international markets in case of SMEs. Research took intensive notice of organizational liabilities (Freeman et al, 1983; Singh et al., 1986). SMEs are, by definition, affected by liabilities of smallness (Hannan and Freeman, 1977). As a consequence, they do not possess rich structural assets that allow for a higher degree of professionalism (Freiling, 2008). Due to financial constraints, SMEs are often unable to hire fine-grained expertise in almost every part of their business (e.g. managerial function, value-added expertise, R&D assets). Instead, many employees are more generalized in their day-to-day activities and are in charge of different tasks. Besides that, bottlenecks in almost every asset category are possible and make SMEs more vulnerable than bigger companies. In particular, it is often argued that due to smallness SMEs lack bargaining power and are, thus, often unable to establish standards in competition. It is one ambition of this paper to shed different light on this aspect.

Another challenge international SMEs regularly face are the so-called liabilities of foreignness. Thanks to these liabilities firms are not familiar with the situation in foreign countries and/or cultures and face problems when making reasonable decisions. Moreover, they experience difficulties when transcending national or cultural boundaries. Making business in another country implies that the legal system of the country-of-origin is no longer applicable. As a consequence, problems occur when SMEs try to reduce legal uncertainty (Gessner, 2009; Callies, 2009; Freiling, 2009). At least, additional costs of coordination challenge the transaction partners. In many cases, however, transactions simply do not take place due to uncertainty out of managerial control.

This paper neither questions these liabilities at all nor ignores the sometimes considerable constraints in this respect. Instead, we are fully aware that SMEs need to find ways to cope with these issues. However, our major point is that beside these obstacles international business offers so many opportunities to unfold that it is simply a reductionist procedure not to consider the opportunities explicitly. Therefore, we intend to outline the opportunities of international business by confronting the more liabilities-focused perspective, as the standard viewpoint in literature, with the numerous chances of SMEs to proactively manage their operations and transactions – and, in particular, to influence the business environment.

However, in this context the question is open what opportunities international business holds ready for SMEs. We do not intend to consider all possible opportunities one might think of. Nevertheless, some striking chances are highlighted below by making reference to earlier contributions that already – explicitly or implicitly – took notice of it.

Generally speaking, small businesses face better conditions to unfold their entrepreneurial power. In this respect, SMEs are thanks to their *lean* and often *informal*

*structures* more flexible than bigger firms (Freiling, 2008). Formalized and bureaucratic structures are often not needed. Thus, the degree of organizational inertia is much lower. In international business this flexibility brings SMEs in a favourable position not only to identify business opportunities quickly but to take the respective chances almost immediately.

As for the *governance structure*, there are striking differences compared to big companies as well. In SMEs, owner and entrepreneur is normally the same person (Storey, 1994; Beaver, 2002). Big companies are often administrated by a board of executives. These executives can be regarded as agents while the owners take over the role of a principal. Thus, the agents have to care for achieving short-term performance goals to reinforce their internal position. The pressure of financial markets is, thus, very high and often causes a management behaviour that is directed towards attaining short-run financial measures. Forced by the owner-managers SMEs often work the other way round, favouring a long-term and strategic perspective. Thereby they act not completely – but to a considerable extent – independent from financial market constraints. In international business this horizon is highly useful as it allows for identifying and selecting business opportunities as well as for positioning the firm strategically – be it in niche markets or not.

One challenge of international business is bridging cultural differences between the firm and external parties. SMEs hold a specific position insofar as relationships between leaders and employees are to a large extent *personalized*. Based on these familiar internal ties, it is much easier to identify the right persons for the respective task. This allocation process is crucial for achieving a state of closeness to the customer as long as the leaders have a sound understanding of the needs of the market. In connection with external advice it is often possible to outperform big companies as for this coordination challenge.

Identifying and taking international business chances requires a deep understanding of markets. Certain closeness to markets is a prerequisite for understanding market processes. This closeness is negatively related to the number of *hierarchical levels* employed. Due to their size, SMEs normally get along with a rather low number of hierarchical levels. This is one reason why entrepreneurial power can easily unfold.

Oftentimes asset shortages seem to describe best the situation SMEs in international business face. The implicit assumption applies that international markets are too demanding for SMEs so that they are forced to take a reactive position. Right at this point of reasoning it transpires that this might be only half-truth. Although international markets are different from national markets, it is not necessarily right that acting internationally is more challenging for SMEs. The situation largely depends on the market definition, the related intensity of competition and the availability of internal resources and competences. Even in cases when SMEs feel over-taxed initially, they might turn this situation in a more favourable one by activating internal processes of learning and capability building as well as external processes of accessing critical resources from third-parties. The resource-dependence approach, promoted by Pfeffer and Salancik (1978) tells us how this might proceed.

Summarizing this discussion, SMEs face considerable constraints and coevally numerous options to unfold their power and to influence at least parts of the business environment. This ambiguous situation calls for a theoretical framework that considers both aspects. Insofar, we are in search of theory that adopts a moderate voluntaristic viewpoint. Many theories favour either determinism (e.g. transaction cost theory, industrial organization, resource-dependence theory) or voluntarism (e.g. Schumpeter's innovation approach (Schumpeter, 1934). Based on this insight we introduce with the CbTF a theory that is able to bridge this requirement in the subsequent section.

### **3. Proactive Moves in International Business - A CbTF Perspective**

CbTF as a theory is a re-conceptualization of resource-based and competence-based theories. Facing the serious criticism on resource-based theories (Priem and Butler, 2001; Foss, 1993; Foss and Knudsen, 2003), primary concern of the re-conceptualization was to provide competence-based theory with a consistent system of antecedents and a better fit between the explananda on the one hand side and antecedents and causal structures on the other (Freiling et al., 2008). As a re-conceptualization, CbTF rests on market process theory of the Austrian School. Thus, CbTF is to a large extent influenced by entrepreneurial thinking and entrepreneurship theory. One common feature of all entrepreneurship theories is to understand the business environment as an arena where given opportunities are to be identified and exploited. More, opportunities can, to some extent, be created and markets proactively shaped – be it stand alone or in connection with partners as the debate on industry architectures triggered by Jacobides et al. (2006) shows. A brief overview of the hard core assumptions according to Lakatos' (1974) conception of research programs illustrates this entrepreneurial touch (Freiling et al., 2008): CbTF assumes (1) radical uncertainty, (2) subjectivism (related to people and organizations), (3) methodological individualism, (4) human action according to von Mises' (1949) 'homo agens' notion, (5) moderate voluntarism, and (6) the relevance of time.

We know from Hamel and Prahalad's (1994) work the impact of competences on market structures and competition. Core competences, built earlier than the ones of rivals, enable firms to outpace competition. CbTF considers this argument and extends the discussion by highlighting the role of entrepreneurial thinking and action. People are modelled as alert players that permanently look out for opportunities to improve their position. The homo agens (acting man) notion implies that people strive for changing the actual frame of targets, means, and alternatives (von Mises, 1949; Kirzner, 1973). As individuals do, so do firms driven by the people inside the organization. Thus, firms have a certain level of discretion to establish new standards and value architectures in competition. However, their impact is far from being unlimited. Powerful competitors and other alert players in the market, legal restrictions, inertia and customer habits are only a few factors that hinder SMEs to implement their plans. That is why we are well advised to take up a position of moderate



voluntarism. On the one hand side firms have managerial discretion based on creativity, alertness, boldness and similar elements well known from market process theory. On the other hand, however, there is ‘social embeddedness’ (Granovetter, 1985) and the companies are well advised to take this into account. Insofar the hard core assumptions of CbTF perfectly match with our basic consideration of this paper.

When dealing with opportunities and constraints of SMEs in international business we need to point out the explanatory power of CbTF in more detail. To this end, we introduce some selected causal mechanisms CbTF uses. Moreover, CbTF has a specific view on the relation between the firm and the business environment. We discuss both issues one by one, the first in this section, the latter primarily in section 4.

What makes us believe that SMEs gain managerial discretion in case of participating in international business although they face – sometimes considerable – liabilities? We propose that SMEs have many and powerful assets relevant to international business: (1) assets of internal resource building and learning (based on economies of speed), (2) assets of ties (based on social capital), (3) assets of re-allocation (based on economies of flexibility), and (4) assets of external absorption (based on human and social capital).

*Assets of internal resource building and learning.* It is unanimous in resource and competence-based research that self-reinforcing mechanisms work in organizations. Dierickx and Cool (1989) and Rumelt (1984) pointed to the phenomenon of ‘asset mass efficiencies’ to indicate that an accumulation of certain assets provides a fertile background for virtuous circles of resource and capability building. More than that, sometimes a certain mass of assets is necessary to go beyond critical thresholds. Obviously, the asset endowment of firms can be usefully differentiated by three categories (Moldaschl and Fischer, 2004): (1) *finite assets* that are absolutely scarce and should be used according to principles of efficiency, (2) *regenerative assets* that should be handled in a sustaining manner to prevent the basic stock from depreciation, and (3) *generative assets*. The last category refers to assets that increase their mass and/or their value in use. Knowledge, skills, capabilities, brands etc. are prominent examples. The more firms make use of these assets, the more they are able to raise benefits. Insofar a completely different logic of utilization applies. It speaks for itself that these assets are of pivotal significance for SMEs acting internationally.

Nevertheless, the question is open why SMEs hold considerably high amount of specific assets of internal resource building and learning compared to bigger firms. A core feature of SMEs is their low level of formalized structures. What might be a liability related to professionalizing processes (Kale and Ardit, 1998) can at the same time be an advantage when it comes to developing generative assets. We know from knowledge management, implemented in particular in bigger companies, that so-called knowledge management systems enable managers to get a transparent overview of the knowledge and, at best, parts of the skills available to the organization (Autio et al., 2000). Tacit knowledge, however, is typically not an issue considered in designing and handling these systems. The entire knowledge base of SMEs is to

a large extent characterized by tacit knowledge and rather informal ways of handling it (Koskinen and Vanharanta, 2002). The same holds true for personal skills of entrepreneurs and middle managers. Insofar, this specific structure of available knowledge enables SMEs to handle critical parts of the knowledge base more effectively and in a much shorter time compared to bigger firms. Moreover, SMEs are often much better prepared to transfer knowledge beyond national and/or cultural boundaries thanks to personal ties (Anderson and Boocock, 2002). Another issue is worth to be considered: knowledge is very often a catalyst of developing other kinds of assets. As far as this holds true, there is in fact a particular asset of SMEs in international business that allows for managerial discretion even in complex and turbulent international market settings.

*Assets of ties.* Due to smallness, SMEs employ a lower number of people (Hannan and Freeman, 1977). Thus, the social complexity as another causal element of resource and competence-based reasoning (Dierickx and Cool, 1989) is lower compared to bigger firms. It can be argued that this may threaten the sustainability of competitive advantages, for social complexity is considered an isolating mechanism (Rumelt, 1984). This, however, does not hold true since relationships between employees on the one hand side and between internal and external people on the other are to a large extent personalized. In other words, lower structural complexity is outweighed by higher complexity of existing relations. Whereas in bigger companies relationships are often anonymous and sometimes people simply do not know each other, in SMEs personal relations allow for a smooth run of activities and high degree of mutual understanding (Meyer and Skak, 2002). Conflicts might arise but can be mitigated in a much easier way. In case of SMEs anonymous relations are much more unlikely, interestingly also with regard to relations that transcend national boundaries. This has two important consequences. First, the coordination capacity of SMEs increases. Second, this phenomenon causes a lower degree of internal coordination costs and external transaction costs. As for external relations of SMEs we can state that many of them are tied to entrepreneurs. Once again, the relationships to product, factor, and financial markets are much more personalized which is often a main reason why the relations are ‘thick’ and stable (Taylor and Thorpe, 2004). This asset is also relevant to the other assets mentioned below.

*Assets of re-allocation.* Although there is no general need that international markets are hyper-dynamic, most of the internationalized SMEs permanently need to reconfigure their asset endowment. There might be some multi-domestic companies that run their subsidiaries in the respective countries more or less stand-alone. However, in most cases the situation is different. SMEs learn in one country and transfer their key learnings actively (CbTF core assumption (4)) to (almost) all the other target country markets (Gibb, 1997). This requires not only a never-ending process of knowledge transfer among the different locations but also other kinds of transfers (e.g. human resources, technologies) (Kunc and Morecroft, 2010). Moreover, the structures of the internationalized companies need to undergo change processes to avoid a loss of effectiveness. SMEs are privileged insofar as organizational

inertia do not play a considerable role when it comes to structural changes. As mentioned above, compared to bigger companies SMEs have a different ratio of formal and informal structures with informal structures in a dominant position. Although we should not under-estimate the difficulty of changing routines and patterns (Nelson and Winter, 1982) as important part of informal structures, it is evident that changes in this respect are often easier and less costly than the change of formal structures with a strong bureaucratic touch is (Karimi et al., 2007). Accordingly, SMEs typically achieve higher rates of structural flexibility (Uzzi and Lancaster, 2003). In case of international business, the required change processes run in a comparatively smooth manner and do not take a long time of final implementation. In general, acting independently in outpacing competitors is easier and allows, once again, for gaining managerial discretion (Thomas et al., 2001).

*Assets of external absorption.* SMEs might face some liabilities of smallness in connection with asset bottlenecks. Although this might hold true for every firm, this aspect seems to be especially important for SMEs as it may cause an extraordinary dependence on third-parties. But SMEs are able to overcome this constraint by creating a ‘negotiated environment’ with personalized relationships that build on trust and commitment. Being aware of the scarce asset endowment, SMEs are often much more open (-minded) and search for useful complementary assets that might fill asset gaps. Existing relationships allow for a smooth and sound assimilation and integration of external assets. Cohen and Levinthal (1990) coined the term ‘absorptive capacity’ to address the identification, assimilation, and integration of external knowledge. In this regard, SMEs appear to be more privileged than bigger firms thanks to assets of ties. Notably, absorptive capacity is cumulative, i.e. it grows in a self-reinforcing manner. What holds true for the absorption of external knowledge is relevant to the absorption of other kinds of assets as well (Zahra and George 2002). Insofar we speak of assets of external absorption. These assets are vital to international business because implementing internationalization processes without accessing country-specific assets (e.g. employees, knowledge) is simply impossible.

We pointed out that the role of SMEs is an ambiguous one. To understand this role, we need to consider the different kinds of assets and liabilities. Henceforth, we focus in detail on assets, for this part is up to now under-researched. At the same time assets are a key factor to gain managerial discretion and to proactively shape external circumstances. We use the model of the OSV of the firm, which is integral part of CbTF reasoning, to consider our arguments in a more systematic manner and to develop first research propositions.

#### **4. An Open System View on Proactive Management of International Companies**

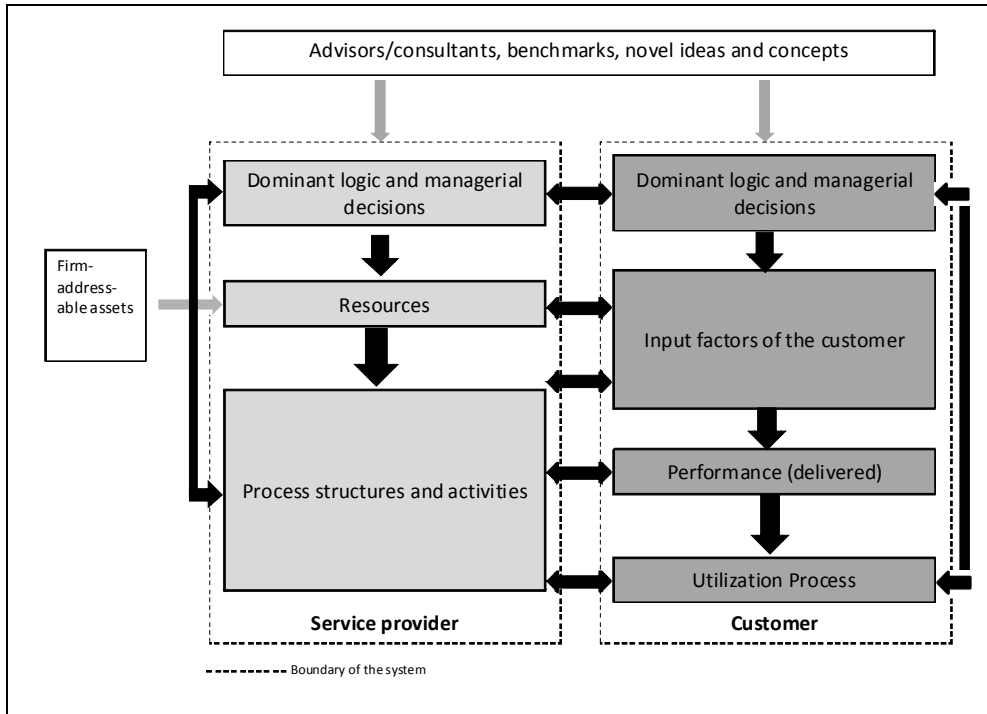
As already noted, we understand SMEs as open systems that are in permanent interaction with the surrounding environment (Nelson and Winter, 1982; Scott, 2002). This interaction is mandatory to access so-called ‘firm-addressable

resources' and to generate new ideas on how to lead the company (Sanchez et al., 1996) for the sake of reinforcing the firm's competitiveness. Sanchez and Heene (1996) build their original OSV of the firm on a competence-based perspective. Following this basic thought, they conceptualize internal system elements of the firm (strategic logic, management processes, intangible assets, tangible assets, processes, products) and important elements of the business environment surrounding the firm, namely: firm-addressable assets, product markets, competitors and persons/institutions giving external advice. Both internal system elements and elements of the surrounding system create an understanding of economic and social embeddedness of firms and possibilities to change the surroundings by making use of resources and competences available to the firm.

We believe that the OSV is extremely useful regarding our research aim but are also aware that this framework needs a reinterpretation and reconfiguration for the sake of a parsimonious usage of constructs that allows for addressing both transactions and value-added processes at the same time. In particular, we do not consider the (in-) tangibility of assets as being important. As pointed out above, other categories of the asset system (e.g. finite, regenerative, and generative assets according to Moldaschl and Fischer, 2004) are more relevant. Furthermore, the dichotomy of tangibility and intangibility seems to be not that meaningful any more. This originates in the fact that applying this dichotomy considerable heterogeneity still remains. Moreover, literature does not specify why intangibles might matter in general.

Our paper focuses on value-added processes with particular emphasis on the phenomenon of value co-production by supplier and customer (Lovelock and Wirtz, 2004). In this connection the collaboration between supplier and customer does not end with delivering the product because at that point of time the customer still needs the supplier to unfold the full potential the delivered solutions offer. This holds true because of the significant knowledge of the supplier that is relevant to the customer in the usage process. When the customer ignores this necessity, it is most likely that the customer is not able to use all facets of the solution offered by the supplier – a problem we know e.g. from IT solutions. Thus, we need to extend and modify the original OSV of the firm.

Figure 1 portrays a modified OSV as result of our efforts that builds the framework for our next steps. In this section we focus based on the OSV on the relationship between the firm and the environment (including the product market). In the follow-up section we employ the SDL of Vargo and Lusch (2004) to highlight the relation of the individual customer and the supplier in a one-to-one setting in international business. This extension is useful to emphasize a powerful source that helps SMEs to improve their position, to accumulate strength, and to structure the markets – in conjunction with customers.



**Fig. 1.** The Modified Open System View of the Firm

Internally, the firm consists of different system elements that are closely related and, notably, market oriented. Market orientation plays insofar a decisive role as the interplay of all system elements is dedicated to respond to market needs and to make profitable transactions – at least in the long run. Although the emphasis might be on internal and some crucial external resources and capabilities, the present and future market orientation is a pervasive feature. Thus, once again, CbTF and the OSV of the firm connect and align internal and external management issues rather than over-emphasizing firm-specific resources. This balanced perspective is often ignored when employing theories in the realm of competences and capabilities.

Among the internal system elements, the strategic logic of the firm (Sanchez et al., 1996) is the core driver of all the internal processes for the logic determines inflow and processing of information and the way decisions are made based on previously learned knowledge structures. SMEs are privileged in this regard thanks to their particular governance structure. Typically, a very low number of owner managers direct the company that speeds up the process of decision-making. Equipped with highly personalized and trustful relationships to advisors in the business environment, the managing owners face a rather low level of coordination costs and are able to

integrate fresh thoughts in a fast manner. Whereas bigger firms might realize higher degrees of internal proficiency in this regard, SMEs adjust to this by having advantages in absorbing external proficiency. We propose:

**Proposition 1:** *SME managerial discretion in international business increases with a strategic logic based on a lower number of persons involved in strategic decision-making and more personal ties to external advisors.*

Similar to the necessity to gather insights on how to lead the firm with the help of external benchmarks, firms depend on the availability of external assets to overcome critical bottlenecks. Due to liabilities of smallness and foreignness, these bottlenecks play a vital role in case of SMEs in international business. Obviously, firms need a capacity to access external assets that belong to the firm-addressable assets in terms of the OSV. We can hardly name specific asset categories on a general level that SMEs need to access. Insofar we have to modify a debate that focuses on understanding how firms are able to collect and utilize external knowledge by an ‘absorptive capacity’ (Cohen and Levinthal, 1990). Whereas *absorptive capacity* – as a clearly defined and introduced term – refers to identifying, assimilating, and integrating external knowledge, the construct of ‘*asset integration capacity*’ is devoted to accessing all other kinds of firm-addressable assets. To avoid misunderstandings, the constructs are not only relevant to fill asset bottlenecks of all kinds but represent a capacity that develops over time and allows for asset mass efficiencies (Dierickx and Cool, 1989). This generative asset allows the firm to extend its capacity to integrate promising assets and to start internal refinement processes that increase the value of resources (Coviello and McAuley, 1999; Knight, 2000; Hollenstein, 2005; Perrini et al., 2007). In other words, absorptive capacity and asset integration capacity enable firms to fill asset gaps over time faster, more effectively, and/or more comprehensively. The better SMEs are able to recognize, assimilate, and integrate these external assets, the more they are able to break free from strong adaptation needs and to shape outer conditions. Thus, we propose:

**Proposition 2:** *Absorptive capacity and asset integration capacity are positively related to the managerial discretion of SMEs in international business.*

The OSV of the firm suggests that internal assets, thoughtfully connected with firm-addressable assets, undergo firm-specific refinements so that resources and competences develop (Freiling et al., 2008). These resources and competences allow for value-added processes that enable the firm not only to respond to market needs but to proactively develop solutions dedicated to the individual needs of customers – stand-alone or in close collaboration with the exchange partner. This aspect is crucial to better understand the managerial discretion of SMEs in international business. Adapting given product standards to individual customer needs helps to overcome obstacles to trade and to become familiar with the international target markets. Moreover, co-

operating with the customer allows for modifying market standards. This may trigger first steps of innovation processes. These innovative steps structure relevant parts of the market and increase managerial discretion.

The way of collaboration with customers differs considerably. In international markets we can find lots of exchanges that are close to arms length transactions in the Williamsonian sense (1985). In marketing literature, Jackson (1985) used the term ‘transaction marketing’ to emphasize the way of buying according to the ‘always a share’ principle. She contrasted this constellation with ‘relationship marketing’ with the ‘lost for good’ logic. In the latter case, customers and suppliers build trustful and long term relationships. This constellation is rather useful to isolate exchanges from anonymous market constellations and to form a temporary unit with well-selected customers (and suppliers). In these one-to-one settings SMEs gain much more managerial discretion and sometimes become indispensable from their exchange partner’s point of view. In fact, many SMEs focus their business on international niche markets where exactly these constellations predominantly occur.

The relational background seems to be a quite fertile one to understand a long term orientation of the partners as this business horizon allows for raising asset mass efficiencies (Dierickx and Cool, 1989) by different synergies that go far beyond cooperation by affecting lots of issues ranging on a personal level. Once again, we propose:

**Proposition 3:** *Managerial discretion of SMEs in international business increases with close ties to exchange partners that go along with asset mass efficiencies.*

Competence-based thinking relies on learning and competence building. The OSV considers this by feedback loops within and after market transactions. We argue that SMEs in international business are permanently involved in ‘races to learn’ (Leonard-Barton, 1995; Lane and Lubatkin, 1998). The question is whether competitors in the industry learn faster than the focal SME or not. SMEs in international business are privileged in this regard once again. Due to their quite non-bureaucratic and often informal structures they are in much better position to question the run of events and to start adaptations in case of internal and/or external disconfirmation. Whereas bigger firms are often ready to change elements of their product and process structures, SMEs are ready for a more radical change. Moreover, they are in much better position to go beyond changes of the surface structures and to embed new ideas, proposals and new concepts on deeper rooted layers (assets, management processes, and maybe even the strategic logic). This allows for a higher pace of learning which is of utmost importance for gaining managerial discretion later on. Thus, we propose:

**Proposition 4:** *If SMEs are able to learn faster than their competitors, they are provided with a chance to determine market standards and to improve their managerial discretion.*

So far, we investigated how SMEs in international business are able to gain managerial discretion by consequently addressing the interfaces of the firm with the external environment in terms of the OSV. In all instances, CbTF and OSV address internal and external factors in close connection. This is useful to understand to what extent proactive moves in international business are possible and how far adaptation is almost the only way to deal with external needs. Next, we extend the OSV by analyzing value-added processes of SMEs in international business in the context of a customer/supplier cooperation. To this end, we employ the so-called ‘SDL’ of Vargo and Lusch (2004) which is highly compatible to the line of thoughts we already presented.

### **5. Service-dominant Logic and Roots of Managerial Discretion**

We acknowledge the existence of *liabilities of foreignness and liabilities of smallness* and share the point of crucial resource bottlenecks of SMEs in international business. However, we extend this view by introducing the concept of SDL (Vargo and Lusch, 2004). Vargo and Lusch (2004) argue that the entire economy undergoes a shift in terms of the run and the basic character of value-added processes. In a nutshell, the economy moves from a product-oriented to a service-oriented one. The economy departs to a new way of arranging value-added processes with some important differences to recent situation (cf. section 4): (1) Value-added processes rest on customer participation and customization – and, notably, not solely on the supplier. (2) Inversely, value-added processes are not finished with service delivery on time. Instead, to unfold the entire potential of products delivered, the integration of the supplier in the usage processes is mandatory. When focusing on marketing and sales, this aspect is often ignored or at least under-estimated. In fact, a collaboration of supplier and customer does not end until the partners (officially) part. Cooperation in the usage process allows for raising synergies, identifying systematic mistakes and weaknesses, and developing more suitable solutions for future market processes. (3) SDL points to the myopic focus on ‘operand resources’ as a direct input in the value-added process (e.g. materials of all kind, energy, buildings, offices, financial assets). Although these factors are relevant in serving the customer, other resources are typically the roots of competitive strengths. Vargo and Lusch (2004) introduce the so-called ‘operant resources’. Operant resources are facilitators and enablers of the entire value-added system. Knowledge, experience, skills, and capabilities are prominent factors in this realm. SMEs are able to develop these resources internally or to acquire them by participating in and learning from market processes without using financial resources. Thereby SMEs fuel their processes of developing their resource endowment. This improves the competitive position and thereby widens the SME scope of action.

We consider this differentiation vital to our topic. In particular, we argue that the debate on SME’s liabilities of smallness in international competition is primarily



related to operand resources but not to operant resources. Instead, operant resources are catalysts which allow for successfully entering new international markets and to structure them according to SME ambitions. Thus, SMEs often do not really have any liabilities in this realm. Their flexibility and creativity rests on operand resources to a large extent.

The debate on operand and operant resources ties in a discussion we highlighted above. Moldaschl and Fischer (2004) deal with finite, regenerative, and generative assets. Maybe the most interesting category is the one of generative assets. Notably, operant resources belong to the category of generative assets whereas for operand resources this typically does not hold true. Following this distinction between *operand resources* and *operant resources*, we can specify factors that enable SMEs in international business to adapt to market challenges and to differing business environments (in particular operand resources) as well as drivers that give SMEs an opportunity to proactively shape the market and/or the market environment (especially operant resources). To specify the managerial discretion SMEs have and can achieve, we propose:

**Proposition 5:** *SMEs in international business are privileged in accessing operant resources. The availability of operant resources is positively related to the managerial discretion of SMEs in international business.*

Vargo and Lusch (2004) argue that SDL goes along with different modes of governance of economic transactions. Obviously, customer and supplier do not only collaborate in close business relationships but form another hybrid, temporary mode of governance. The reason for this is that customizing solutions often goes along with bilateral resource adaptations between customer and supplier. These adaptations cause a co-specialization of assets (Teece, 1986) of the more durable kind. As Vargo and Lusch (2004) believe, this situation forms a temporary unit so that to some extent organizational boundaries are re-defined. For SMEs in international business this has important implications. The more they are involved in these hybrid arrangements, the better the chances are to create a negotiated environment with favourable circumstances to shape outer conditions. This governance issue is related to proposition 3, but goes far beyond it. We propose:

**Proposition 6:** *SMEs in international competition increase their managerial discretion by creating temporary units with their exchange partners and extending their area of control.*

Following SDL, there is one more issue to be considered. Vargo and Lusch (2004) point to the paradigm shift that sheds light on the utilization processes on customer side. Conventionally, suppliers focus their interest on the value-added process, the delivery and some service problems that might arise in the context of repair and

maintenance. This, however, seems to be too myopic. SMEs in international business can unfold their capabilities best employing entire concepts of customer care. The more they involve themselves in utilization processes of the customer, the more they might reinforce their market position. Furthermore, the more they are embedded in customer-side utilizations processes, the more they are able to steer running transactions the way they like and to develop new modes of running the business. This leads to our final proposition:

**Proposition 7:** *Managerial discretion of SMEs in international business is positively related to an involvement in the utilization processes of their customers.*

SDL allows for developing more specific propositions. One of the most important insights is that SMEs are open entities. Following that, hybrid arrangements with exchange partners evolve. It may be true that these relationships are not principally advantageous for SMEs. However, they allow for taking several chances of increasing managerial discretion. From an entrepreneurial perspective, such as CbTF provides, these chances should not be ignored.

## 6. Discussion and Outlook

So far, we developed a set of research propositions. The next step is to confront these propositions with a first reality check. We consider qualitative case studies useful since the research propositions are formulated in a more general manner. Qualitative research, e.g. by case studies, could be helpful to specify and eventually modify the propositions and to identify those with a superior explanatory power. Conducting quantitative research can only be the second step to approach this field of research as in has to be backed up by more exploratory fieldwork.

Our paper advances research in a number of ways. First, the paper employs CbTF in the light of SME management in international business to better understand available managerial discretion. Second, the paper introduces a modified OSV of the firm to better identify potential levers of gaining managerial discretion. Based on CbTF and the conforming OSV it is possible to analyze internal and external elements that are relevant to SMEs' available managerial discretion in international business. Third, the paper uses SDL as a 'microscope' to better analyze the SME interface to exchange partners since this interface is highly relevant to shape outer market conditions – often rather unnoticeably from a competitors' point of view. To this end, we considered the basic cornerstones of SDL in our modified open system model.

We conclude by pointing out that managerial discretion of SMEs in international business is, by far, not an illusion. Although – sometimes severe – constraints might appear, we can identify a lot of levers of managerial discretion. We cannot conclude that SMEs are not aware of these opportunities. Often the opposite holds true as

niche strategies of successful SMEs clearly show. However, it is up to a more entrepreneurial management of SMEs to better and more systematically exploit the opportunities.

CbTF is a starting point to make moves into this direction. More conceptual and empirical work is required to find out how far CbTF is useful in this regard. As for research on international business and international management theories of this stream could be useful to develop an entrepreneurial theory of internationalization that complements the available theories as portrayed by Forsgren (2008).

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# AN ANALYSIS OF SME FINANCIAL STATEMENTS AFTER THE ADOPTION OF IFRS FOR SMES A SOUTH AFRICAN CASE STUDY

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**ABSTRACT.** The adoption of International Financial Reporting Standards by many countries is fundamental to global accounting harmonization. However the reporting requirements were often criticized as being too comprehensive and not necessarily applicable to all levels of businesses, especially smaller businesses. As a result the International Accounting Standards Board developed an accounting framework for small and medium enterprises entitled IFRS for SMEs. Even though the IFRS for SMEs might be easier to apply, many commentators warned that the framework is still too complex. They also argue that the framework is a mere scaled-down version of IFRS and that the specific disclosure requirements of small and medium enterprises have not been taken into consideration in developing the framework. In August 2007, despite the afore-mentioned concerns, South Africa became the first country to formally adopt the IFRS for SME as an accounting framework.

Whether the adoption of the IFRS for SMEs in South Africa, and perhaps elsewhere, could be described as a process of accounting harmonization for small and medium enterprises remains uncertain. The focus of the study is therefore on disclosure practices by small and medium enterprises in South Africa. Based on a sample of financial statements the results suggest that despite the availability of the IFRS for SMEs, and the acceptance thereof as SA GAAP, limited South African SME's actually embraced the accounting standard.

**Key words:** *Accounting, Accounting Harmonization, International Financial Reporting Standards, Small and Medium Enterprises/Entities.*

**JEL classification:** M41; M48

## 1. Introduction

The effect of globalization on international markets, and then especially on the development of a 'common language' for financial reporting has been a topic of much debate in recent times. During the last decade or so, more than 100 countries have then also adopted International Financial Reporting Standards (IFRS) (Carmona & Trombetta, 2006; Fosbre, Kraft & Fosbre, 2009). The drive for a singular framework

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of financial reporting is further supported by the convergence efforts between IFRS and US GAAP (Henry, Lin & Yang, 2009). With the prospect of US companies preparing financial statements in accordance with IFRS, it appears that most global economies are in support of a unified set of reporting standards. The apparent accomplishments of a singular international accounting framework could be attributable to the fact that IFRS was designed for multinational companies with a global audience (Van Mourik, 2007). When the International Accounting Standards Board (IASB) introduced an international reporting framework for small and medium enterprises (SMEs) entitled IFRS for SMEs, commentators warned that the unique SME environmental factors could have a negative effect on the successful adoption and implementation of the framework (Askary, 2006; HassabElnaby, Epps & Said, 2003). Although many countries eventually adopted the IFRS for SMEs, the successful implementation hereof remains to be tested.

The objective of this article is therefore to gauge the level of success in the IFRS for SMEs adoption in the South African context. In the next section of this article we provide a theoretical background of the development process of the IFRS for SMEs, as well as the factors impacting the adoption thereof. Following this is a discussion of the research methodology employed and the research sample, before presenting our data analysis and results. Finally we also provide our research conclusions and some suggestion for future research.

## **2. Theoretical framework**

As far back as the 1800s the question was asked as to whether corporations should be required to adopt a uniform accounting system, or framework (Ho & Shying, 2007). Many commentators supported such uniformity for comparability purposes, while opponents thereto argued that the potential benefits would not necessarily exceed the cost of providing the information. Nonetheless, the formalities of a global accounting language were set in motion in 2002 when the European Commission issued Regulation No. 1606/2002 which required all member states to prepare financial statements in accordance with IFRS from 2005 onwards (Dao, 2005). In addition, a number of non-European countries (including South Africa) also introduced plans to converge their own national accounting standards to IFRS. However, according to Larson and Street (2004) many countries experienced several obstacles in converging to IFRS, including issues with the complicated nature of IFRS, the tax driven nature of their own national accounting standards, insufficient guidance in respect of the first time adoption of IFRS, limited domestic capital market participants and translation issues and so forth. Furthermore, the diversity of the various countries involved was also listed as a potential barrier, while Sawani (2008) noted that developed countries have better developed accounting practices, whereas less developed countries have limited accounting regulations and guidelines. He also identified the differences between capital markets as a major obstacle when

different countries adopt IFRS, for example, in Germany the capital markets are primarily financed through banks compared to public financing in many other parts of the world. Despite these, IFRS acceptance showed significant progress in recent years.

In light of the significant progress in Europe and elsewhere, companies in the United States (US) could be using IFRS for their corporate reporting purposes sooner rather than later. In 2007 the US regulatory Security Exchange Commission (SEC) scrapped the requirement to restate IFRS-based financial statements for US GAAP compliance and listing purposes. Furthermore in November 2008, the SEC revealed a detailed plan for the adoption of IFRS in the United States by the end of 2014, which would effectively mean that the financial statements of 60% of the global market capitalisation are compiled in accordance with IFRS (Deloitte, 2009).

The acceptance of IFRS to a global audience is however, supported by the fact that IFRS was developed for multi-national companies operating in globalized markets with a lot of focus on the development of international accounting standards and the adoption thereof by large industrialised countries (Zeghal & Mhedhbi, 2006). In the midst of the successes of the globalisation efforts, the IASB then also announced a proposed accounting framework for the small and medium business sector. When a uniform accounting framework is announced for a sector without the support from key global role players the same amount of success is not necessarily guaranteed. Prior to the adoption of IFRS for SMEs many commentators warned about the influence of environmental factors (Perera, 1988; Radebaugh, 1997; HassabElnaby, Epps & Said, 2003). Some commentators even argued that the IFRS for SMEs is merely a scaled down version of regular IFRS and therefore still too complex for SME purposes. Notwithstanding the aforementioned concerns however, South Africa became the first country in the world to formally adopt the IFRS for SMEs (Carte, 2007). In view of the aforementioned, concerns about the post-implementation compliance and acceptance of the IFRS for SMEs may be raised. It may also be asked whether SMEs worldwide could truly be expected to 'speak a single global financial language'.

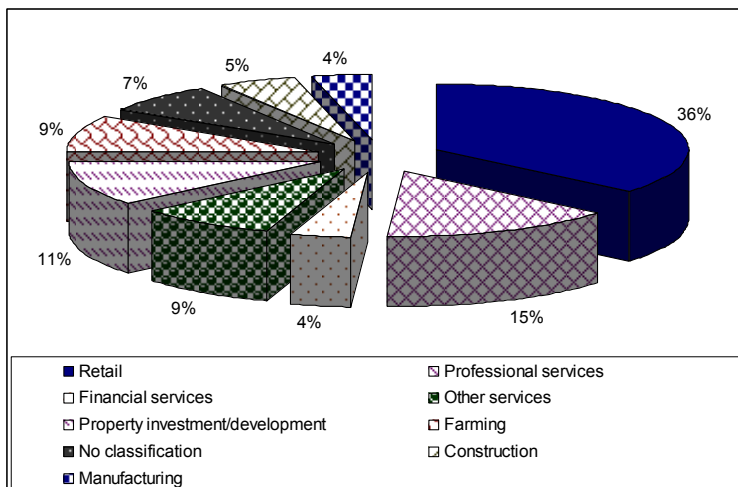
### **3. Research methodology**

In considering the impact of IFRS for SMEs in the South African context our focus was on the disclosure practices of SMEs subsequent to the adoption of the accounting standard. In striving to achieve our research objectives we adopted content analysis as our basic research approach, which, according to ACCA (2009) is a well-established research method used throughout the social sciences. Krippendorff (2004) defined content analysis as a research technique for making replicable and valid inferences from text and related data. Although content analysis does not exclude quantitative research, the emphasis is more towards qualitative research. In addition, the focus thereof is on transferability, rather than on generalisations, which usually limits the size of the sample (White & Marsh, 2006:36). Researchers

who previously utilised this method of research in analysing financial statements include Spathis (2002), Christensen and Mohr (2003) and Hernandez and Perez (2004). Prior research in respect of the practical application of IFRS for SMEs included field tests conducted by the IASB and the Association of Chartered Certified Accountants (ACCA). The IASB considered 116 small entities from 20 different countries whereas ACCA considered 25 companies from the UK. Both these studies were conducted during the pre-implementation stage of IFRS for SMEs. In supplementing the aforementioned field tests, this article considers the current situation in South Africa after the adoption of the IFRS for SMEs accounting framework.

In view of the fact that issues of security and privacy are considered to be the main barrier in respect of SME research (Khosrow-Pour, 2006); the financial statements of SMEs were not as readily available as is typically the case with publicly listed companies. Despite this constraint our sample consisted of 139 SMEs' financial statements that were compiled subsequent to the adoption of the IFRS for SMEs accounting framework in South Africa. The financial statements were obtained from legal entities obligated to adopt the IFRS for SMEs, and exclude publicly listed companies that should adhere to regular IFRS requirements. The financial statements were collected from SMEs throughout South Africa on the condition that the reporting practices and other information would be confidential and only be considered for research purposes.

As far as the business activities of the sample are concerned the majority of the SMEs included in our sample were from the retail (36%) and professional services (15%), property development (11%), with farming and other services (9% each). The detailed distribution of respondents according to business sectors is set out in figure 1.

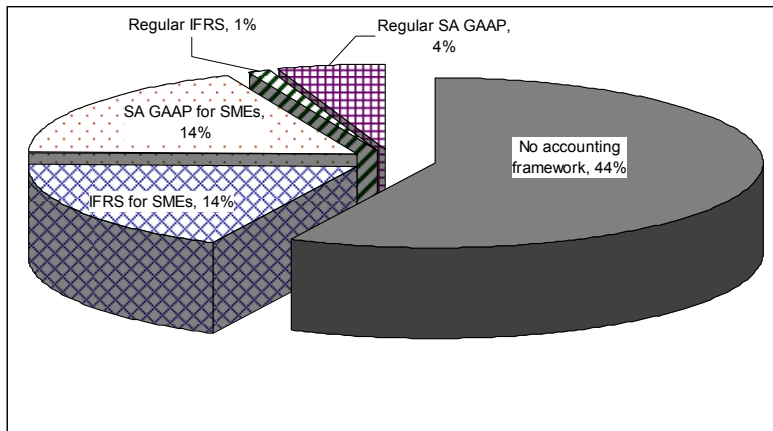


**Fig. 1.** Distribution of sample across business sectors

**Source:** Own research

#### 4. Data and results

In summarising the financial statements, we noted that even though the IFRS for SMEs was officially adopted in South Africa, the accounting framework was not adopted by all South African SMEs. When South Africa became the first country in the world to adopt the IASB’s accounting framework for SMEs, the IFRS for SMEs was adopted as the South African Statement of GAAP for SMEs. During the period under review we therefore expected the SMEs included in our sample to state compliance with either the IFRS for SMEs or the South African Statement of GAAP for SMEs. Our analysis however, revealed that less than 50% of SMEs from our sample adopted either IFRS for SMEs (14%) or SA GAAP for SMEs (14%) (refer to figure 2. Despite the fact that an accounting framework was available to South African SMEs that supposedly provided relief in terms of many of the historic disclosure requirements, a number of respondents claimed compliance with ‘regular IFRS’ in the format of either the South African Statements of GAAP (27%) or full IFRS (1%). Perhaps more alarmingly we noted that 44% of our sample financial statements did not contain any reference to an accounting framework or any relevant accounting standard.



**Fig. 2.** Accounting framework from sample SMEs

**Source:** Own research

In addition to the different types of accounting frameworks adopted by the SMEs we also considered the financial data disclosed in the sampled financial statements. This enabled us to compare the contents (such as transactions and events disclosed) of the financial statements with the content requirements of the IFRS for SMEs. Our analysis incorporated both the components and the major elements of the financial statements. With regards to the components of the financial statements, we consolidated the financial information of the ‘Statements of Financial Position’ in table 1 and the ‘Statements of Comprehensive Income’ in table 2. We did not consolidate the ‘Statements of Cashflows’ due to the fact that 25% of the responding SMEs did not

prepare statements of cashflows for the financial periods under review. We also did not consolidate statements of changes in equity as movements in equity were limited to profits/ losses for the periods under review and to a limited extent, dividends paid.

**Table 1.** Consolidated statement of financial position (presented in South African Rand)

	Sum of totals	Percentage of items included in sample	Minimum amount disclosed	Maximum amount disclosed	Mean	Median
<b>Non-current assets</b>	1,002,963,279					
Property, plant & equipment	435,858,335	92%	12	172,691,400	3,405,143	489,791
Investment property	66,663,583	9%	7,883	26,250,547	5,127,968	2,288,074
Goodwill	9,613,622	14%	15	2,102,677	480,681	138,025
Investments	368,212,437	14%	10	218,439,100	18,410,622	203,296
Loans receivable	105,328,903	32%	10	25,519,749	2,393,839	573,425
Deferred taxation	17,286,400	9%	2,200	10,120,305	1,329,723	129,683
<b>Current assets</b>	1,374,297,114					
Inventories	390,108,750	52%	3,755	252,321,545	5,418,177	497,974
Trade and other receivables	900,463,507	71%	60	667,940,623	9,095,591	241,636
Loans receivable	24,902,146	25%	2,608	9,052,160	711,490	136,295
Current tax receivable	11,880,575	35%	200	4,906,753	242,461	29,475
Cash and cash equivalents	46,942,136	81%	223	5,399,689	415,417	72,044
	2,377,260,393					
<b>Equity</b>	550,606,197					
Share capital	28,793,056	96%	2	12,891,341	214,874	100
Retained income/loss	320,416,715	100%	-34,914,399	149,241,527	2,305,156	275,382
Non-distributable reserve	201,396,426	17%	6,000	133,675,833	8,391,518	1,364,426
<b>Non-current liabilities</b>	686,827,698					
Long-term liabilities	642,475,014	91%	232	266,445,938	5,099,008	823,944
Deferred taxation	44,352,684	16%	684	21,761,166	2,016,031	294,545
<b>Current liabilities</b>	1,139,826,498					
Bank overdraft	40,266,298	42%	18	6,955,203	694,247	137,837
Trade and other creditors	1,019,748,171	91%	42	785,042,452	8,093,239	199,348
Provisions	28,223,775	8%	3,751	26,434,961	2,565,798	50,000
Current tax payable	14,519,561	46%	7	2,857,542	226,868	43,561
Deposits	238,901	3%	6,173	162,316	59,725	35,206
Income received in advance	833,103	4%	44,542	448,917	138,851	84,001
Short-term loans	35,996,690	31%	8	15,301,564	837,132	199,998
	2,377,260,393					

(Source: Own research)

From our analysis in table 1 we were able to ascertain that the following sections from the IFRS for SMEs may be considered of key relevance in the South African context as the majority of the sample contained these items:

**Financial assets and liabilities:** Seventy-one percent of the sample disclosed trade and other receivables, 91% of the sample disclosed trade and other payables as well as long-term liabilities;

**Inventories:** Fifty-two percent of the sample disclosed information regarding inventories;

**Property, plant and equipment:** Ninety-two percent of the sample disclosed information regarding property, plant and equipment;

**Equity:** Ninety-six percent of the sample disclosed information regarding equities.

The following sections appear to be of limited or no importance as table 1 contains only a few of these items:

**Consolidated and separate financial statements:** Apart from the fact that none of the SMEs from our sample compiled consolidated financial statements, we could not establish whether any of the SMEs was either a parent or a subsidiary during the year under review;

**Investments in associates:** Even though 14% of the sample disclosed investments, none of the SMEs disclosed information in connection with associates;

**Investment in joint ventures:** No specific disclosure in connection with joint ventures;

**Investment property:** Only nine percent of our sample classified property as investment property;

**Intangible assets other than goodwill:** None of the responding SMEs disclosed information related to intangible assets;

**Business combinations and goodwill:** Only 14% of the responding SMEs disclosed information related to goodwill;

**Provisions and contingencies:** Only eight percent of the responding SMEs disclosed information related to provisions.

Our analysis in table 2 revealed the relative importance of the following items only in the South African context:

**Revenue:** All the financial statements contained at least one type of revenue, including sales, rental income and interest received; and

**Income tax:** Sixty-one percent of the sample disclosed income taxes; it appears however that assessed losses are not disclosed as deferred tax assets. Moreover, only a few SMEs (25%) accounted for deferred tax in table 1;

**Table 2:** Consolidated statement of comprehensive income  
(presented in South African Rand<sup>2</sup>)

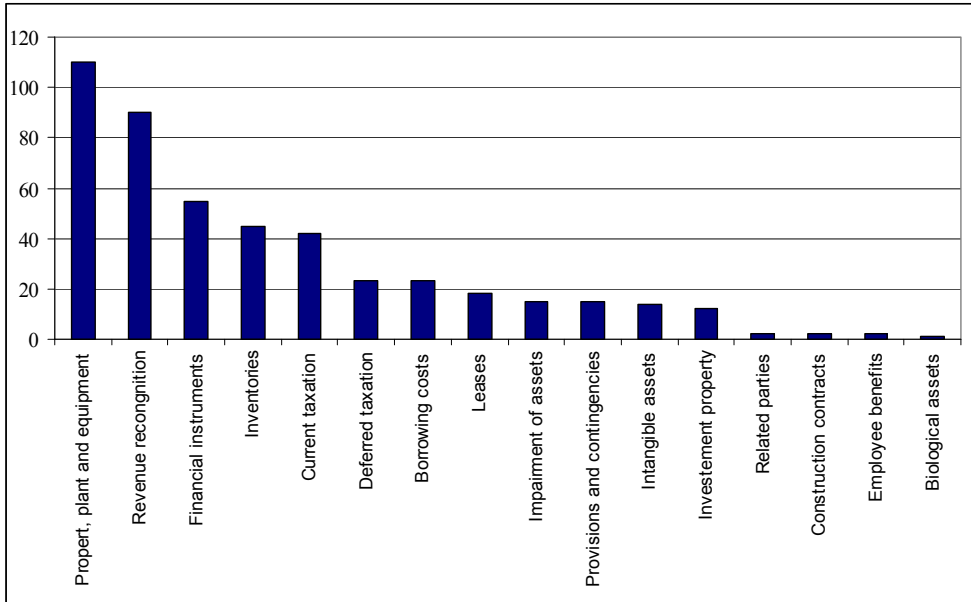
	Sum of totals	Percentage of items included in sample	Minimum amount disclosed	Maximum amount disclosed	Mean	Median
<b>Income</b>	5,010,105,562					
Sales	4,670,461,505	95%	5,000	2,945,755,024	35,382,284	4,252,089
Rental income	4,105,899	6%	3,142	3,515,777	456,211	34,308
Investment income	52,242,587	59%	1	31,355,531	637,105	22,590
Other income	283,295,571	42%	423	252,734,259	4,884,406	86,581
<b>Expenditure</b>	4,851,281,321					
Cost of sales	3,445,697,804	65%	6,667	2,459,968,017	38,285,531	3,473,487
Operating cost	1,258,680,295	96%	3,500	533,785,446	9,393,137	1,654,793
Finance charges	146,903,222	66%	1	102,888,167	1,596,774	93,826
<b>Profit before taxation</b>	158,824,241					
<b>Taxation</b>	15,074,681	61%	-4,276,396	2,776,253	177,349	90,727
<b>Profit for the period</b>	143,749,560					

Owing to the fact that a variety of methods were used to classify expenses, the relevance of the other ‘Statement of Comprehensive Income’ items could not be confirmed by considering table 2 only. For this reason we analysed the accounting policy notes included in our sample of SME financial statements. Our analysis in figure 3 however, did not reveal any additional evidence in connection with the relevance of certain sections from the IFRS for SMEs. Apart for property plant and equipment as well as revenue recognition (already confirmed in tables 1 and 2) none of the items were included by more than 50% of our sample.

We were therefore not able to ascertain whether the following ‘Statement of Comprehensive Income’ items are of any importance to South African SMEs; government grants, borrowing costs, share-based payments, impairment of non-financial assets, employee benefits, events after the end of the reporting period or related party disclosures.

Although our sample did not contain extensive accounting policy notes for employee benefits and borrowing costs we observed that the majority of the SMEs included these items such as salaries and interest paid respectively. In the absence of extensive accounting policies for these items we suggest that the more complex issues, such as post-employee benefits and the capitalization of interest paid, are not very relevant to South African SMEs.

<sup>2</sup> At the time of the study the Euro:South African Rand exchange rate was € 1.00 = R9.86.



**Fig. 3.** Accounting polices disclosed

(Source: Own research)

## 5. Conclusion and limitations

Despite the fact that South Africa was the first country in the world to formally adopt IFRS for SMEs, our study revealed that a limited number of SMEs actually adopted the accounting standard in the two years since the announcement was made. We also performed a content analysis of SME financial statements which revealed that certain sections from the IFRS for SMEs are not necessarily relevant in the South African context. The sections identified could be indicative of the fact that the IFRS for SMEs in its current format is not necessarily addressing the reporting needs of South African SMEs and even provide an explanation as to why all the SMEs from our sample did not adopt the IFRS for SMEs during the period under review.

Due to the fact that SME research is confronted by issues of confidentiality however, our sample might not necessarily be representative of all South African SMEs, let alone on a global scale. Future research is therefore encouraged to address such shortcomings.



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**Annexure A – Contents of IFRS for SMEs**

1	Financial Statement Presentation
2	Statement of Financial Position
3	Statement of Comprehensive Income
4	Statement of Changes in Equity
5	Statement of Cashflows
6	Notes to the Financial statements
7	Consolidated and Separate Financial Statements
8	Accountings Policies, Estimates and Errors
9	Financial Assets and Liabilities
10	Inventories
11	Investments in Associates
12	Investments in Joint Ventures
13	Investment Property
14	Property, Plant and Equipment
15	Intangible Assets other than Goodwill
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25	Employee Benefits
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# THE INDIAN ENVIRONMENT FOR ENTREPRENEURSHIP AND SMALL BUSINESS DEVELOPMENT

NIR KSHETRI<sup>1</sup>

**ABSTRACT.** India is touted as a new entrepreneurship powerhouse and the *next Asian miracle*. There have been some successful and many unsuccessful attempts to promote entrepreneurship and small business development in India. There are also some well-founded rationales as well as a number of misinformed and ill guided viewpoints about the friendliness of environment to support entrepreneurship and small business growth in the country. This paper examines various indicators related to entrepreneurship in India and analyzes factors affecting India's entrepreneurial performance. Specifically, we provide a detailed assessment of the Indian environment for entrepreneurship in terms of various dimensions provided by the Organization for Economic Co-operation and Development (OECD framework. The dimensions include regulatory framework, market conditions, access to finance, R&D and technology related factors, physical infrastructures, entrepreneurial capabilities and entrepreneurial culture. We provide a detail treatment of various forms of financing from the standpoint of small business development such as bank loans, IPO market, venture capital, microfinance, remittances inflow, domestic savings and informal investments

We also compare India with its neighboring country, China and major global economies in terms of many of these dimensions. Also examined in the paper is the effect of the recent global financial crisis on India's performance in supporting entrepreneurship and small business development. *Analyzed in the paper is also how the lack of trickledown effect and an emergence of oligarchic capitalism are affecting entrepreneurship and small business development.*

**Key words:** *Entrepreneurship, oligarchic capitalism, microfinance, remittances, global financial crisis*

**JEL classification:** L52, L53, J68.

## Introduction

Because of its improving entrepreneurial performance, some analysts consider India as the next Asian miracle. It is argued that India is "shifting away from a legacy of state-dominated commerce toward a market-oriented system" (Stewart et al., 2008, p. 85). The country has set an "explicit policy objective to become a leading business-friendly economy" (World Bank, 2008a). In a number of important areas, institutional reform has gained a higher momentum in India than in China.

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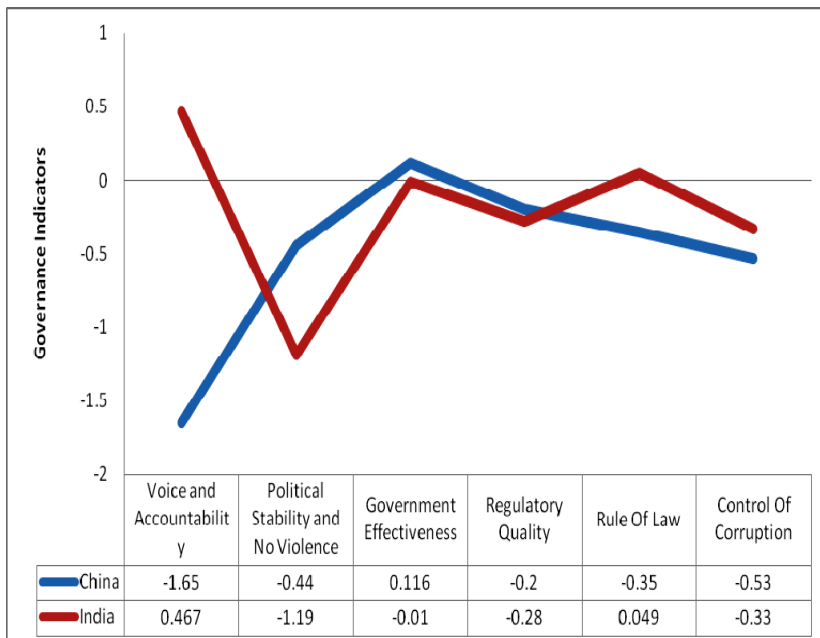
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India also outperforms China in many of the World Bank’s governance indicators (Figure 1). Huang (2008) notes that India is “shedding [its] harmful legacy” and Indian politics has become “more open and accountable”.

Despite this progress, however, red tape, bureaucracy and corruptions in the country, both at the national and state levels, lead to longer time, higher costs, and reduced speed and flexibility for entrepreneurs (Majumdar, 2004; The International Economy, 2006). While some influential entrepreneurs are in a position to take advantage of institutional holes, SMEs tend to be more adversely affected by the dysfunctional institutions. Chi Lo, the author of Phantom of the China Economic Threat, however, commented: “The biggest obstacle to India outperforming China is reform inertia” (The International Economy, 2006). Observers often note the most Indian multinational companies are in a primitive or an embryonic stage (Kumar et al., 2009).

In light of the above observations, this study has two objectives. First, we seek to provide an overview of the current status of the entrepreneurship landscape in India. Second, we analyze various determinants of entrepreneurship in India. The approach of this paper can be described as integrative, conceptual, and theory building rather than purely empirical one.

The paper is structured as follows. We proceed by first providing a survey of the current status of entrepreneurship in India. Then, we provide a review of some determinants of entrepreneurial performance in India. The final section provides concluding comments.



**Fig. 1.** A comparison of governance indicators in China and India (2010)

**Note:** The six indicators are measured in units, which range from about -2.5 to 2.5. Higher values indicate better governance outcomes (<http://info.worldbank.org/governance/wgi/faq.htm#2>)

### **A survey of the current status of entrepreneurship in India**

We begin this section by considering India's economic reform initiatives. India started relaxing industrial regulation in the early 1970s. Trade liberalization began in the late 1970s and the pace of reform picked up significantly in the mid-1980s (Panagariya, 2005). Indian entrepreneurship, however, got a big boost following the 1991 economic liberalization, which transformed India's entrepreneurial landscape.

Many large and inefficient firms did not survive the competition created by the 1991 liberalization. Of the largest 20 private firms listed on the Indian stock market in 1990, for instance, only five were in the top 20 list in 2011 (Foulis, 2011).

In 2009, 47 Indian companies were included in Forbes' Global 2000 list of the world's biggest companies (DeCarlo, 2009). The country has also achieved positive societal changes. For instance, Indian divisions of some leading financial institutions such as HSBC, JPMorgan Chase, Royal Bank of Scotland, UBS and Fidelity International were headed by women. Women also accounted for about half of the deputy governors at the Reserve Bank of India.

### **Entrepreneurship in the Indian IT and offshoring sector**

The story of India's entrepreneurial performance is incomplete without a reference to its offshoring sector. India has been a global capital of the offshore information technology (IT) and business process (BP) offshore outsourcing (Kshetri 2007; Kshetri and Dholakia, 2009). India's offshoring industry started from back office works, which moved to business process and is gradually shifting towards high-end functions such as R&D (Kshetri, 2011a; Kshetri and Dholakia 2011a, Wadhwa, 2009). To illustrate this point one may think of the drug industry. Many U.S.-based drug companies are outsourcing drug development processes to India. One estimate suggested that developing a drug in India was about US\$100 million compared with over US\$1 billion in the U.S. (worldbank.org, 2009). Another study found that pharmaceutical plants in India have 40% cost advantage over those with identical machinery and capability in Europe (Pharmaceutical Executive, 2011). In BioPlan Associates' 8<sup>th</sup> Annual Report and Survey of Biopharmaceutical Manufacturing Capacity and Production, 13.2% of the respondents identified India as the country as a potential biomanufacturing outsourcing destination (Langer, 2011). Indian ranked second only after China in the survey.

Direct employment created by this industry was estimated at 1.6 million in 2007 (Ribeiro, 2007) and 2.2 million in 2009. The offshoring industry's indirect job creation was estimated to be 8 million in 2009 (NASSCOM, 2009). This sector accounted for 1.2% of national GDP in fiscal year (FY) 1998, which increased to 5.8% in FY2009 (NASSCOM, 2009).

India's business and technology services companies revenues' increased from US\$4 billion in 1998 to US\$ 58 billion in 2008 (Kaka, 2009), which further increased to US\$ 60 billion in FY2009 (NASSCOM, 2009). According to NASSCOM, the export portion of the sector (that is, offshore BP and IT offshoring industry) in FY 2011 grew by 18.7% to reach \$59 billion, which was 26% of India's exports and 11% of services revenue (The Hindu Business Line, 2011).

India's entrepreneurial IT firms heavily depend on exports. The industry exports US\$3.75 for every dollar earned in India. For the leading IT company, Infosys, the domestic market accounts for only 1.2% of revenue (Economist, 2009a). This sector's contribution to Indian exports increased from less than 4% in 1998 to about 16% in 2008 (NASSCOM, 2009a).

In addition to economic impacts, entrepreneurial activities in the offshoring sector have brought some positive societal changes. Institutions related to entrepreneurship are changing. For instance, women have entered into new status hierarchies (Adya and Kaiser, 2005). The mixed gender workforce in the offshoring industry requires working at nights to meet daylight needs of Westerners (Russell, 2008). In the offshoring industry, women account for 65% of the workforce and 85% of them work on night shifts. Call centers are breaking the societal taboos as men and women work together in nights. In the Rajasthan state, the law forbidding women to work after sunset was changed at the request of the outsourcing company, Genpact (Wadhwa, 2009).

### **Low overall entrepreneurial performance**

Despite all the hype surrounding entrepreneurship in India's IT and offshoring sector, more detailed figures paint a different picture. The country falls behind many other developing economies on important indicators related to entrepreneurial activities. For instance, in terms of high-expectation business launchers per capita, India underperforms Brazil (Lewis, 2007). On the World Economic Forum's competitiveness index, India ranked 49<sup>th</sup> in 2009.

The size of the informal economy in India is substantial and increasing. Size of the informal and shadow economy a proportion of official GDP was estimated to increase from 18.1% in 1988/89 to 20.3% in 1994/95 and to 22.8% in 2000/01 (Bajada and Schneider, 2005). Likewise, about 70% of nonagricultural workforce is informally employed (UNDP, 2004). If agricultural employment is included, this proportion rises to over 90%. Informality thus remains a pervasive characteristic of the Indian labor markets.

Consider another indicator related impacts of entrepreneurship--poverty reduction (Ahmad and Hoffmann, 2008). During 2000–2007, 41.6% of the population in the country lived on less than US\$1.25 a day and 75.6% lived on less than US\$2 a day (UNDP, 2009). The traditional sector is economically disadvantaged and there is thus very little progress in poverty reduction. MacDonald (2006) notes that while the offshoring sector is “bold”, “exciting” and “vibrant”, the rest of the economy is “backward looking, corrupted and poverty stricken”.

### **Lack of trickle-down effect and signs of oligarchic capitalism**

The benefits of economic growth are highly concentrated and disproportionately distributed to the wealthiest and have failed to trickle down to the poor. About 10 families control more than 80% of the stock in the country's largest corporations (Malhotra, 2009). According to the ADB, large Indian companies have won most of lucrative government contracts, hold power over the country's natural resources and have "privileged access to land". Likewise, in a 2007 government survey of about 200,000 services firms in the formal and informal sectors, the top 0.2% accounted for about 40% of output.

The geographic concentration of entrepreneurial activities also deserves mention. The 2007 government survey also found that companies in two states – Maharashtra and Karnataka – accounted for about 50% of output (Foulis, 2011).

India obviously has some elements of a market economy and political democracy. The country, however, lacks a true democratic market system. A report from the ADB suggested that Indian economy has many characteristics of oligarchic capitalism and there is a possibility that this form of capitalism would further consolidate in the country, which can slow long-term development of the country (cf. Malhotra, 2009). Note that in an oligarchic capitalistic society, a small group of people maintains a grip over the country's economy, polity, and society (EMF, 2009). Research has indicated that the 1991 reforms have had little or no effect in promoting SMEs. A small number of well-connected industrialists have dominated the Indian economy and protected themselves from outside competition (Weitzman and Fontanella-Khan, 2011).

As it happens in oligarchic capitalism, India has shown signs of adverse impact on incentives required for structural changes as well as the state's reduced autonomy (EMF, 2009). Petras (2008) notes that most Indian billionaires built their wealth by "using economic power to secure neo-liberal policies" (p. 323). He goes on saying: "While many Indian publicists and economists hail the "Indian miracle" and classify India as an "emerging world power" because of the high growth rates of the past five years, what really has transpired is the conversion of India into a billionaire's paradise" (p. 323).

### **Indian environment for entrepreneurship and small business development: Some determinants**

Contexts and environment play important roles in determining entrepreneurial behavior (FORA, 2006; Tan, 2002). In this section, we examine the determinants of entrepreneurial performance in terms of factors identified by Ahmad and Hoffmann (2008): regulatory framework, access to capital, access to R&D and technology, capabilities, market conditions, and culture.



## **Regulatory framework**

Entrepreneurial firms are likely to thrive and act in socially responsible ways if there are strong and well-enforced legislation and regulations in place to ensure such behavior. In this regard, notwithstanding the existence of some essential elements of a democracy, the Indian political system and institutions are characterized by poor governance and have become inherently unaccountable and corrupt (Kshetri and Dholakia, 2011b).

Beyond all that, in India, there are groups with disposition to support traditional values, norms, and institutions, which hamper entrepreneurial practices. Notwithstanding their supports to modern values, the Indian government and court system are forced to settle for compromise, which means a slower progress than they would like to see.

Indian court systems are overburdened and are characterized by procedural delays, and red tape. The Bureau of Democracy, Human Rights and Labor's report, 'Supporting Human Rights and Democracy: The U.S. Record 2004-2005' noted: "poor enforcement of laws, especially at the local level, and the severely overburdened court system weaken the delivery of justice." According to the South Asia Human Rights Documentation Center, there was a backlog of 23.5 million cases in 2002. The court system is decentralized and is largely administered by states. National labor laws are administered at the state level (Deloitte, 2006). Due to budget problems, the states have failed to comply with federal directives to upgrade legal infrastructures and court facilities.

Moving to the specific context of entrepreneurship, weak laws and inappropriate regulatory processes hinder efficient entrepreneurial behaviors. For instance, it is argued that corruption is likely to make the Israel model of government funding for startups highly ineffective in India. The Israeli government provides a highly supportive role to facilitate entrepreneurship. For instance, it is reported that 80% of the first \$500,000 for every idea identified is funded by the government (Shah, 2010). It is speculated that such a model "will lead to favoritism, cronyism and corruption" in the country.

As an example of inappropriate regulatory elements, it takes 7 years to close a business in India compared to the OECD average of 1.7 years. Likewise, the average time to register property in South Asia is 106 days compared to the OECD average of 25 days (The World Bank Group, 2009). Moreover, companies with over 100 employees require government permission to dismiss workers (Deloitte, 2006).

Entrepreneurial and marketing activities are hindered by complex regulations. In the retail sector, for instance, there are barriers such as anti-hoarding laws and signboard licenses. Competition laws have not yet been introduced in some sectors of the Indian economy. For instance, in the Indian retail sector, the existing laws work against retailers and favor small mom and pop stores (Economist, 2008d).

## **Market conditions**

As noted above, access to the domestic and foreign markets influences entrepreneurial performance. In this regard, the big domestic market size has helped some Indian entrepreneurial firms to compete successfully in foreign markets. It is argued that Indian firms' capability to deliver value for money in the domestic market has been an important source of competitive advantage to operate in the African market (Kumar, 2008). Indian companies are in a position to reconfigure their resources and adapt the business models used in the domestic market to operate in other developing economies (Harvard Business Review, 2009).

That being said, it is also the case that various regulations hinder the access to domestic market in India. For instance, there are taxes for bringing goods into a state, for taking them out of a state as well as for moving them within a state (Economist, 2008d).

## **Access to finance**

Access to finance has been a major barrier facing many potential entrepreneurs in India. Gandhi (2010) notes: "A bank loan or angel investment is not impossible to get but extremely unlikely. Getting funding is even harder if, like most aspiring entrepreneurs, you are not from a top-tier university and don't have a family with deep-pockets. There are countless 'micro-entrepreneurs' in Indian society who finance their own small businesses as a means to survival but don't have access to the capital necessary to grow them".

Below we describe the situation in regarding the common forms of entrepreneurial financing.

### *Bank loans*

India's state banks, which account for 70% of bank assets in the country, are a major source of financing for entrepreneurial firms (Economist, 2009a). State Bank of India (SBI) is the country's largest lender. According to the July 2009 issue of *The Banker*, a *Financial Times* publication, SBI is the world's 64<sup>th</sup> largest bank (76<sup>th</sup> by asset). As of March 2009, SBI had 12,100 offices worldwide, over 150 million customers, a capital reserve of more than US\$ 12 billion and a total business of US\$ 273.6 billion (including deposits and advances) (Ramavarman, 2009).

That said, SBI is about one-tenth of the size of China's biggest bank in terms of profits (Foulis, 2011). The state banks have done little to promote productive entrepreneurship in India. A complaint often heard is that business merits play a little role in loan disbursements (Bikchandani, 2010). Lending is disproportionately oriented toward powerful economic and political interests such as family-owned groups. This situation was more readily apparent in the pre-1991 India (Kshetri, 2011b).

*The Indian IPO and capital markets*

In 2007, India ranked the world's ninth largest IPO market. India captured 3% of the global IPO market share in 2007 compared to 1.3% in 2006 (businessstandard.com, 2007). By the end of 2007, the total wealth of all companies listed on the Bombay Stock Exchange, measured in terms of cumulative market capitalization, was over US\$1.7 trillion (EconomicTimes.com, 2007). India accounts for 3% of the world's stock market value (Foulis, 2011). In recent years, poor returns have made IPO relatively unattractive for many Indian companies. One study indicated that stocks of 70% of companies that launched IPOs in 2010 were trading below their price in June 2011 (Kohli, 2011).

Institutional investors such as pension funds and life insurance companies which pool huge large sums of money and invest those in securities, property and other assets account for about one-eighth of Indian stock market profits compared to over half in Western economies. State-backed firms are estimated to account 40% of stock market profits (economist.com, 2011). Likewise, in 2011, the Bombay Stock Exchange (BSE) 100 index of the largest firms accounted for about 70% of Indian stock market value (Foulis, 2011).

*VC (venture capital) investments*

In recent years, India has become increasingly attractive destination for VC investments. In a survey conducted by Deloitte in 2009, 12% U.S.-based VC investors considered India as the most attractive market. The country ranked only behind China (42%) and the U.S. (24%) (Deloitte, 2009). By 2008, US\$8.5 billion in VC was invested in Indian startup companies, which compares with China's US\$9.3 billion by that time (Fannin, 2010).

Indian VC industry is at a nascent stage of development. For one thing, VC culture is not well developed in India. Observers have noted that Indian entrepreneurs often fail to understand the reality that not all VC-funded companies are likely to achieve an IPO. While there is a greater likelihood of a VC-funded company exiting through an M&A than an IPO in the U.S., Indian entrepreneurs are less prepared for a M&A option (Tagare, 2011).

*The microfinance industry*

The flourishing microfinance industry is perhaps the most notable feature of the Indian capital market. By the early 2007, 50 million households had benefitted from microfinance (pr-inside.com, 2010a). By the end of 2009, SKS Microfinance, India's largest MFI, had 1,675 branches, which lent US\$ 600 million to seven million customers. Private-equity firms and other investors have invested billions of dollars in micro-financing, which grew by 72% annually during 2008-2009. In 2008-09, loans issued by MFIs in India increased from US\$1.2 billion to US\$2.3 billion (Kalesh, 2010).

At the same time, some negative experiences related to microcredit have been reported. As of the early 2010, over 15 million borrowers in India owed

microfinance debts of US\$2.3 billion. The average Indian household's debt to microfinance banks increased fivefold during 2005-2010 (Shah, 2010b). It was also reported that some borrowers used loans intended for business purposes to buy luxury items such as TVs and fridges.

#### *Remittances inflow and entrepreneurship*

India receives more remittances than any other country. Remittances have led to the establishment of new businesses and social service organizations such as nursing homes and educational institutions. In January 2010, the Chief Minister of the Gujarat state of India noted that the state's economy was growing despite the global financial crisis due to "record-breaking investments made by the Indian diasporas" (mangalorean.com, 2010).

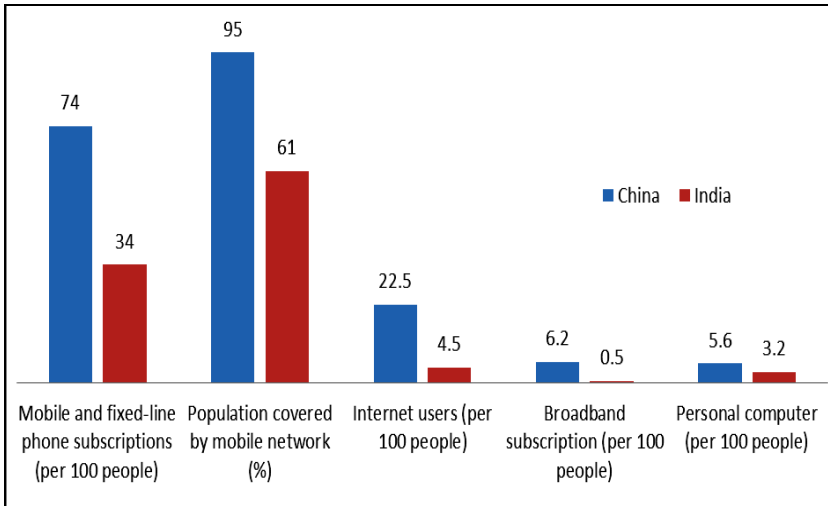
#### *Domestic savings and informal investments*

Finally, domestic savings have also been an important source of investment. The household saving rates are showing increasing trends, which 34.7% of GDP in 2010 (Power, 2010). As is the case of China and other Asian economies, the high savings rates in India can be attributed to income insecurity associated with mostly informal jobs. The high saving rates thus may not automatically translate to a higher investment rates.

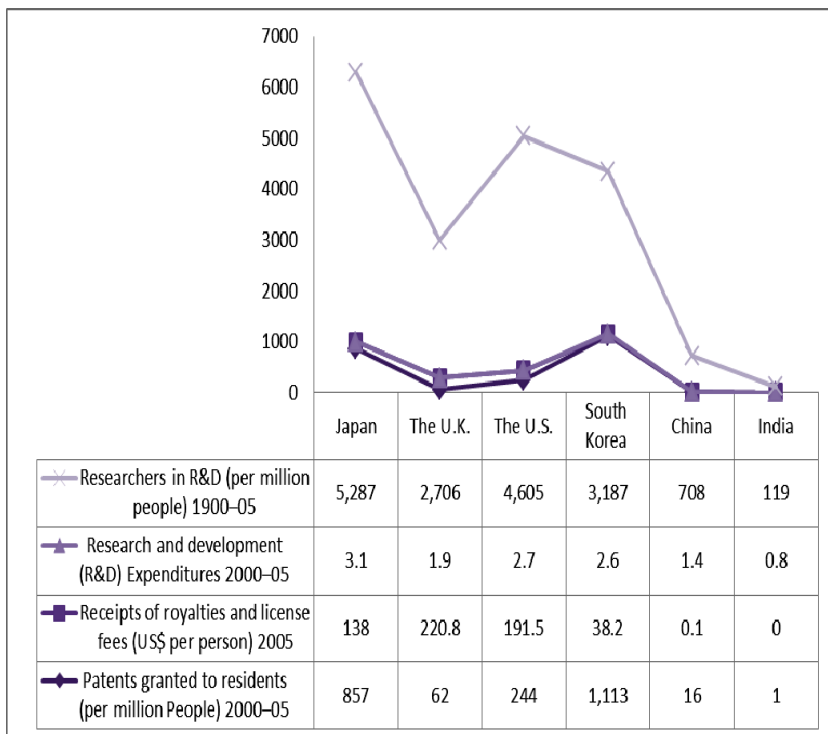
### **R&D and technology related factors**

India's ICT adoption and usage rates have been relatively lower compared to most countries. For instance, India's subscription rates of cellular and fixed phones, PC, the Internet and high speed broadband are well below China (Figure 2). According to a study released by Google India in the mid-2011, only 2 million out of 35 million SMEs were online (Narasimhan, 2011).

Nonetheless, there have been some highly visible instances of ICT usage in promoting entrepreneurial activities. As a high profile example, in October 2010, Intel announced an agreement with an alliance of 70 companies including Bombay Stock Exchange (BSE) and CtrlS to develop hardware and software for an open and inter-operable cloud (Kshetri, 2010). The Open Data Center Alliance (ODCA) works to address security, energy efficiency and interoperability. The BSE expects that the new trading platforms supported by mobile telephony and clouds would broaden participation by allowing real-time and seamless access to data across phones, laptops and other devices. This approach would also deepen and widen asset classes traded. The new platforms will increase participation of younger Indians in pension funds, insurance and mutual funds and others. Especially the popularity of mobile-based cloud applications is promising. Only 80 million Indians were online in early 2011, but more than 670 million used cellphones.



**Fig. 2.** Comparing India's ICT usage indicators with China (2008)



**Fig. 3. R&D and innovations profiles: Comparing India with some major economies**

Source: UNDP (2008)

India's overall innovation and R&D profile is weak. As indicated in Figure 3, India lags behind industrialized countries and its neighbor China in terms of various indicators related to R&D and innovations. Due to India's poor R&D and innovation performance, some liken entrepreneurial activities in the Indian IT and offshoring industry to a "hollow ring". An Economist article notes: "India makes drugs, but copies almost all of the compounds; it writes software, but rarely owns the result. ...[it has] flourished, but mostly on the back of other countries' technology" (Economist, 2007a).

### **Physical infrastructures**

A lack of well-developed physical infrastructures has been a barrier hindering entrepreneurship. Most roads are narrow. In 2007, there were only 1,500 trucks and one-third of produce were reported to be rotted before reaching customers (Hamm and Lakshman, 2007). The global financial crisis further hindered India's infrastructure development. In the late 2008, reports indicated that about half of India's planned highway-improvement projects, which were valued at over US\$6 billion, could be delayed by two years.

According to the Planning Commission, inefficient power supply has hindered entrepreneurial activities, employment creation and poverty reduction (UNDP, 2008). As of 2008, half of India's population or about 500 million people, lacked access to electricity (UNDP 2008).

### **Entrepreneurial capabilities**

There have been some measures to develop entrepreneurial capabilities. India has around 40 incubators mentoring between four and 20 start-ups each (Chaudhary, 2010). That said, human development in the country has been slow. For instance, in 2009, India ranked 134<sup>th</sup> in the human development index. Adult literacy rates during 1999–2007 were 54.5% for females and 76.9% for males.

Although English is an official language in India, only a small proportion of graduates meet the standard required to interact with foreigners (Fairell et al., 2005). This goes contrary to the widely held belief that India's huge English-speaking population will give it an edge over China and other rising nations in doing business with Western corporations (Mehta, 2005). Customers' complaints regarding difficulties to understand the operators forced some companies to relocate call centers from India to the Philippines (Fairell et al., 2005).

While India has some professionally run companies such as Wipro, Infosys and TCS, the country's management is highly traditional. To attract outsourcing and other jobs, firms are required to be "process-driven and detail-oriented"—characteristics that are virtually absent in the Indian work culture (Piramal, 2004). In the same vein, whereas Western countries have the time-is-money culture, Indians have more

flexible approach to deadlines (Slater, 2003). Experts argue that the country needs to go far before a culture of modern and professional management emerges (Bellman, 2005). Similarly, product quality, reliability and on-time delivery often vary greatly in the country (Murphy, 2004). Addressing this challenge may be no small feat.

That said, some Indian firms have made some progress in adopting the culture of modern management. This is especially noticeable in the offshoring sector. In an attempt to address their clients' fear that customer data will be stolen and even sold to criminals (Lucas, 2004) firms have enhanced security mechanisms. For instance, call center employees have to undergo security checks that are considered to be "undignified" (Economist, 2005b). Firms have established biometric authentication controls for workers and banned cell phones, pens, paper and Internet/e-mail access for employees (Fest, 2005). Similarly, computer terminals at Mphasis lack hard drives, e-mail, CD-ROM drives, or other ways to store, copy, or forward data. In general, Indian outsourcing firms extensively monitor and analyze employee logs (Fest, 2005).

### **Entrepreneurial culture**

Societal norms that "permit variability in the choice of paths of life" are likely to promote entrepreneurial behavior (Hoselitz 1960, p.155). A society's religions strongly dictate such a possibility. According to the 2001 census, Hinduism accounted for 80.5% of the Indian population. Islam is the second largest religion, practiced by 13.4% of the population. Hinduism and Islam have many similarities from the standpoint of entrepreneurship. Both promote fatalism and orientation towards the present or the past than the future (Berdyayev, 1990; Buss, 2003).

The distinguishing mark of Hinduism, the most popular religion in India, is that it is centered around dharma (duty) and karma (a Sanskrit word that means "actions" or "deeds"). Furthermore, each individual's dharma and moral codes are specific to his/her caste of birth, which often lead to conflicting, confusing, misleading and often contradictory social and ethical values (Elliot 1998). More importantly, many beliefs and values run counter to capitalism and entrepreneurship (Dana, 2000).

Accepting one's destiny rather than trying to control life can be viewed as a central core of traditional cultural values in India. Reincarnation is an essential tenet of Hinduism, which maintains that if nothing wrong is done in this life, there would be a prospect for a better life next time (Elliot, 1998).

A distinguishing feature of Hinduism is its social structure based on the caste system, which have acted as a major barrier to entrepreneurship in India (Dana, 2000; Sharma, 2003). The studies of many researchers over the past few decades have indicated that various obligations associated with the Indian caste system make it more compelling and convenient to follow the family occupation instead of launching a new venture. The caste system has thus hindered class mobility. Unsurprisingly the Vaishya (the caste of merchants) and non-Hindu communities (e.g., Jains and Parsis) historically dominated Indian businesses community.

Entrepreneurship thrives in a society that places a high value on work and innovation. It is argued that work is not valued in itself in India. Observers also suggest that people in the country work primarily because of emotional attachment with the workplace or as a favor to the supervisor or to the employer.

Indian culture also places relatively less value on innovation and gradual improvements. For example, a belief among many people in India is that for the inner soul and mind, being passive and satisfied with the status quo is healthier than trying to improve the situation (Dana, 2000). Moreover, Hinduism considers work as the performance of duty instead of an ambition to innovate or improve (Elliot 1998).

Women entrepreneurs in India face additional obstacles (Bertaux and Elaine, 2009). Some communities in the country think that a respectable girl should not expose herself to outside influences. In traditional sectors, it is a taboo and probably hard to imagine for young women to work during nights. During 1993-2001, 53% of adult Chinese worked compared to 37.7% of Indians (Deloitte, 2006). This difference was largely due to the lower female participation in India. Traditionally, women were not allowed to work after sunset.

It is also argued that Hinduism has promoted corruption and hindered the country's anti-corruption efforts. First, it is suggested that Hinduism has a forgiving tendency and Hindus are too lenient toward offenders. These characteristics of Hinduism have worked as a roadblock to India's anti-corruption measures. Second, fatalistic orientation of Hindus is associated with the belief that the status quo cannot be changed, which hinders fight against corruptions.

One final, but not less important, aspect of Indian culture that renders it interesting to us is the fact that Indian society has a negative attitude toward entrepreneurship in general and especially failure as an entrepreneur. Gandhi (2010) notes: "And don't even think about what will happen if you fail as an entrepreneur. Socially, you will have lost your eligibility for marriage until you get a job. Financially, you'll be saddled with loads of debt, and politically, good luck on somebody acknowledging your entrepreneurial endeavor as real work experience. With all these challenges, one wonders why anyone bothers trying to become an entrepreneur in India?".

### **Concluding comments**

The 1991 economic reform has undoubtedly facilitated and stimulated entrepreneurship in India. The impact on the broad economy is, however, barely noticeable. While billionaires, oligarchs and state-owned companies are benefiting from privileges, the playing field is not level for SMEs and new venture start-ups, which face a host of barriers. Inappropriate regulatory elements and legal bottlenecks have severely hampered productive entrepreneurial activities. In sum we cannot really take the existence of a few entrepreneurial firms in the Indian IT sector the



as proof positive that India provides a conducive environment for entrepreneurship. In fact, it is possible to draw the opposite conclusion on the basis of the fact that very little entrepreneurial impact is felt by the mass of the population. Moreover, many Indian entrepreneurs still struggle with a culture that looks down on capitalism and is indifferent to hard work, improvement and innovations.

To some extent, the structural inertia of the Indian economy has acted as a barrier to foster modern entrepreneurship. India's heavy reliance on agriculture, for instance, has resulted in constraints in resources for entrepreneurial development. For instance, industry and agriculture compete in the allocation of water between states, which has created inter-state rivalries and tensions (UNDP, 2008).

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## GLOBAL CHALLENGES AND LOCAL ANSWERS BY THE SMEs IN THE NORTH HUNGARIAN REGION – ROLE OF STRATEGIC THINKING

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**ABSTRACT.** The economic role of small and medium enterprises is increasing however their long term survival depends on their changing and reaction ability with special regards to world globalization processes, to the world economic crises. The research covers the small and medium enterprises within the North Hungarian Region. The low economic activity, the high unemployment rate, the low proportion of the industrial enterprises' that are below the national average and the low professional skills are typical for the region. Due to the low economic power of the region it must be found out which factors needed to be strengthened from the SMEs' management side. In our opinion one of these factors should be the strategic thinking and the innovation capability.

To become stronger it is necessary to have the ability to adjust within competition, the continuous renewal of the strategic and innovative thinking. For them mainly the application of creative, loose, partly formal vision of future oriented strategy making could be practical. The question is in what kind of changes necessary to achieve, that the skill can be developed.

Based on questionnaire carried out in the North Hungarian Region we examine the existence of the conscious strategic future of vision and find the relationships between the SME's survival ability, innovative behavior and their growth during and after the economic crises. One of the aims of the research is the identification of those factors that influence the success and competitiveness with special regard to the innovation. The additional aim of the research, is to reveal those relations, that can be shown between the existence of the strategic thinking and the ability of renewal and the examination, whether a change can be revealed in the enterprises' behavior due to the economic crisis.

It can be stated that due to the interpretation of innovation its extended meaning is uncharacteristic between the characters of the sector. The difference can be manifested in relating to the innovation according to the small and medium enterprises main activity, and according to the life cycle. In those small and medium enterprises, where the importance of the innovation is realized, the change induces is strong within the managers and owners, the existence of the formalized strategy is typical. The knowledge and the acceptance of innovational cooperation opportunities (innovational nets) are in low-level in the region between small and medium enterprises' characters.

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In our opinion not only the financial support of innovation is needed but to establish an innovation and enterprise friendly environment from the governmental is also important. Aspect change is needed within the sector, the key of cooperate competition's success is the innovative thinking.

**Keywords:** *innovation, finance, market, strategy, cooperation*

**JEL classification:** D220

## 1. Introduction and review of literature

After Hungary's European Union integration we can state that the role of small and medium sized enterprises in economy has increased, their economic power stabilized, but there are several challenges, questions they have to answer. One of them is their response opportunity and ability, towards which direction they have to develop, to become real economic players.

In Hungary, the significant proportion of the participants of the small and medium sized enterprises' sector can be characterized as a compulsory entrepreneur nowadays, or is equal to a family undertaking in the classical sense. It is due to the socio-economic transition took part in the last two decades in Hungary, too. A polarization process began among the small and medium sized enterprises. One – the huger – part remained as a so-called surviving group, characterized by lack of capital, lack of managerial knowledge and marketing connections. The primary goal of is to provide a living to the proprietor and his family. In the other group there belong those enterprises, which are in the gazelle status (by their life cycle), have good market opportunities, showed a developing tendency, and increased their earning, capital. The small and medium-size companies play a significant role in the country's economic life. Characteristically the labor input is high and the intensity of capital is low. Lag can be shown compared to the characters of the big company's sector within the production and the service efficiency, and the area of management, the inner developmental opportunities are limited and they face leadership, and succession problems.

Besides their economic role, the SMEs have important role in improving quality of life in rural areas. The number of inhabitants was 9 986 000 on January 31<sup>st</sup>, 2011. The number of settlements is 3152 (July 1<sup>st</sup>, 2009), which means a pretty low number of inhabitants per settlement. 54,3% of the inhabitants live in settlements with less than 1000 inhabitants (1713) (KSH, 2010). Unfortunately in these settlements there are operating only a few numbers of SMEs, although they could take part in increasing the capability of economic development.

The economic development in Hungary showed an increasing tendency in the last fifteen years (Table 1). The financial and economic world crises had negative

effects on this tendency. The crises reached the Hungarian economy at the end of 2008. The economic processes slowed down markedly, beside the moderated domestic demand and the decline of export, the Hungarian enterprises had to face with the narrowness of financial market's opportunities because of the radical decrease of the willingness of financial institutes' risk bearing and the decline of the Hungarian currency rate and the strength of its volatility at the same time. The GDP decreased radically, by 6.3 % in 2009. External demand tightened by 4.5 %. Due to the crises, nearly all the elements of the domestic consumption decreased and several consumers' items were fallen down significantly. The final consumption of the households was back by 6.7 % from the previous years' value. The GDP at purchasing power parity – similarly to the previous years' position – was only 64 % of the EU average in Hungary. That means the 21st place in the EU that is least favorable position.

Also a problem for Hungary that the different regional inequality processes come forward in several dimensions if we only think in the relations of Budapest vs. countryside, the central region vs. the other areas of the country, West vs. East. The regional differences are mainly of an economic nature- GDP, investment, unemployment, earnings etc. but they also hide the societal consequences as well, which can bring about aggravating conflicts in the long run so that is why the intervention of the central government is of vital importance by means of the conscious and scheduled implementation of regional development.

**Table 1.** Some economic characteristic in Hungary

Year	Gross Domestic Product (GDP)	GDP per capita
	(million EUR)	(EUR/capita)
1995	35 215,7	2 059
1996	36 678,9	2 556
1997	41 207,5	3 174
1998	42 662,9	3 770
1999	45 267,2	4 211
2000	50 334,0	4 848
2001	58 842,9	5 567
2002	70 459,3	6 281
2003	73 914,3	6 889
2004	82 109,6	7 630
2005	88 767,1	8 067
2006	89 589,4	8 726
2007	99 445,9	9 326
2008	105 653,5	9 870
2009	91 322,1	9 663
2010	97 118,8	9 711

Source: Hungarian Statistical Office, database

Examining the value changes of GDP per capita in regional connections, it can be stated that the rate of growth in the North Hungarian Region corresponds to the



country average, but the starting data (year of 2000) were only 64 % of the country average, the collapse from the average became larger (Table 2). Tánczos (2010) examined the micro-regional differences during a longer period (1996-2007) and stated that the differences have grown, but these processes were not equable. In the case of micro-regions – started from the lower developmental stage – the increase of differences can be observed.

**Table 2.** GDP per capita by regions (2000-2006)

Regions	(EUR/capita)									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Budapest	10125	11917	14800	15053	16950	18799	19794	22108	23522	21342
<i>Central Hungary</i>	7791	9296	11417	11680	13076	14364	14848	16641	17608	15664
<i>Central Transdanubia</i>	4842	5497	6145	6765	7740	8228	8026	9228	9544	7955
<i>West Transdanubia</i>	5691	6132	7174	7893	8499	8696	8904	9769	10324	8611
<i>South Transdanubia</i>	3788	4344	5108	5317	5809	6080	6005	6808	7264	6351
Borsod-Abaúj-Zemplén county	3215	3697	4334	4647	5432	6003	5880	6542	6687	5674
Heves county	3584	4297	5091	5428	6000	6100	6088	7115	7343	6351
Nógrád county	2776	3257	3832	4035	4375	4427	4393	4640	4824	4138
<i>North Hungary</i>	3234	3775	4441	4741	5396	5761	5680	6363	6539	5588
<i>North Plain</i>	3242	3892	4540	4872	5336	5576	5612	6255	6595	5720
<i>South Plain</i>	3684	4145	4894	5089	5682	5951	5899	6574	7096	6116
<b>Hungary</b>	<b>5034</b>	<b>5855</b>	<b>6980</b>	<b>7337</b>	<b>8185</b>	<b>8781</b>	<b>8915</b>	<b>10019</b>	<b>10607</b>	<b>9267</b>

Source: Hungarian Central Statistical Office

Examining the tendencies of the unemployment by regions it can be proved that the highest unemployment rate (16.0 %) was in the North Hungarian Region in 2010, and at the same time the rate of economically active persons in the population aged 15-74 was the lowest. The neighboring North Plain Region has similar disadvantageous conditions (Table 3.). Because of the economic crises not only the first entering young people's unemployment rate grew up with a higher rate than the average, but the young adults' (aged 25-29 years) also, that is the source of a serious social tensions.

**Table 3.** Economic activity among population aged 15–74 (2010)

Regions	Employed	Unem- ployed	Rate of unemploy- ment	Econo- mically active	Rate of economically active persons in population aged 15-74	Number of population aged 15–74
	(thousand capita)		%	(thousand capita)	%	(thousand capita)
<b>Central Hungary</b>	1 228.8	120.5	8.9	1 349.2	59.1	2 284.0
<b>Central Transdanubia</b>	433.1	49.6	10.3	482.7	56.7	850.6
<b>West Transdanubia</b>	404.3	40.9	9.2	445.2	57.4	775.5
<b>South Transdanubia</b>	342.1	46.9	12.1	389.1	53.5	727.9
<b>North Hungary</b>	392.5	75.0	16.0	467.5	51.1	914.3
<b>North Plain</b>	497.4	84.6	14.5	582.0	51.6	1 128.0
<b>South Plain</b>	483.1	57.3	10.6	540.3	53.7	1 006.1
<b>Hungary</b>	3 781.2	474.8	11.2	4 256.0	55.4	7 686.4

Source: Hungarian Central Statistical Office, database

On the basis of economic development major regional differences can be observed in Hungary. The North Hungarian Region can be characterized as under the average country economy indicators. The center-periphery relation between Budapest – the capital – and other district of the country is determinative (Sarudi, 2003). Besides the reasons there is Budapest’s leading role of industry, central position of an economy characterized by concentrated capital and human resources. The capital’s share of the GDP is significantly higher – higher than the inhabitants’ ratio – during the last decades. The GDP per capita in Budapest and in the Central-Hungarian Region is rising continuously, exceeding the country average, was about 182-212 % of it between 1996-2007.

The capital’s economic dominance is indicated by the value of investment per capita is 221 % of the country average and 346 % of the less developed North Hungarian Region. The center of the vehicular net is also Budapest. The qualification of the population (independently of the graduate level) is higher than the country average. It must be highlighted that the share of the population aged over 25 and having higher qualification is 38.4 %, while the national average is only 13.6 %.

42.9 % of the R&D workplaces that can be considered as the basis of innovation are situated here, and 65.9 % of the R&D expenditures go to the Central Region. It can be observed a west-east developmental axis in Hungary, which became an arc, including Szeged town, due to highway investments carried out in the 2000ies. The problems of outside periphery must be mentioned, namely the problems of the north, east and south frontier districts. These districts have lost their weight and become margins. On the one hand due to the collapse of the former “eastern” market connections, on the other hand because of the southern Yugoslavian war and some structural problems. (Sarudi, 2003; G. Fekete, 2004; Király, 2009)

**Table 4.** Investment per capita by regions (2000-2007)

<b>Regions</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Budapest	655 056	806 266	895 001	879 396	1 000 032	1 189 989	1 314 469	1 309 716
<b>Central Hungary</b>	<b>521 861</b>	<b>593 995</b>	<b>665 953</b>	<b>642 734</b>	<b>725 342</b>	<b>825 757</b>	<b>906 767</b>	<b>905 358</b>
<b>Central Transdanubia</b>	<b>261 369</b>	<b>253 106</b>	<b>291 659</b>	<b>343 315</b>	<b>450 413</b>	<b>461 608</b>	<b>449 480</b>	<b>622 087</b>
<b>West Transdanubia</b>	<b>283 758</b>	<b>322 824</b>	<b>300 610</b>	<b>343 401</b>	<b>359 581</b>	<b>350 782</b>	<b>383 646</b>	<b>385 532</b>
<b>South Transdanubia</b>	<b>183 789</b>	<b>172 743</b>	<b>186 876</b>	<b>251 756</b>	<b>243 447</b>	<b>218 146</b>	<b>243 652</b>	<b>236 961</b>
Borsod-Abaúj-Zemplén County	211 611	193 448	190 080	330 095	352 776	298 317	268 624	233 511
Heves County	181 173	161 859	163 872	223 351	294 843	282 826	323 704	285 815
Nógrád County	160 541	148 774	184 376	126 045	125 427	136 209	175 104	111 822
<b>North Hungary</b>	<b>107 369</b>	<b>177 872</b>	<b>182 502</b>	<b>268 381</b>	<b>299 362</b>	<b>266 771</b>	<b>266 737</b>	<b>226 190</b>
<b>North Plain</b>	<b>133 355</b>	<b>153 215</b>	<b>163 899</b>	<b>186 778</b>	<b>208 836</b>	<b>279 747</b>	<b>216 879</b>	<b>212 507</b>
<b>South Plain</b>	<b>127 708</b>	<b>141 136</b>	<b>162 077</b>	<b>196 559</b>	<b>216 758</b>	<b>202 142</b>	<b>201 445</b>	<b>203 945</b>
<b>Hungary</b>	<b>282 489</b>	<b>306 719</b>	<b>335 527</b>	<b>364 756</b>	<b>411 095</b>	<b>443 001</b>	<b>461 949</b>	<b>476 420</b>

Source: Hungarian Central Statistical Office, 2008

The number of enterprises per 1000 capita can be a partly suitable index for characterizing the regions' economic activity. The deviation between the center and other regions are extreme. The activity is the lowest in the North Hungarian Region. In Central Hungary over one and a half times higher is the number of registered enterprises per 1000 capita comparing to the secondly most developed West Transdanubia Region (Table 5).

**Table 5.** Number of registered enterprises (piece/1000 capita) by regions (2000-2007)

<b>Regions</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Budapest	189	196	210	214	219	220	218	221
<b>Central Hungary</b>	<b>157</b>	<b>162</b>	<b>173</b>	<b>177</b>	<b>181</b>	<b>181</b>	<b>179</b>	<b>182</b>
<b>Central Transdanubia</b>	<b>99</b>	<b>101</b>	<b>113</b>	<b>116</b>	<b>118</b>	<b>120</b>	<b>116</b>	<b>119</b>
<b>West Transdanubia</b>	<b>106</b>	<b>108</b>	<b>121</b>	<b>123</b>	<b>126</b>	<b>128</b>	<b>126</b>	<b>129</b>
<b>South Transdanubia</b>	<b>109</b>	<b>109</b>	<b>121</b>	<b>123</b>	<b>124</b>	<b>123</b>	<b>120</b>	<b>123</b>
Borsod-Abaúj-Zemplén County	68	68	78	81	84	85	84	87
Heves County	79	81	93	97	100	101	100	105
Nógrád County	67	67	80	82	84	86	83	86
<b>North Hungary</b>	<b>70</b>	<b>71</b>	<b>82</b>	<b>85</b>	<b>88</b>	<b>89</b>	<b>88</b>	<b>91</b>
<b>North Plain</b>	<b>75</b>	<b>76</b>	<b>86</b>	<b>90</b>	<b>92</b>	<b>93</b>	<b>91</b>	<b>97</b>
<b>South Plain</b>	<b>92</b>	<b>90</b>	<b>100</b>	<b>102</b>	<b>104</b>	<b>108</b>	<b>105</b>	<b>119</b>
<b>Hungary</b>	<b>109</b>	<b>110</b>	<b>121</b>	<b>125</b>	<b>127</b>	<b>129</b>	<b>126</b>	<b>131</b>

Source: Hungarian Central Statistical Office

Király (2009) examined the regional differences. With the use of Dual-indexes, Hoover-indexes and allocation ratios he also proved this polarization of the regions comparing the most relevant economic regional indicators. He also confirmed the greater inequality between the regions in the case of investments. The difference in investment spending between the groups above and below the average by regions was more than six fold from 1998 to 2007.

To summarize the above mentioned, we can state that the small and medium sized enterprises have low economic activity in the North Hungarian Region, where at the same time the unemployment rate is high, the lowest proportion of the industrial enterprises' that are below the national average and the low professional skills is typical for the region.

The effect of the economic crisis in 2008-2009 indicates the timeliness of the topic. One of the negative consequences of the previous unfavorable economic processes in Hungary was the drift, the waiting, the lack of the ability for renewal and changing were typical in the small and medium-size enterprise sector. The need for a change in the perception of the sector, the key of the successfulness of collaborative competition is the strategic thinking (Borsi – Telcs, 2004; Salamonné, 2006; Karda, 2009). The key for the character strengthening, increasing of the sector, considering the future will be the continuous increase of R+D+I expenditures (alignment with the EU aims) on the one hand, and on the other hand remind the proprietors that instead of forming and accepting of renewal cannot speak about success and competitiveness. More authors emphasize this (Kállay – Imreh, 2004; Belyó et al., 2008). To the corporate success is not sufficient the ambition for the cost effectiveness, and the processes development. All this is particularly true in crisis, only then we don't talk about the success exclusively, but often the persistence the stake. The healthy corporate development can be realized through an innovation, but the corporate limits may hinder the innovation (Capello – Faggian, 2005; Miles et al., 2006).

Economists dealing with the cooperation theory suggest that within the small and medium-size enterprises sector, the operation along the cooperation helps the continuous innovation and the development of the innovational skills. The human capital is interpreted as the condition of the long-term success, but not merely the human capital, as an input, but the contact capital being incarnated in the people. The significance of the relational capital is higher within small and medium-size enterprises' innovational cooperation (Welbourne – Pardo-del-Val, 2009).

Due to lack of renewable ability of the market strength, the share and the competitiveness decrease. Earlier studies emphasize that the innovational ability of the small and medium-size enterprises depends on the owner's individuum on the one hand, and the uncertain organizational culture one on the other hand (Hoványi, 2001; Cakar – Erturk, 2010).

According to the result of other research, the competitiveness of a small and medium-size enterprises sector depends on the openness, the suitable informational and communicational technological state and the willingness to implement these new

business policies. But within the small and medium-size enterprises sector, the suitable knowledge, the human resources and the development of sources are impending factors (Bessant, 2003; Szalai – Opitz, 2007; Leskó et al., 2007). The intense benefit that characterizes the small and medium-size enterprises is rooted in their flexibility. But then again there will be a real benefit, if it appears being built atop with the big companies. Hoványi (1997) noticed the importance of this after the change of regime and that the market balance and the competitiveness will be defined by the balance or disproportion define (Hoványi, 1997).

To become stronger it is necessary to have the ability to adjust within competition, the continuous renewal of the strategic and innovative thinking is crucial. The role of strategic thinking (innovation) is the breakout point of SMEs. At the same time a widely spread opinion is, that the Hungarian small and medium sized enterprises are not innovative, therefore they are not competitive. For them mainly the application of creative, loose, partly formal vision of future oriented strategy making could be practical. The question is, that this is typical, and in what kind of changes necessary to achieve, that the skill can be developed.

Research hypothesis was the following:

- Among the small and medium-size enterprises can be found the ones of which the thinking in the conscious strategic future of vision is typical in the examined region, at the same time the drift and the passive adoption are typical of the majority of small and medium-size enterprises.
- The strength of strategy thinking depends on the age of the manager.
- The satisfaction of the manager with the profitability correlates the existing of formal strategy.
- The strategy making practice depends on the knowledge on strategy.
- The difference can be manifested in relating to the profitability according to the strategic thinking/making

## **2. Materials and Method**

On the base of statistical data we evaluated the small and medium sized enterprises' status of the examined region with special regard to sectorial differences. We made primary data collection.

SMEs were interviewed about their strategic thinking, innovation capability, changing and willingness of cooperation. The questionnaire survey was carried out in early 2011, by random selection. 170 appreciable answers we got, among them 51.7 % come from the North and the East Hungarian Regions. In this paper we present the results coming from the North Hungarian Region (70). We must underline that the sample cannot be considered as a representative sample.

There were 120 variables from which we used the followings in this research:

- K104, age of enterprise: (by the age of the enterprise we formed four groups: 0-5: ‘infant’ , 6-10: ‘teenagers’, 11-15: ‘young adults’, 16-: ‘calm adults’);
- The economic strength of the small and medium enterprise: K106, number of employees; K110, size of sales income (2009);
- Demographic data of the manager: K117, gender; K118, age; K119, education
- K2, manager’s satisfaction with profitability (1= profitable, over the sector average; 2= profitable, reaching the average; 3= has not reached the sector average, but able to develop; 4= faces with serious profitability problems);
- K5, knowledge on strategy;
- K6, attitude to strategy thinking of management.

Besides the above mentioned questions in the questionnaire we also asked about the enterprises’ innovativeness, innovational willingness, financial situation and attitudes, their chosen ways and responds to the crisis.

Valuation: simply statistic methods, relation examination with econometric models, making of compare analysis.

### 3. Results and Discussion

Analyzing the questionnaires we found the following most important results concerning to the knowledge, attitude to strategy thinking, profitability, age of enterprise, managers.

Examining the correlation between the age of the enterprise and their profitability (K104-K2) it can be stated that the less satisfied with their profitability are the managers of younger enterprises, while the most satisfied are the managers of young and calm adult enterprises in the North Hungarian Region. This is different from the results of the total sample, where there was no verifiable difference by the age of enterprises.

On the bases of the questions concerning the knowledge of strategy and attitudes to strategy planning we got the result that those respondents who understood a written, plan for a longer time as strategy, they really have formalized plan. In those enterprises where there are no conscious strategies, the respondents consider the strategy as “something is developed in the course of the progress”, but it has some positive conceptions for the future.

On the bases of Pearson-correlation examinations it can be stated that there is significant correlation between the knowledge of strategy and the practice of strategy making attitudes (K5-K6) at the 0.05 level in the north Hungarian Region’s sample. At the same time the significant correlation could be proved at the 0.01 level for the total sample (Table 6 and 7.). There was no significant correlation found between the highest qualification level of the managers and the adoption of making formalized strategy in practice. All this directs the attention to the importance of the higher level of managerial knowledge that helps the spread of formalized strategy making.

It must be noted that the question about the highest qualifications was a general one, the managerial qualifications were not asked.

Between the age of the enterprise and its profitability (K104-K2) a significant positive correlation was provable in the total sample. The “infants” and “teenagers” (operating more than 10 years) reported less bad earnings and profitability after the crises in 2008-2009, as a matter of fact, they were more satisfied with their economic position compared to the sector profitability. There was no significant correlation in the North Hungarian Region. In contrast to expectation there was no significant correlation between the age of the enterprises, the reached higher developmental level and the shaping of conscious vision.

Examining the correlation between the size of enterprises (by the sales income) and the strategy making attitudes (K110-K6) it can be stated as a fact that both in the evaluated region and in the total sample a strong positive correlation was manifested at the 0.01 level. This refer to the necessity of putting in the practice a conscious, future oriented planning, which is essential to organizational development, success.

**Table 6.** Correlation matrix, North Hungarian Region (70 respondents)

		K2	K5	K6	K106	K110	K117	K119	K118	K104
K2	Pearson Correlation									
	Sig. (2-tailed)									
K5	Pearson Correlation	,012								
	Sig. (2-tailed)	,920								
K6	Pearson Correlation	<b>,316*</b>	,208							
	Sig. (2-tailed)	,011	,101							
K106	Pearson Correlation	-,228	-,221	-,215						
	Sig. (2-tailed)	,059	,070	,086						
K110	Pearson Correlation	-,114	-,087	-,146	<b>,680**</b>					
	Sig. (2-tailed)	,364	,493	,258	,000					
K117	Pearson Correlation	,200	-,092	-,084	,059	,101				
	Sig. (2-tailed)	,100	,455	,504	,625	,420				
K119	Pearson Correlation	,064	<b>-,150</b>	,059	<b>,127</b>	<b>,283*</b>	,230			
	Sig. (2-tailed)	,601	,223	,638	,295	,022	,056			
K118	Pearson Correlation	,162	,159	,147	-,061	,106	-,110	-,015		
	Sig. (2-tailed)	,183	,195	,242	,615	,396	,366	,902		
K104	Pearson Correlation	,214	-,016	-,052	,352**	<b>,370**</b>	,003	,047	,217	
	Sig. (2-tailed)	,078	,898	,681	,003	,002	,977	,700	,071	

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Source: own construction

**Table 7.** Correlation matrix, Total sample (170 respondents)

		K2	K5	K6	K106	K110	K117	K119	K120	K118	K104
K2	Pearson Correlation										
	Sig. (2-tailed)										
K5	Pearson Correlation	,199**									
	Sig. (2-tailed)	,009									
K6	Pearson Correlation	<b>,295**</b>	<b>,373**</b>								
	Sig. (2-tailed)	,000	,000								
K106	Pearson Correlation	<b>-,309**</b>	<b>-,182*</b>	<b>-,181*</b>							
	Sig. (2-tailed)	,000	,017	,019							
K110	Pearson Correlation	<b>-,299**</b>	<b>-,113</b>	<b>-,210**</b>	<b>,737**</b>						
	Sig. (2-tailed)	,000	,149	,008	,000						
K117	Pearson Correlation	<b>-,029</b>	<b>-,041</b>	<b>-,130</b>	<b>,149</b>	<b>,186*</b>					
	Sig. (2-tailed)	,704	,597	,095	,051	,017					
K119	Pearson Correlation	<b>-,065</b>	<b>-,192*</b>	<b>-,138</b>	<b>,323**</b>	<b>,337**</b>	<b>,185*</b>				
	Sig. (2-tailed)	,399	,012	,076	,000	,000	,015				
K120	Pearson Correlation	<b>-,022</b>	<b>,086</b>	<b>,125</b>	<b>,009</b>	<b>-,030</b>	<b>,071</b>	<b>,009</b>			
	Sig. (2-tailed)	,777	,267	,110	,903	,709	,358	,904			
K118	Pearson Correlation	<b>,052</b>	<b>,092</b>	<b>,087</b>	<b>-,084</b>	<b>,022</b>	<b>-,045</b>	<b>,015</b>	<b>-,018</b>		
	Sig. (2-tailed)	,497	,230	,266	,273	,780	,562	,846	,817		
K104	Pearson Correlation	<b>,151*</b>	<b>,062</b>	<b>,081</b>	<b>,193*</b>	<b>,186*</b>	<b>,070</b>	<b>,061</b>	<b>,089</b>	<b>,202**</b>	
	Sig. (2-tailed)	,049	,423	,300	,011	,017	,362	,425	,251	,008	

\*\* Correlation is significant at the 0.01 level (2-tailed).

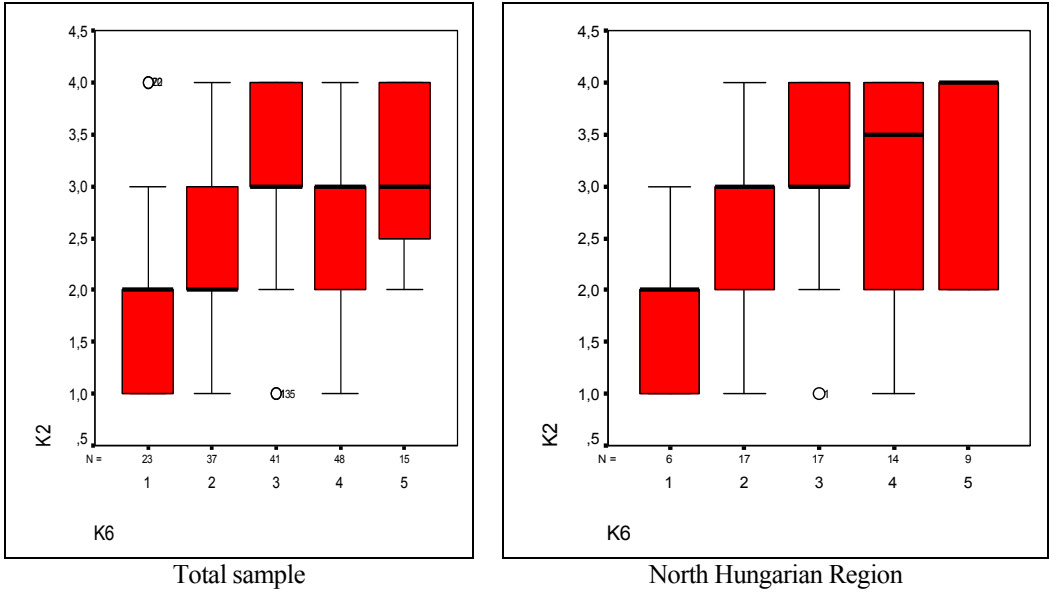
\* Correlation is significant at the 0.05 level (2-tailed).

Source: own construction

Examining the correlation between the profitability and the characteristics of strategy making attitudes we stated that the conscious strategy making enterprises (having written, formalized strategy) reported on profitability at least or over the sector average, both in the total sample and in the North Hungarian Region's sample. In the case of the respondents who operate by strategy thinking way but have no formal strategy, realized profit at the sector level or a little bit under it. Those enterprises that practically refused the strategy thinking denote major problems in profitability. These correlations were significant in the case of the total sample (Figure 1.).

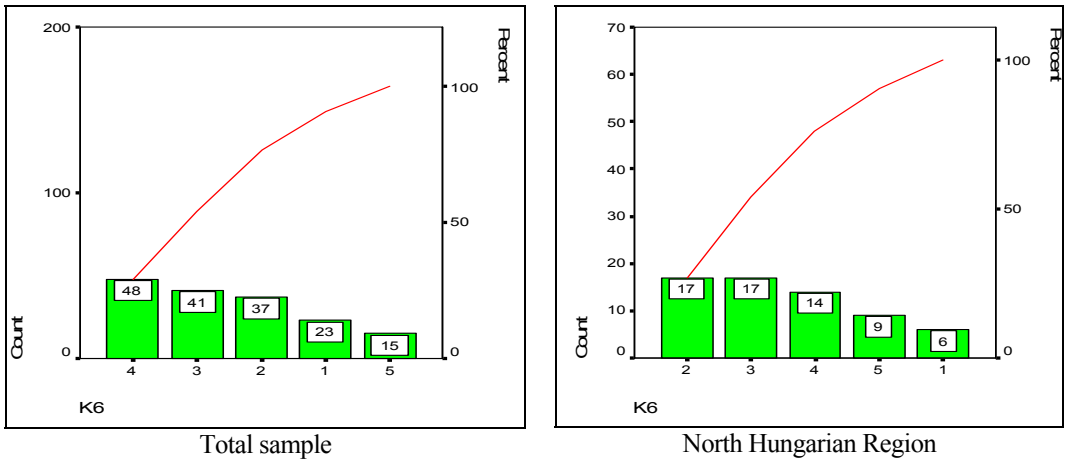
The proportion of enterprises having a formalized strategic plan does not show significant variance between the total sample (8.7 %) and in the North Hungarian Region's sample (Figure 2.).





**Fig. 1.** Correlation between the profitability and the characteristics of strategy making attitudes

Source: own construction



- 1= there is a formalized strategic plan
- 2= there is an exact vision, but it does not occur in a strategy plan
- 3= it is not possible to elaborate a strategy plan for the long time and its pursuance
- 4= there are some written elements of strategy but the strategy is “formed” mainly during operating
- 5= there is no strategy, the operating is without any plans

**Fig. 2.** The proportion of enterprises having a formalized strategy

Source: own construction

It was not proved any significant correlation between the size of enterprises (by sales income) and its profitability (K110-K2) in the evaluated sample.

There was a negative correlation between the number of employees and the profitability (K106-K7). In the total sample this correlation was significant at the 0.01 level. This raises the necessity of further examinations whether the numbers of employee are adequate to the real requirement or whether the ‘over employment’ is typical after the crises in the interviewed enterprises. Because the survey focused on the questions of strategic thinking primarily, we will not deal with the human resource management aspects, hereinafter.

The number of employees and the sales income of the enterprises (K106-K110) showed strong correlation in the North Hungarian Region.

Between the manager/respondents’ highest educational level and the strategy making attitudes (K119-K5) a negative correlation can be shown. In the North Hungarian Region it was not significant, while it shows a weak significant negative correlation in the total sample. Similarly there cannot be shown a correlation between the gender of the respondent and the strategy making attitude (K118-K6).

The connection of manager’s highest qualification level and their strategy making attitude (K119-K6) shows strong correlation in the total sample. Independently of the kind of the manager’s highest qualification, it can be stated that the conscious vision making as a key factor and a precondition of long-term success, already appeared among the highest educated managers’ practice. That was not confirmed in the previously carried out surveys in Hungary. At the same time this relationship was not identifiable in the North Hungarian Region.

Between the age of the manager and the strategy making practice (K118-K6) there was no provable significant correlation.

Concerning the former drafted hypothesis the following results were got:

– Among the small and medium-size enterprises can be found the ones of which the thinking in the conscious strategic future of vision is typical in the examined region, at the same time the drift and the passive adoption are typical of the majority of small and medium-size enterprises.	Rejected
– The strength of strategy thinking/making depends on the age of the manager.	Rejected
– The satisfaction of the manager with the profitability correlates the existing of formal strategy.	Proved
– The strategy making practice depends on the knowledge on strategy.	Proved
– The difference can be manifested in relating to the profitability according to the strategic thinking/making	Proved

#### 4. Conclusions

Evaluating the results of the survey carried out in SMEs it can be laid down as a fact that it has not been strengthened the existence of strategic thinking, the conscious

vision draws in the enterprises further on yet. In connection to the sample we verified the relationship between the knowledge of strategy and the formalized, written strategy, that attract the attention to emphasize more notice on this knowledge in the education and further trainings of managers.

Previously some research dealt with the assessment of the Hungarian SMEs' sector, their life-cycle features, characteristics of their growth and development, stated that the strategies are rather evolving than being evolved by various forces. The lack of conscious way of future thinking is typical. We were not able to repeat Salamonné (2006) results, whereas among the enterprises that reached a higher developmental level, and operating more than 10 years – we called them as young and calm adults – a group can be separable, to which the conscious vision making is typical.

The practice of strategy making is characteristically the use of partly formalized strategy, which gives enough scope for actions, based on creativity and adaptation for the managers. The strong relationship between the growth of enterprises' size and the making of formalized strategy shows that the implementation of conscious, future oriented strategy making in the everyday practice is needed for the growing of enterprises.

One of the key factors the strengthening of the SMEs besides the strategy thinking is the continuous renewal and the innovation. In this study – because of the size limit –detailed results the manifestation of innovation activity, the connection between the age of managers and enterprises, their attitude to strategy thinking, the profitability, the financial condition, etc. have not introduced. Examination of these questions will be the subject of further research.

The North Hungarian Region can be characterized by low economic activity, high unemployment rate, low proportion of the industrial enterprises' that are below the national average and low professional skills are typical. To begin their closing up to the national average, the SMEs must strengthen, the existence of management skills is necessary, the ability to the adaptation in the competitive environment, the continuous renewal the strategic and innovative thinking.

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## ENTREPRENEURS' INFORMATION NEEDS AND POLICY OF ACCOUNTING SIMPLIFICATIONS IN POLISH SMALL ENTERPRISE SECTOR – RESEARCH RESULTS\*

JACEK JAWORSKI<sup>1</sup>

**ABSTRACT.** Nowadays, the main problem of small firms is their low "survival". The limited access of small enterprises to reliable and well-prepared information about their condition and environment is one of the main reasons for this situation. It is known that such information determines the rationality of decisions and the effectiveness of achieving objectives which each company sets ahead. One of the key types of information used in management is financial information. From the perspective of further development of small businesses, diagnosing entrepreneurs' information needs in this area is the very important issue.

The fundamental source of financial information in the enterprise is the implemented and functioning accounting system. This system consists of methods, plans and procedures used for the identification, analysis, presentation and communication of the information about all phenomena related to corporate finance. In the Polish small enterprise sector there are four accounting systems related to the form of taxation chosen by the company. They have different details of recorded data and provided information.

The main goal of the paper is to present results of the empirical research concerning information needs reported by managers of small enterprises in the context of accounting systems used in this sector. The research is aimed at verifying the two hypotheses. The first says that the accounting systems and entrepreneurs' information needs are in close interdependence and the second claims that the Polish policy of accounting simplifications for small enterprises does not correspond with their information needs.

The research was based on the questionnaire survey conducted among 1008 managers of small enterprises in Poland in mid. 2010. The presentation of the research results was preceded by a theoretical study, which consists of the definition of financial information together with the discussion of its role in enterprise management and the characteristics of accounting systems used in the small enterprise sector in Poland.

The empirical research partially confirmed the hypothesis that information needs and the accounting system are interdependent. This relationship is stronger in the information support of the short-term management. The second hypothesis was verified as entirely positive. Accounting obligations for small enterprises are different in scope and capacity from their information needs.

**Keywords:** *small business accounting, financial information, information in management*

**JEL classification:** M19; M48

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## **Introduction**

In accordance with the Polish law (UoSDG), the small enterprise sector consist of companies, which for past two years:

- 1) have employed fewer than 50 employees,
- 2) have achieved generated annual sales revenue and have performed financial operations amounting to no more than the equivalent of € 10 million and/or their total assets amount has not exceed the same level.

The law also distinguishes micro-enterprises as part of this particular segment of companies. For these companies the above limits are - 10 employees and € 2 million of income, respectively. But for the purposes of this paper, they are treated as a component of the analyzed sector.

The importance of small companies in the modern economy cannot be underestimated. In 2008 they produced 37.1% of Polish GDP, employed 51.8% of all employees and accounted for 98.95% of active companies in Poland (Wilmańska, 2010). In other European countries the situation is similar.

The main problem of today's small firms is their low "survival". The limited access of small enterprises to reliable and well-prepared information about their condition and environment is one of the main reasons for this situation (Nogalski, Karpacz, Wójcik-Karpacz, 2004). It is obvious that this information determines the rationality of decisions and the effectiveness of achieving objectives that each company sets ahead. Thus, each manager reports specific information needs depending on: the ongoing objectives, the type of decision making, their own experience and education, etc.

One of the key types of information flow used in the corporate management is financial information. The main source of such information is accounting system implemented by company. In this context, accounting is a component of the corporate management system. The shape, quantity and quality of provided financial information depend on the accounting system used. Therefore, on the one hand the accounting system meets the information needs of managers. On the other it engenders new information needs.

The main goal of the paper is to present results of the empirical research concerning information needs reported by managers of small enterprises in the financial information area in the context of accounting systems used in this sector. The research is aimed at verifying two hypotheses. The first claims that the accounting systems and entrepreneurs' information needs are in close interdependence. The second says that the Polish policy of accounting simplifications for small enterprises does not correspond to their information needs. The identification of these needs was the intermediate objectives of the research.

The research was based on the questionnaire survey. It was conducted among managers of small enterprises in Poland. The structure analysis of responses and elements of statistical analysis were used in the evaluation of the results. The presentation was preceded by theoretical study consisting of the definition of financial

information together with the discussion of its role in enterprise management and the characteristics of the accounting systems used in the small enterprise sector in Poland. The accounting systems were presented in the context of their information capacity and usefulness.

### **Financial Information and Its Role in Corporate Management**

In theory of information (Przybyłowicz, 2008, p. 1), it is assumed that information is a primary concept. It means that defining information using simple terms is not possible. Therefore, the explanation of the meaning of information is made with reference to human intuition. Generally, information is defined as (Szymczak, 1993): "notification of something, communicating something, message, indication, instruction...". This definition highlights the utilitarian sense of information. Such an approach to the information in economic science examines the management theory. It defines information in many ways:

- "information – it is communication, the communication, which eliminates the uncertainty" (Shannon, 1943),
  - "the information is a knowledge transfer to the recipient of information, because its value allows him to reduce uncertainty" (Ackoff, 1969),
  - and concludes: " the information is a kind of resource that can increase our knowledge about ourselves and the world around us" (Kisielnicki, Sroka, 2005).
- These definitions underlie the valuable and pragmatic theory of information.

In view of the first theory, information is assessed by determining its values for the decision. This theory allows us to maximize the benefits from the information during decision making [Rokicka-Broniatowska, 2002, p. 78]. Treating the information as one of corporate resources, the most important commodity, whose value is assessed through the prism of usefulness in business processes, is the feature of the pragmatic theory. Such information is called economic information. Management information is a particular type of economic information. It allows us to carry out basic functions of management (planning, organizing, conducting and monitoring). In this way, it reduces the uncertainty of particular actions and ensures the correctness of *a priori* decisions (Wrycza, 2010).

Managers of modern companies try to obtain relevant and well-prepared information. The characteristics of such information are (Wrycza, 2010):

- relevance - the information must be relevant to problem and help to solve it,
- detail - the information should be detailed enough to resolve the problem (accurate and precise); too many details create excessive costs, but too much vagueness increases the risk of making a mistake,
- completion - the provided information must include, as far as possible all aspects of the analyzed problem,
- reliability - the source of information must be credible and the information itself must be reliable and true,



- timeliness – the information should be provided in a proper time, it should primarily focus on future periods, but without losing connection with the present,
- adequate addressing – the information should be delivered to a proper and competent person who is responsible for solving a problem,
- proper transmission – the information should be provided by the appropriate communication channel (face to face, in public, via e-mail, traditional post, etc.).

The information with the above characteristics is an essential element of decision making process. Its algorithm presented by J. Kumal (1976) includes the information flows intertwined with objects and decision-making entities:

- 1) decision situation (information about a decision situation),
- 2) decision problem (information for solving a decision problem),
- 3) variants of the decision (information about possible developments in decision-making situation),
- 4) criteria for decision-making,
- 5) the decision (the solution of a decision problem),
- 6) the responsibility for a decision and the implementation of a decision,
- 7) information about the effects of decisions and their control.

Consequently, there are three types of decision-making conditions depending on the degree of knowledge about the problem (Mytlewski, 2010):

- decisions undertaken in the conditions of certainty - the manager can correctly predict the results of all activities covered by the decision on the basis of information,
- decisions undertaken in the conditions of risk – information allows managers to estimate the probability of all consequences of possible decisions,
- decisions undertaken in the conditions of uncertainty – there are not known potential consequences of taken decisions, or there are no estimates of the probability of their occurring in the future.

In the context of the discussed conditions, the identification of information content, information needs and the implementation the proper information system are very important tasks for the manager. The realization this task leads to more decision-making in certainty, and less in the conditions of uncertainty.

The management information is classified under various criteria. Table 1 shows the most frequently mentioned classifications and characteristics.

The information, whose content concerns financial flows in the enterprise, can be called financial information. Such information carries messages and decisions concerning the formation of all economic phenomena related with the corporate finance.

Taking into account the usefulness of this information in management, the key criteria will be:

- the period for which the decisions are taken,
- the scope of those decisions.

As regards the first criterion, the future of the company usually is divided into two periods, where decisions are taken (Brealey, Myers, 1999; Bień, 2002):

- 1) short term (up to 1 - 3 years) – operational management,
- 2) long term (over 3 years) – strategic management.

In the short term, the company usually seeks to achieve a satisfactory profit, which in effect it wants to transform into additional, unladen (free) cash flow (Bień, 2002; Jaworski, 2010). In this respect, in particular, the decisions taken by a company should be aided by information about:

- the ability to generate profits (profitability),
- the shaping of the current and future revenue,
- and about incurred and planned costs.

**Table 1.** Classification of Information (Wrycza, 2010; Kisielnicki, Sroka, 2005)

<b>Criteria</b>	<b>Classification</b>	<b>Characteristic</b>
Source of the information	<ul style="list-style-type: none"> <li>• internal,</li> <li>• external,</li> </ul>	<ul style="list-style-type: none"> <li>• the source is an internal system of organization,</li> <li>• the source is the organization environment,</li> </ul>
Measurements	<ul style="list-style-type: none"> <li>• quantitative,</li> <li>• qualitative,</li> </ul>	<ul style="list-style-type: none"> <li>• measurable; the description of the problem is possible using numbers,</li> <li>• immeasurable; description of the problem is possible using words,</li> </ul>
Time	<ul style="list-style-type: none"> <li>• historic,</li> <li>• current,</li> <li>• future,</li> </ul>	<ul style="list-style-type: none"> <li>• about the past (retrospective, <i>ex post</i>),</li> <li>• about the present,</li> <li>• about the future (prospective, <i>ex ante</i>),</li> </ul>
Level of management	<ul style="list-style-type: none"> <li>• operational,</li> <li>• tactical,</li> <li>• strategic,</li> </ul>	<ul style="list-style-type: none"> <li>• important for short-term decisions,</li> <li>• significant in medium-term decision making,</li> <li>• important for long-term decisions,</li> </ul>
Area of management	<ul style="list-style-type: none"> <li>• marketing,</li> <li>• financial,</li> <li>• R &amp; D,</li> <li>• about workers</li> </ul>	<ul style="list-style-type: none"> <li>• concerning the market on which the organization operates,</li> <li>• related with financial categories,</li> <li>• concerning the undertaken studies and implemented innovation,</li> <li>• concerned with the use of human resources</li> </ul>

Source: Wrycza, 2010; Kisielnicki and Sroka, 2005

In addition to profit maximization, decisions in working capital management should also include a second important task - the maintenance of liquidity (ability to regulate current liabilities) (Ross, Westerfield, Jordan, 1999; Jaworski, 2010). Direct information about the current and expected liquidity should also be accompanied by:

- information about the demand for cash in the short term,
- information about the efficiency and effectiveness of the management of current assets and liabilities.

In accordance to the widely accepted opinion (Ross, Westerfield, Jordan, 1999; Jaworski, 2010) the main long-term financial goal is to maximize the company's value. In this context, information about current and projected value of the company appears to be significant information for long-term management. This value primarily derives from the long-term financial performance and the relationship between assets and capitals of the enterprise. Therefore, relevant information in the long-term management also concerns:

- profitability of investments,
- shape of the company's financial structure (the company's debt),
- cost of the capital used in assets financing,
- company's financial condition in relation to its competitors and business sector,
- expected financial results of the planned long-term activities.

The information discussed above supports the process of financial company management. It influences the decisions that can be categorized in three areas (Ross, Westerfield, Jordan, 1999; Bień, 2002; Jaworski, 2010):

- 1) capital budgeting – it is based on identifying ways of investing in the company assets;
- 2) building the financial structure – it is the result of the selection of the available financing sources (own and foreign);
- 3) working capital management – it means decision-taking determining the levels of current assets (inventories, receivables and cash) and their turnover rate in relation with the current liabilities payment deadlines.

It means that financial information plays a key role in the preparation and implementation of decisions concerning key aspects of the enterprise. It constitutes the basis for developing investment strategies, allows the company to construct a rational financing strategy, and influences the ongoing processes in companies. In this way, financial information becomes a necessary resource of the company that guarantees its proper functioning.

### **Accounting Systems in Polish Small Enterprise Sector**

The fundamental source of financial information in the enterprise is the implemented and functioning accounting system. This system consists of methods, plans and procedures used for the identification, analysis, presentation and communication of the information about all phenomena related with corporate finance (Ainsworth, Deines, Plumlee, Larson, 1997).

In the Polish SME sector, the primary factor influencing the filing systems is a form of income taxation. In view of tax solutions, this income may be legally taxed under the following laws:

- 1) Act of February 15, 1992, about the income tax from legal persons (ITLP) - applies to all income earned by legal persons (capital companies),

2) Act of July 26, 1991, about the income tax from natural persons (ITNP) - contains the general principles of taxation of income earned by the company of natural persons,

3) Act of November 20, 1998, about the flat-rate tax on some parts of income of natural persons (FRITNP) - enables enterprises of natural persons or their companies to establish a simplified flat-tax liability depending an income earned.

The Act of September 29, 1994, about accounting (AaA) is closely connected with the above mentioned tax law.

Depending on the chosen form of taxation, companies are required to maintain and keep different accounting systems:

- 1) standard accounting books,
- 2) tax book of income and expenditures (Revenue and Disbursement – RaD),
- 3) records of revenues in flat-rate income tax,
- 4) records related to the tax card (actually a lack of records).

All legal persons and companies of individuals taxed according to general principles (ITNP), whose turnover in the previous year exceeded € 1 200 thousand are obliged to keep the classic double-entry bookkeeping - standard accounting books – in accordance with AaA. Despite some simplifications that can be used by small firms, they provide the information about all key financial categories giving the basis for the assessment of the management effects and also about the factors influencing these categories (resources, costs and revenues etc.) (Jaworski, 2007). Therefore, this accounting system is characterized by the highest information capacity and it is a good basis for obtaining complete financial information.

Enterprises of natural persons which have not exceeded € 1 200 thousand of revenue often pass on keeping accounting books. For these companies, the accounting obligations are regulated by ITNP. They have to keep tax book of income and expenditures (Revenue and Disbursement – RaD).

The fundamental records in RaD consist of the amounts of revenue and expenditures, but only complying with ITNP. On the basis on RaD, the entrepreneur calculates the income (revenue minus the costs) required to set tax liabilities. Although there are quite significant differences in the perception of costs and revenue by the ITNP and AaA, Revenue and Disbursement can reliably determine the factors influencing the financial result as well as accounting books.

Along with RaD the taxpayer is obliged to keep some records and procedures relating to the company's assets (such as records of fixed assets and intangible assets, records of equipment, mandatory inventory of stocks, etc.). But RaD is devoid of some important information about (Jaworski,2008):

- receivables and liabilities,
- cash turnover and amount,
- current status and value of the inventory.

Collecting the above information is optional depended on manager's decision. Thus, RaD is a poorer accounting system than the accounting books. It collects fewer data and generates less information.

Taxpayers, whose income in the previous year did not exceed the amount of € 150 thousand or starting a business, can choose the flat-rate taxation based on the registered income. These principles exclude only certain types of activities such as pharmacies, pawnbrokers, exchange offices etc. listed in Annex 2 to the FRITNP.

Enterprises choosing the flat-rate taxation collect only the data about the revenue. In addition, at the end of the fiscal year they have to do stock-taking. Thus, in the flat-rate income taxation, there are registered fewer data than in RaD. The level of costs is not registered. The tax base is income and profit determination becomes an optional activity. The most important data from the managerial point of view are omitted in the records. The decision about their collecting depends on the same company (Jaworski, 2007).

The simplest form of income tax is the tax card. It can be used by person running selected business activities. 85 activities are listed in the annex to FRITP. These business activities are mainly services to the public. The critical criterion for selecting this form of taxation is the number of employees, whose maximum for a particular type of activity cannot be more than 3-5.

Tax amount of tax in the tax card form depends on the type of operation, number of employees and the number of inhabitants of the municipality where a business is conducted. Determining the tax amount does not require any special records (the salary cards for the employees are kept and the copies of sales documents are archived). Thus, the tax card is the poorest accounting system in terms of information capacity (Jaworski, 2007).

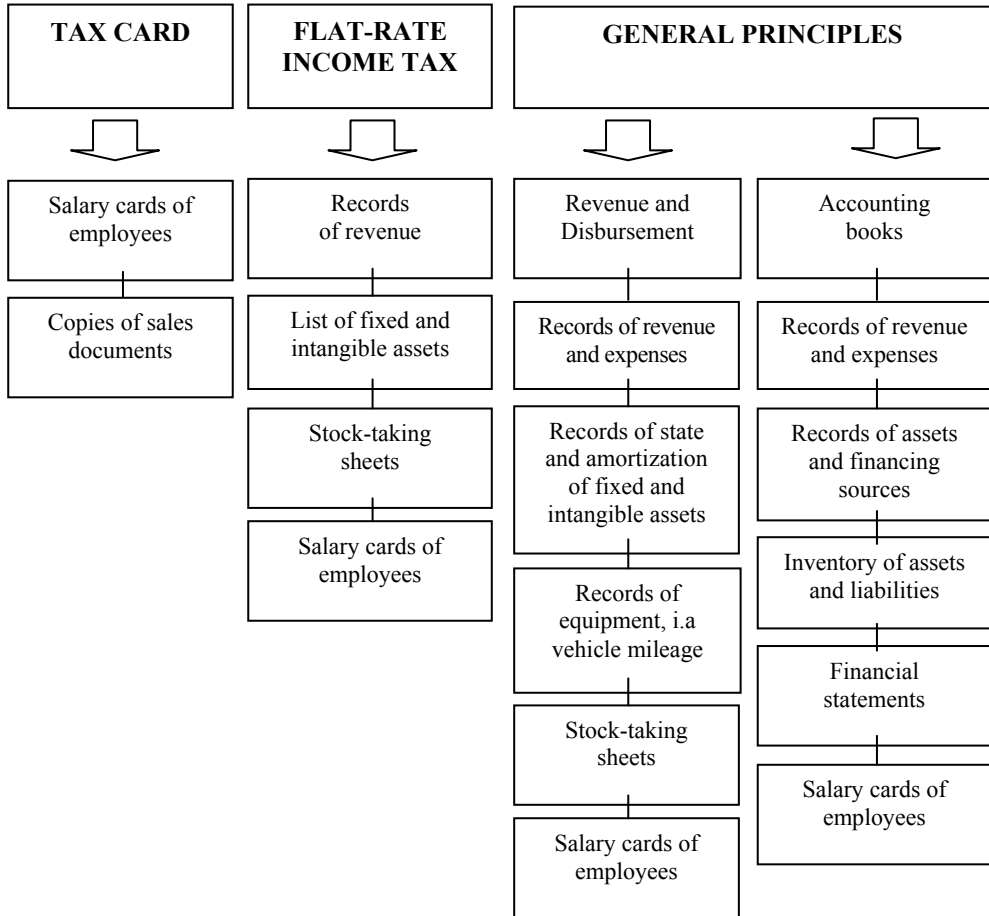
Figure 1 summarizes the structure of the accounting systems for each form of taxation.

Table 2 presents the quantitative structure of accounting systems used in the small enterprise sector in Poland in 2008.

**Table 2.** Accounting Systems in Polish Small Enterprise Sector in 2008 (GUS)

[in thous.]

<i>Accounting systems</i>	<i>Micro ent.</i>		<i>Small ent.</i>		<i>Whole sector</i>	
	<i>Quant.</i>	<i>%</i>	<i>Quant.</i>	<i>%</i>	<i>Quant.</i>	<i>%</i>
GEN. PRINCIPLES	1 260.4	70.5	55.0	100.0	1 315.4	71.4
Acc. books	107.1	6.0	36.9	67.1	144.0	7.8
Revenue and Disbursement	1 153.3	64.5	18.1	32.9	1 171.4	63.6
FLAT-RATE INCOME TAX OBLIGATIONS	420.8	23.5	0.0	0.0	420.8	22.8
TAX CARD OBLIGATIONS	106.8	6.0	0.0	0.0	106.8	5.8
<b>OVERALL</b>	<b>1 788.0</b>	<b>100.0</b>	<b>55.0</b>	<b>100.0</b>	<b>1 843.0</b>	<b>100.0</b>



**Fig. 1.** List of recording obligations in forms of taxation in Poland

Source: Martyniuk, 2009

The dominant system is RaD. It is used by over 63% of Polish small firms. Nearly 23% of taxpayers use the flat-rate taxation with income recording. 5.8% of the companies use the tax card. These data suggest that a significant part of Polish small firms (92.2%) keep accounting systems with varying degrees of restrictions in financial information provided. Only 7.8% of the companies run accounts, which allow them to access all information discussed in the previous section. In this situation it can be hypothesized that the information needs of managers are shaped by the chosen form of taxation. Also the choice of a particular form of taxation is related to the accounting systems applied.

## Methods of Empirical Research

In order to identify information needs reported in the practice of Polish small enterprises, the questionnaire survey was conducted among managers from this sector. The representative sample of companies was taken from all over the country. The survey was conducted using computer assisted telephone interview (CATI). After rejecting any incomplete or inconsistent questionnaires, 1,008 correct answers were obtained. The structure of the respondents in terms of applied forms of taxation and the resulting accounting systems are shown in Table 3

**Table 3.** Structure of Surveyed Enterprises

<i>Section</i>	<i>Quantity</i>	<i>%</i>
<b>Form of Income Taxation</b>		
General principles of ITLP	289	28.67
General principles of ITNP	458	45.44
Flat-rate income tax	207	20.54
Tax card	54	5.36
<b>Accounting Systems</b>		
Accounting books	312	30.95
Revenue and Disbursement	435	43.15
Records in flat-rate taxation	207	20.54
Records in tax card	54	5.36

Each of the respondents was asked about:

- 1) the most important financial information from his point of view in short-term management,
- 2) and the most important information from his point of view in long-term management,

Respondents answered assessing pre-defined types of financial information using the scale 1 - 5 (1 – the least important, 5 – the most important). They could describe their subjective perception of and demand for financial information this way. Managers could assess the information using the same note for more than one answer. Table 4 presents the possible choices for both questions.

In the assessment of general research results, the analysis of the answers' structure was applied. The analysis was based on the arithmetic average of the evaluations. This type of analysis is also used in the presentation of information needs of entrepreneurs for selected accounting systems.

For the evaluation of the statistical correlation between the set variables (accounting systems and information needs) the Chi-square compatibility test was used. This test is used to verify the hypothesis concerning the relation between two qualitative variables and it is based on Chi-square statistics (more: Balicki, Makać 2000).

**Table 4.** Types of Financial Information Used in Survey

<i>Financial information used in short-term management is about:</i>	<i>Financial information used in long-term management is about:</i>
<ul style="list-style-type: none"> <li>• ability to pay current liabilities (liquidity)</li> <li>• ability to generate profits (profitability),</li> <li>• operational efficiency (asset turnover rate),</li> <li>• demand for cash,</li> <li>• level of current and future income,</li> <li>• level of current and future costs,</li> <li>• other categories,</li> </ul>	<ul style="list-style-type: none"> <li>• level of debt,</li> <li>• cost of capital,</li> <li>• return on investments,</li> <li>• current and future value of the enterprise,</li> <li>• position in industry and among competition,</li> <li>• financial results of planned development</li> <li>• other categories,</li> </ul>

The mathematical aspect of the Chi-square test is reduced to calculate the statistics:

$$\chi^2 = \sum_{i=1}^k \sum_{j=1}^l \frac{\left( n_{ij} - \hat{n}_{ij} \right)^2}{\hat{n}_{ij}} = \sum_{i=1}^k \sum_{j=1}^l \frac{n_{ij}^2}{\hat{n}_{ij}} - n ,$$

where:

$l, k$  – kinds of first and second variables,

$n_{ij}$  - empirical numbers of the simultaneous occurrence of pairs of variables  $i$  and  $j$ ,

$\hat{n}_{ij} = \frac{n_i \times n_j}{n}$  - expected numbers of the simultaneous occurrence pairs of variables  $i$  and  $j$ ,

$n$  - number of all respondents' answers.

The calculated statistics is compared with the theoretical value of chi-square distribution (for example read out from the statistical tables for specific values of  $k$  and  $l$  and also the significance level; in the research significance level was set on 0.05). If  $\chi^2$  is less or equal to the read value, then there is no reason to reject the hypothesis about the independence of variables. Otherwise, there are reasons for accepting the alternative hypothesis saying that the variables are dependent.

To determine the strength of the correlation between each of the examined factors and reported information gaps, T-Czuprow and C-Pearson contingency coefficients are used. Both indicators are used in estimating the strength of correlation for qualitative variables (more: Makać, Urbanek-Krzysztofciak 2001). Mathematical definitions of these coefficients are presented in Table 5.

The values of both coefficients are in the range (0-1). The correlation between the examined variables is stronger when the coefficients' values are higher. For the purpose of this research it is assumed that (Barańska, 1999):

- correlation is weak when both indicators are less then 0.30,



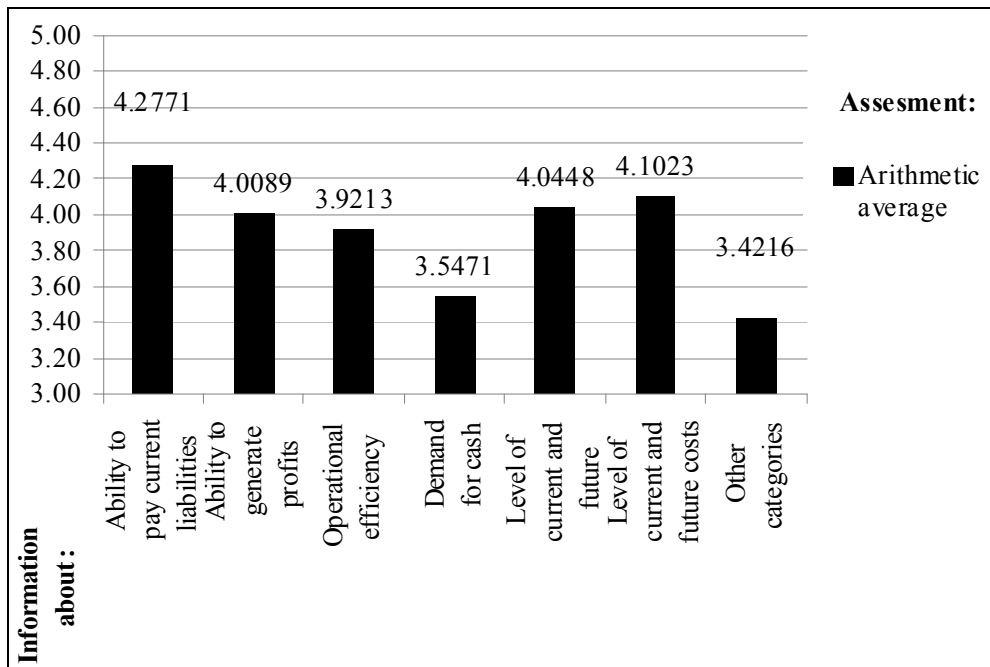
- correlation is moderately strong when the indicators are in the range (0.30 – 0.60),
- correlation is strong when the values of coefficients are higher than 0.60.

**Table 5.** T-Czuprow and C-Pearson Contingency Coefficients (Makać, Urbanek-Krzysztofciak 2001)

T-Czuprow	C-Pearson
$T = \sqrt{\frac{\chi^2}{n \times \sqrt{(k-1) \times (l-1)}}$	$C = \sqrt{\frac{\chi^2}{\chi^2 + n}}$

### Empirical Research Results

Figure 2 shows the structure of the general assessments provided for short-term management area.



**Fig. 2.** Demand for Financial Information for Short-term Management Area

The information about liquidity was the most important for most of the managers (4.2771). It confirms that the largest danger for a small company in the short term is to lose the ability to pay current liabilities. Therefore, the managers want to know about it as much as possible. Slightly lower scores were given for information about the level of current and future costs (4.1023). It means that in addition to liquidity, the critical category in the short-term is cost management. The managers also expect the information about income (4.0448) and about profitability (4.0089). The information about operational efficiency (3.9213) and about demand for cash (3.5471) are found as less important. Information about other categories was rarely mentioned and got the lowest score - 3.4216.

Figure 3 presents the assessment's structure of managers' information needs in the long-term management. In this area, all types of information achieved scores lower than 4.0. It may mean that managers of small enterprises are less interested in long-term activities than in short-term management. But surely, it means that their information needs are lower during long-term decision making.

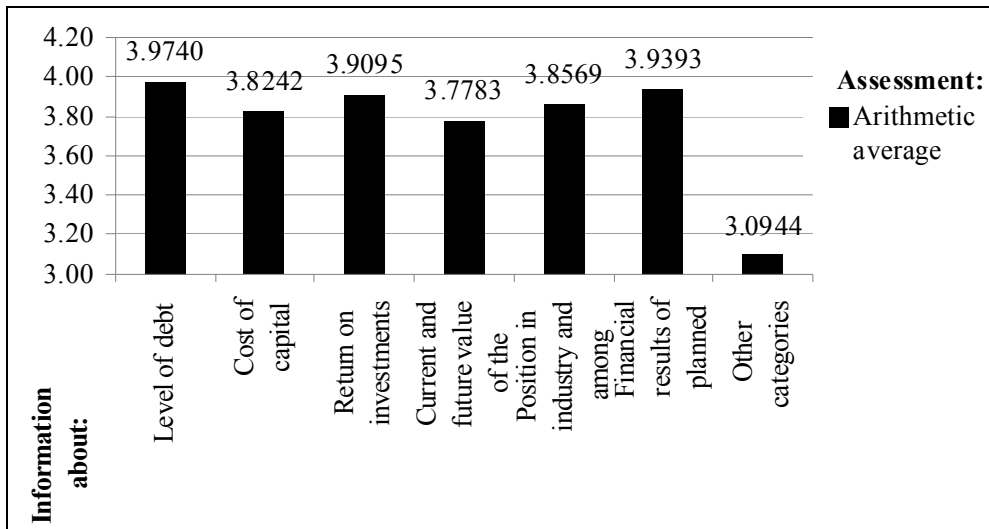


Fig. 3. Demand for Financial Information for Long-term Management Area

In the long-term management area, the information about the level of debt was found as the most important (3.9740). The second place was taken by the information about financial effects of planned long-term activities (3.9393). The information about profitability of investments was relatively highly rated. The entrepreneurs regard the information about financial condition in relation to competitors and the industry as less important (3.8569). It also concerns the information about the cost of capital (3.8242) and about enterprise value (3.7783). The information about other categories was found as irrelevant (3,0944).

Table 6 presents the calculations of  $\chi^2$  statistics and contingency coefficients (T-Czuprow and C-Pearson) for the evaluation relationship between reported information needs and applied accounting systems.

**Table 6.** Relationship between Entrepreneurs' Information Needs and Accounting Systems Used

<i>SHORT-TERM MANAGEMENT</i>							
<i>Information about:</i>	<i>Liquidity</i>	<i>Profitability</i>	<i>Efficiency</i>	<i>Demand for cash</i>	<i>Revenue</i>	<i>Costs</i>	<i>Other categ.</i>
<b>Empirical <math>\chi^2</math></b>	39.44	32.67	49.59	38.83	10.27	11.57	14.65
<b>Theoretical <math>\chi^2</math></b>	21.03	21.03	21.03	21.03	21.03	21.03	21.03
<b>Dependence</b>	Exist	Exist	Exist	Exist	Not exist	Not exist	Not exist
<b>T-Czuprow</b>	0.1072	0.0978	0.1202	0.1069	-	-	-
<b>C-Pearson</b>	0.1956	0.1790	0.2184	0.1951	-	-	-
<b>Correlation</b>	Weak	Weak	Weak	Weak	-	-	-
<i>LONG-TERM MANAGEMENT</i>							
<i>Information about:</i>	<i>Debt level</i>	<i>Cost of capital</i>	<i>Return of inv.</i>	<i>Value of enterpr.</i>	<i>Finacial cond.</i>	<i>Log-term effects</i>	<i>Other categ.</i>
<b>Empirical <math>\chi^2</math></b>	29,63	20,18	15,50	23,98	14,52	19,09	11,45
<b>Theoretical <math>\chi^2</math></b>	21.03	21.03	21.03	21.03	21.03	21.03	21.03
<b>Dependence</b>	Exist	Not exist	Not exist	Exist	Not exist	Not exist	Not exist
<b>T-Czuprow</b>	0.0929	-	-	0.0834	-	-	-
<b>C-Pearson</b>	0.1704	-	-	0.1533	-	-	-
<b>Correlation</b>	Weak	-	-	Weak	-	-	-

Statistically, a significant relationship between information needs and accounting systems in the short-term management area is diagnosed for information about: the ability to pay current liabilities (liquidity), the ability to generate profit (profitability), operating efficiency and demand for cash. In the case of long-term decisions, the interdependence exists only for two types of financial information: about the debt level and about the company's value. The diagnosed correlation is week in all cases - the rates of T-Czuprow and C-Pearson is less than 0.3. Figures 4 and 5 present the distribution of demand for information according to the managers' assessment for short- and long-term management.

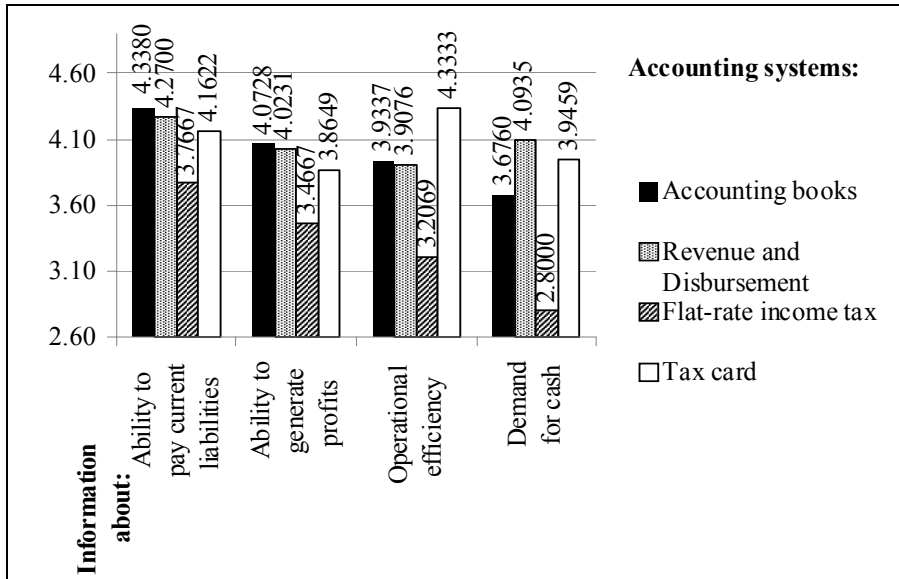


Fig. 4. Demand for Financial Information for Short-term Management Area According to Accounting System Used

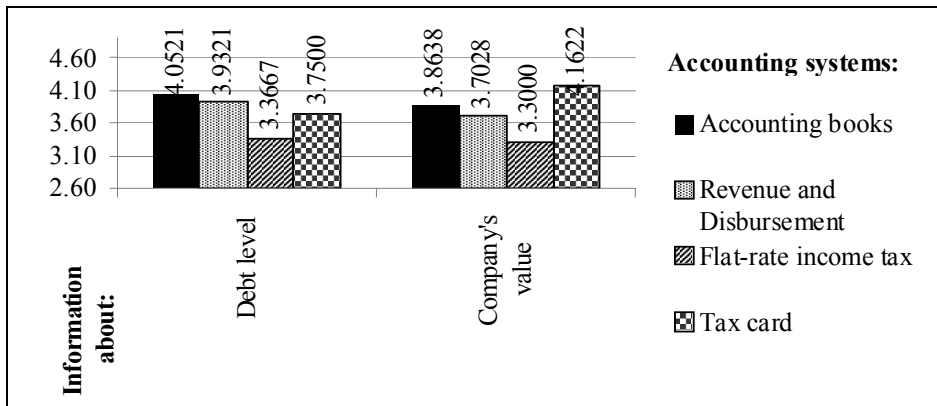


Fig. 5. Demand for Financial Information for Long-term Management Area According to Accounting System Used

The information about liquidity (4.3380) and profitability (4.0728) is the most important for companies keeping accounting books. Managers of companies with RaD rated highest importance of the information about demand for cash (4.0935). In turn, the information about operational efficiency is primarily interesting for companies taxed by the tax card (4.3333).

Enterprises keeping accounting books also assess the demand for the information about level of debt most highly (4.0521). The information about the company's value (4.1622) is the most important for entrepreneurs taxed by the tax card.

Small differences are shown in both figures (4 and 5) for assessment of information needs completed by the companies with accounting books and RaD. As a rule, the latter evaluate the usefulness of all types of information a bit lower, but the observed trend is very similar. The lowest information needs were reported by entrepreneurs taxed by the flat-rate income tax (2.8000 to 3.7667). The assessment of information needs of entrepreneurs with the tax card is the most differentiated but relatively high (3.7500 to 4.3333).

### **Findings and Conclusions**

The results indicate that small business managers consider the information concerning short-term management as more important. The relevance of information supporting long-term decisions was rated relatively lower. It confirms the widely recognized notion that small entities are primarily focused on survival in the short term. Their managers rarely see the business in the long term.

Entrepreneurs report the largest demand for information about financial liquidity. Payment congestions and the loss of liquidity are in fact the most common causes of bankruptcy among small enterprises. The information about costs incurred and planned is second on the list of information needs. Therefore, in addition to liquidity control, small companies are interested in managing costs. The information about revenue and profitability were assessed a little lower. This information is correlated with the second primary financial objective that companies try to implement, namely the achievement of profit.

During long-term decision making the managers are primarily interested in information about the debt level. Probably they see in it the risk for the continuation of the activity in the long term. The information about financial effects of planned long term activities was found almost as equally important. It means that managers would precede the decision resulting in the long-term by the accurate diagnosis of its implications for the enterprise. The information about the profitability of investments and about the company's financial position in relation to competitors and the business sector was also found as relatively important. The low demand for information about the cost of capital may be surprising. This assessment seems to contradict the widely accepted thesis about too expensive loans for small enterprises.

The hypothesis about the interdependence of information needs and the accounting systems used in the small enterprise sector was confirmed positively only partially. It is evident in the short-term management area (for more financial information). In long-term management the dependence is present in case of two types of financial information. In all cases this correlation is weak.

The most relevant information needs related to the general characteristics discussed previously are notified by enterprises with accounting books and Revenue and Disbursement. As for first type of companies managers rate the significance of the most information analyzed slightly more highly. The companies taxed by the flat-rate do not seem to appreciate the importance of financial information in decision-making, but for the enterprises with the tax card rated it surprisingly high. It concerns especially the information about operational efficiency (short-term management) and about the value of the company (long-term management).

Summarizing the results of the research, the weak correlation of entrepreneurs' information needs and the accounting systems should be noted (the second hypothesis was positively confirmed). Only accounting books provide relevant information which allows managers to assess liquidity, costs, revenue, profitability and the debt level. The financial statement prepared on the basis on accounting books is a good source for planning the financial consequences of the decisions made. It seems that managers who use these books appreciate their information value highly assessing the importance of financial information in decision making.

RaD without additional records does not provide relevant information for assessing liquidity and the debt level. On that basis, it is difficult to estimate the return on investment. Meanwhile, the managers of companies with RaD expect just such information. In the case of enterprises with the tax card (not keeping obligatory records) the lack of correlation between information needs and accounting system is especially evident. Only for companies taxed by the flat-rate, the low demand for information is accompanied by small information volume of the accounting system. However, it may result from the fact that the flat-rate tax is, as a rule, chosen by start-up enterprises having no experience in making economic decisions.

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## SPECIFIC ASPECTS CONCERNING CHOICE OF STRATEGY IN TRADE SMES

NICOLAE MARINESCU<sup>1</sup>

**ABSTRACT.** This aim of this paper is to emphasize the role of strategy within small and medium-sized enterprises (SMEs) operating in trade. First, some brief considerations are made on the particular traits of strategy in trade SMEs as described in various studies. Then, the most important strategic alternatives available to trade SMEs are analyzed in detail, according to various criteria. These alternatives are confronted with the empirical findings concerning strategic choice in trade SMEs active in Brasov city. The results from the empirical research undertaken before the start of the economic crisis show a somewhat different pattern to the strategic behaviour depicted by the literature. Nevertheless, the crisis has brought about some serious challenges for the strategic choices made by trade SMEs. The paper ends with some concluding remarks on the perspectives opening up to trade SMEs, in particular Romanian ones, in the new context of the European Single Market and the aftermath of the economic crisis.

**Key words:** *SMEs, trade, management*

**JEL Classification:** L81

### Introduction

In the case of trade SMEs, due to the paramount importance of the elements that can be found in the surrounding business environment of the company, strategy can be defined as the sum of all management efforts concerned with the guidance of the respective company as a response to the changes (opportunities and threats) in the environment, according to the competence it possesses and the available resources (Marinescu, 2006).

Moreover, the strategy of a trade company is the result of a decision process through which long-term objectives, main ways of action, resources and deadlines are set to define the present and future profit of the entity (Naghi and Stegorean, 2001).

Of all the elements defining strategy, resources play a key role in the case of trade SMEs. This is underlined by the following situations. An underestimation of liquid assets leads to a lack of cash necessary for building inventory of raw materials, goods etc. in order to develop the activity of the trade company in a continuous way.

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An overestimation of liquid assets leads to a blocking of cash in various inventory pieces of hard-to-sell goods.

According to Mercioiu (1998) the business strategy for trade SMEs is composed of the following elements:

- The decision of directing the investment towards a certain market or commercial activity, i.e. the scope of the market, the level of investment, the allocation of resources inside the business portfolio etc;
- Functional strategies, i.e. supply, research & development, marketing;
- The base on which a competitive advantage is built, i.e. assets, managerial capabilities.

The adoption of a certain strategic posture by the trade company influences the quantitative and qualitative characteristics of activities and the economic performance of the company as such. For example, diversification of services implies the development of technical capacity through the acquisition of new commercial equipment, remodelling the professional structure of the work force, changes in the characteristics of the supply, logistic and storage process of goods.

Research across EU-countries on companies operating in trade reveals that among the most important factors for success one can take into account the following: quality of products, fast delivery, flexibility, qualification of employees, good reputation of the company, incentives and services offered, managerial training, organization, ability to solve problems and creativity. We observe that qualitative factors dominate the quantitative ones, albeit low costs or a sound financial position (Buhrens, 1997).

### **Strategic Alternatives for Trade SMEs**

As the majority of trade companies are oriented towards the market, Antonoaie and Foriș (2002) suggest that the most adequate strategies for addressing the market open to trade SMEs are:

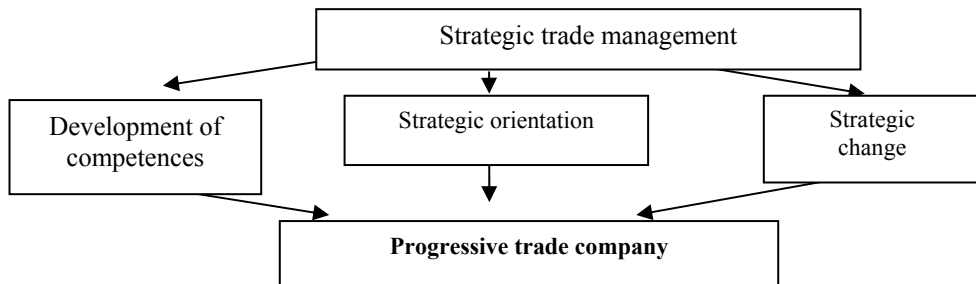
- Focus on a single market segment;
- Specialization on product / service on different markets;
- Specialization on a single market (all segments included);
- Selective specialization (choice of the most attractive segment on different markets).

Moreover these strategies can be combined according to the specific business environment the company operates in.

Empirical studies carried out on SMEs in the tertiary sector generally show that the highest profitability was reached by companies with aggressive pricing and low margins operating on the large-scale market or those focused on a market niche with high margins. In this competition of strategies, the exclusive character and the advantage of a low price, accompanied by superior quality in the services and the warranty delivered has proven unbeatable.

For trade SMEs, combining strategic planning with operations management (supply, handling, prices, promotion, and services for customers) is absolutely necessary to enjoy higher results than the average of the sector.

The dynamic environment in today's trade needs a new, modern approach of strategic management for trade companies. This approach should comprise according to German researchers Liebmann and Zentes (2001) three basic elements: development of competences that should lead to the consolidation of competitive advantage, strategic orientation and strategic change (see figure 1).



**Fig. 1.** A new approach of trade management

Source: Liebmann and Zentes, 2001

The first element consists in the continuous development of the firm's competences based on a rigorous organization and an orientation towards the customers. With the ascent of new forms of communication and the fabulous rise of e-commerce, trade management faces the challenge of building new fields of competence, if the respective enterprise does not want to lose its capacity of competing in the future.

Electronic networks pose new, diverse conditions to managers, taking into account that the classic organization and decision structures fade gradually. The management of the company has to be open-minded for change, but also creative enough to develop new management solutions.

The second element that characterizes trade management is the strategic orientation, so as to differentiate from competition. Alongside setting benchmarks for growth, the accomplishments of the company (e.g. product portfolio, services offered) are important for present and future customers. These decisions lead to the positioning of the company in a competitive setting and to a market profile that is considered when choosing suppliers.

Just setting the first two elements wouldn't yield results, if the respective company would not adopt an approach of strategic change that should orientate the company to a renewal of the structure and of the organization of operations implied. The goal is to implement a continuous optimization process.

According to Tietz (1993), the basic strategic orientation for trade SMEs comprises two options:

- Orientation towards customers, where certain market segments of customers are identified and the company chooses a business strategy to reach and service these segments;
- Orientation towards supply, where the company chooses its product portfolio according to its own perception of the price / quality ratio and tries to attract customers that fit the firm's strategy.

Within each strategic option, the focus can be set on prices or differentiation. Subsequently, four strategic alternatives emerge (see table 1).

**Table 1.** Strategic alternatives in trade

	Price more important than differentiation	Differentiation more important than price
Orientation towards customers	(1)	(2)
Orientation towards supply	(3)	(4)

Source: Tietz, 1993

The passing from general product portfolios according to capacity to clearly profiled portfolios, according to customer segments or to supply, leads to a better restructuring of the existing offer and confers a strategic direction.

Some authors even recommend giving up the traditional segmentation of customers when designing the strategy for trade SMEs, asserting that it should start from dividing the market in target-customers and non-customers or newer, as a supplementary criterion, in target-suppliers and non-suppliers. For an efficient strategy, the understanding of relevant markets and the competence of assessing them are of major importance.

Applying the framework of Porter's generic strategies to trade SMEs displays some specific features. Thus, although in the case of differentiation a company usually achieves a minor market share on the general market, in trade (retail, wholesale) a company might be able to enjoy a significant market share from the moment it multiplies its basic concept or it extends it via a network of subsidiaries. The strategy of the leader through quality does not include just differences concerning products or product lines, but refers to all activities of the company.

In the case of trade SMEs, the differentiation strategy can also manifest itself by means of the shopping ambiance, the close contact to the salesperson (as a general rule for specialty shops) or the speed of service.

The particular aspects of implementing the differentiation strategy show up especially in the primary activities of the value chain, considered relevant by customers:

- Assortment (quality level, choice available, brands offered);
- Communication policy (advertising, promotion etc.);
- Architecture and design of the shop;
- Display and merchandising of products.

When applying the differentiation strategy the optimal case for the firm is to separate itself from competitors on many levels. A major factor for success in achieving the leader status by differentiation in a certain commercial segment is represented by the sales force, directly responsible for the performance of the services offered. Specialty knowledge and professional competence are very important in this respect, as well as the ability of personnel to adapt to individual desires of customers and to offer specific counselling.

The dangers of the differentiation strategy in the case of trade SMEs appear in the following situations:

- Price differences comparative to competition are very large, or are perceived as very large, so that customers are not willing to pay the extra difference in price, despite leader status of the products and prefer the risk of giving up high quality, image or service;
- Quality features are not considered relevant by customers or the prior profile of the firm has lost its importance;
- Competitors launch imitations on the market for the products and services offered and the uniqueness of the qualitative aspect is thus lost for the respective firm.

Risks are considerably higher when the differentiation feature (e.g. store design) is easier to replicate by competitors. As a principle, the consequences of imitation are much lighter when it comes to an emotional trait, such as closeness to the customer, which dominates certain areas of trade. A successful differentiation strategy leads to an increase in customer loyalty. A strong loyalty can become the most difficult barrier to surpass by competitors. Especially in stagnating markets, keeping one's own customers is a priority compared to gaining new customers, as the investments needed are much lower.

If a trade SME chooses the cost leadership strategy, two important assumptions have to be fulfilled:

- It has to reach a relatively high market share so as to take advantage of economies of scale and experience;
- It has to push continuously towards measures for standardization and cost reduction along the whole value chain and at the intersection with the value chains of partners.

Another condition is to fulfil quality standards so as to guarantee a performance at least similar to that of competitors and achieve a higher than average profitability.

Purchasing conditions play a major role in the low-cost strategy employed by trade SMEs, taking into account the importance of suppliers. The market share and bargaining power enjoyed by the firm are positively correlated to the lowering of the prices of goods purchased from suppliers. Nevertheless, to achieve such convenient terms, the quantity purchased has to be significant, at least from a selected item, which is difficult to achieve by the majority of trade SMEs.

The strategy of cost leadership is not solely based on purchasing at minimum prices but implies also a tight control of all activities, as the total costs of a trade SME do not depend only on the costs of goods supplied, but also on operational costs.

To achieve a cost advantage relative to competitors the firm has to optimize the value chain in all functions (product line, purchasing, storage, marketing, etc.), compared to the differentiation strategy, where selling activities are paramount.

Here are some of the measures that can be taken to accomplish a cost advantage:

- Giving up on a sophisticated design of the store;
- Scaling down of the service offered;
- Limiting the product lines;
- Building an efficient logistics for purchasing and distribution;
- Implementing a valid information system.

One of the major present tendencies in the context of cost leadership is the focus on essential competences and the outsourcing of logistics to specialized firms. Moving inventory with a high speed and stocking only orders of a small scale, in a “just-in-time” manner, represent characteristics of the cost leader. This strategy is not solely reserved to large companies that have the necessary resources to build a high market share, but also to SMEs. A modern system of distribution, such as the franchise confers SMEs the possibility to capitalize on economies of scale. The cost advantage in a franchise system is obtained by multiplying a standard business concept towards more locations.

The difficulties with the low-cost strategy stem from the following reasons:

- The firm has to be oriented always towards cost control and diversions to other product lines or business fields are problematic, as they usually incur a cost increase;
- Technological changes, imitations introduced by competitors or price reductions may harm the generic strategy of the respective firm;
- Despite a consistent cost orientation, the firm has to maintain a certain flexibility to bring changes in the supplied product lines or in the marketing of products, once some of the goods reach maturity and customer expectations tend to become more complex.

### **Empirical Findings**

Trade SMEs form the most important part of the SME sector in Romania, with almost 39% of the total number of SMEs (Nicolescu et al., 2007). Braşov, one of the largest cities in Romania, boasted in the period before the outbreak of the international economic crisis more than 3,500 active SMEs in trade, of which around 870 SMEs displayed a positive turnover and more than 1 employee (CCMIPIMM Braşov, 2006). From a series of empirical researches conducted by the author in the city of Braşov in that period (2005-2007), several interesting insights and results on the strategic behaviour of trade SMEs have emerged.

More than 110 trade SMEs were targeted for research. Managers of trade SMEs selected in a statistically representative sample were approached with a semi-structured questionnaire with most of the questions of closed type, but also comprising some open questions to let managers share their views on various aspects. Several questions referred to the existence, design, use and implementation of strategy.

The empirical findings show that a lot of the managers in trade SMEs do not consider following any strategy at all. Despite this situation, strategy is the most useful tool to guide a company in a turbulent market environment. Unfortunately, more than half of the managers of the SMEs surveyed (58 per cent) don't engage in planning activities. This calls absolutely for the need to plan ahead and then adjust strategy to the specific context in which each company operates.

For most of the cases, there is a lack of vision and of a definite strategy in the management of the firm. The "always in a hurry" attitude demonstrated by managers leads to the idea that they rarely take their time to reflect on the direction in which the firm is going. Even if for SMEs, intuition is an important part of the managerial behavior and strategy is made up in the mind of the entrepreneur, SMEs surveyed were far from a complete strategic behavior in the real sense of the term. Strategy is more an activity, a collection of actions than a definitive plan based on the idea to gain a competitive advantage.

To most SMEs surveyed, following one of Porter's generic strategies is completely unknown. They switch from one side to the other, being caught in the "middle trap" (Marinescu, 2005). Indeed, 64 per cent of the surveyed SMEs think of themselves as delivering superior quality but at the same time 80 per cent of them consider having lower prices than competitors. Moreover, they generally have little information about rivals (or even do not care about them) and about their own competitive position.

Managers of SMEs do set some objectives, mostly operational, for the activity of the firm they run. The time horizon for setting objectives is though generally limited to one year, 64 per cent of managers stating their objectives are set for timeframes of one year or even shorter periods. This is partly due to the pronounced seasonal character of trade, where SMEs have to cater for frequent changes in the environment and partly due to the generally low level of managerial training, as discovered during the research.

According to the mainly operational planning undertaken in SMEs, control activities are carried out almost continuous. Monitoring results and comparing them to the objectives set is an operation performed by up to 74 per cent of managers, but not all of them measure results in terms of financial performance of the firm.

To sum up, the research reveals some deficiencies concerning the management of trade SMEs, including poor or no strategic planning, reliance almost solely on intuition, neglect of competition, lack of knowledge about the own competitive position and other elements (Marinescu and Antonoaie, 2006).



European integration was considered by many authors a scare for Romanian SMEs in general, and trade SMEs in particular, due to increased competition and the regulatory burden. Many anticipated a massive closure rate but the negative outcomes of this process were largely overstated, as practice demonstrated.

Accession to the European Union didn't generate large turmoil for trade SMEs in Romania, but the economic crisis which has engulfed most of Europe did. A significant part of small retailers and wholesalers closed down operations once internal demand fell quickly as a consequence of recession. The trade sector together with the construction sector displayed the highest percentage of closures in the Romanian economy according to national statistics. Governmental policy was not extremely helpful to counteract negative effects of the crisis for SMEs. On the contrary, Romanian authorities introduced May 2009 a minimum lump-sum tax for all enterprises, irrespective of their size, measured in employees or turnover. Even SMEs that reported losses or did not carry out officially registered activities during the year were not exempt from the new tax.

Subsequently, even though the estimated purpose of the tax was to gather more budgetary revenues, fight tax evasion and get rid of shadow companies, the tax yielded in practice a totally different result. A lot of SMEs suspended their activities or closed down completely generating an increase in unemployment, and budgetary revenues did not rise as a consequence. Considered afterwards a failed measure, authorities decided the elimination of the lump-sum tax in October 2010.

## **Conclusions**

Retailing within the European economy is one of the success stories of the late twentieth century. The sector has expanded in volume and variety of activity; productivity of labour and capital has risen; retailers have responded positively to the challenges of new information and communication technologies. (...) At the same time the sector has seen the birth of many small firms which are successful at a local and family level. In looking for an economic sector where good management practice can be viewed through all sizes of firms, then the retail sector is particularly prominent (Dupuis and Dawson, 1999).

Still, the weaknesses of many SMEs active in European trade consist in too large product lines, too long value chains, too many operations and an excessive centralization of decisions. Successful firms distinguish themselves through simplicity, a feature that surfaced also in the comprehensive study carried out by Jim Collins and his team in his bestseller book "Good to Great" on the most successful American companies over a long timeframe (Collins, 2001). They adjust their product portfolio and the structure of their customers, optimize the number of operations and tend towards an integration of the product portfolio development by cooperation between research, purchasing, marketing, production and distribution.

Trade SMEs of the future won't have incorporated in their own structure the whole ensemble of functions typical to management (i.e. with a few exceptions). They

direct themselves towards a volatility of their own frontiers towards the business environment, which does not include the consumer only, but also responsiveness to suppliers and competitors, to economic policy and to information and technology. Eliminating the frontier between firm and environment is essential for success.

Such a restructuring should be accompanied by the transfer of decision to executive posts and to autonomous work teams. These teams can take decisions faster and adapt quicker to changes, requirements and expectations.

One of the main weak points of Romanian trade SMEs consists in an organizational structure built on the premises of classic management, with jobs located in a hierarchical structure along functions and supervised from above. In line with the tendencies on the European Single Market, the focus on core competences, associated with the outsourcing of activities that can be developed more efficiently by third parties will hopefully become mainstream in the years to follow.

Concerning the strategy employed by trade SMEs in Romania, the view of the author is that strategic planning is an instrument that should not be missing in any firm. Even if the planning efforts are rather time-consuming, the formulated strategy is important for orienting and bundling the activities of the firm, to position it in the surrounding market environment and to supply the entrepreneur with relevant signals related to the evolution of its business. As a consequence, the benefits of a well-designed strategy exceed in the majority of cases the efforts and costs incurred by the necessary planning. The experience of Romania and other EU-countries shows that firms that have engaged in planning achieved better results than those that have neglected this managerial aspect.

The recent economic crisis has brought about some serious challenges to trade SMEs, confronted with a shrinking of their usual market.

From the discussed typology of strategies available to trade SMEs the one suggested is the differentiation focus, based on a narrow segment or a niche market. This choice of strategy is particularly recommended under the circumstances that more and more customers, "assaulted" by an excess supply of products and information, will direct themselves towards specialised firms and shops. This would also lead to an increase in the value added provided by Romanian trade SMEs and would form a sound alternative to resist to competitive pressures on the Single European Market.

Unfortunately, in the Romanian trade sector cost reduction measures are a mainstay of activity compared to measures for increasing value added. Cost reduction works short-term, brings visible and fast results and can contribute to the mitigation of competitive disadvantages. Such measures are of operational nature though and have little in common with strategic renewal of the company activities, which is a lasting process. Innovations and progress are needed to achieve this aim, as well as focusing on new markets or market segments and providing outstanding services.

Once the competition on the European market will gather momentum in the aftermath of the economic crisis, trade SMEs will have to (re)define their strategies. Moreover, besides designing and applying a clear strategy, significant organizational

changes are needed in trade SMEs including the implementation of an organizational culture oriented towards optimizing processes, having a faster reaction to environmental factors, cooperating with other firms and getting closer to the customer.

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## **SMES' CONTRIBUTION TO THE KNOWLEDGE-BASED SOCIETY PERFORMANCE AND THEIR SUPPORT WITHIN THE CZECH REPUBLIC**

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ZDENĚK MATĚJA<sup>3</sup>**

**ABSTRACT.** The article deals with the role of small and medium-sized enterprises, especially of the so-called high-tech enterprises, in terms of their contribution to the knowledge-based society performance in the Czech Republic. The research is based on background research of relevant scientific literature, official statistics and documents, as well as on authors' study of preliminary research works related to this issue.

Our attention is focused on (absolute) efficiency indicators of high-tech enterprises (revenues and value added) and on their relation to the number of employees. The analysis is performed both by size and industry groups covering the period 1995-2005.

Special attention is paid to the comparison of monitored indicators achieved in high-tech enterprises operating both in manufacturing and in services, considering the importance of the tertiary sector in developed economies.

SMEs represent a significant element of each market economy; they are considered as important innovation potential bearers and have significant impact on regional cohesion. Therefore they are supported both at the European Union level and at the national level. Such support has its tradition and is characterized by new trends and new (currently having been prepared) instruments.

The aim of this article is to find answers to the following issues:

- Is the reason for promotion of small and medium-sized enterprises rather in their capacity of being market stabilizers with regard to the employment issue, or of contributors to the knowledge-based economy performance in the Czech Republic?
- Is there an upward trend in the efficiency indicators and in the high-tech enterprises development indicators in the Czech Republic and does this trend correlate with growth of wealth in the Czech economy?
- Does the trend of the high-tech services indicators correspond to increasing contribution of the tertiary sector to the creation of wealth in comparison to the high-tech manufacturing companies' indicators?
- Do support tools correspond to trends and needs of small and medium-sized enterprises in the Czech Republic?

**Key words:** *knowledge-based society, performance, SMEs, support tools*

**JEL classification:** L53, O14, G38

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## 1. Introduction and Review of Literature

European economy has been lagging in a globalizing world. Its position has been replaced by Asia's economies, especially by China with its great economic growth (Kraftová, Kraft, 2009). The current (problematic) situation has influenced the European Union (EU) economic strategy, which is summarized in the „Europe 2020“ plan for the upcoming period 2013 – 2020. With the aim of reaching the so-called smart growth, there was declared the „Innovation Union“ initiative to strengthen innovation chain and to increase the volume of investment (European Commission, 2011). The relative weak position of the EU countries in the world, in terms of ability of companies to absorb new technologies, was demonstrated by the data of the World Economic Forum, according to which only three countries from six countries with the highest absorption capacity were European and only two were the EU countries (Sweden and Finland). When compared with the global average score, which was 4.8, the Czech Republic was placed as the 33<sup>rd</sup> country with the score of 5.3 (World Economic Forum, 2008). Efforts to support economic reforms with the aim to encourage the knowledge-based society progress, in which are results of research and development implemented into advanced innovations, are obvious even in many European countries, including the Czech Republic. This fact is reflected also in the national reform program announced under the title “Investing in Europe's competitiveness” launched by the Government of the Czech Republic in May 2011 (Vláda České republiky, 2011). Some countries have problems with ability to use their potential to build and develop the knowledge-based economy, which would help them to become a competitive economy oriented toward higher value added; this statement is a part of the evaluation of the Slovak economy provided by the American Chamber of Commerce (Ivanička, 2009).

For economic growth, scientific and technical progress, there are fundamental activities of high-tech enterprises in many countries. These countries use, on one hand, innovation in advanced technology, and on the other hand, they are a source of innovation and creativity. Their impact on economies or economic performance of other companies is essential. Quality of production that is created by high-tech enterprises enables consumption with higher satisfaction of customers/ consumers. It also usually means more environmentally friendly production. Very important is also the multiplier effect that is caused by high-tech companies. It means that their investments generate a wide range of investments in other companies in a classic sense of the investment multiplier. In this context, they can have as effect the principle of acceleration, which generates an opposite trend, a decreasing effect of multiplied range of quantities (Kraftová, Kraft, 2008).

Small and medium-sized enterprises (SMEs) operating in high-tech sector have a significant innovation potential (Nikolaev et al, 2010). SMEs work more at the local or regional level, but seldom at global level. Nevertheless, they are influenced by globalization because it has changed the scope and the nature of the

competition. Given the large number of SMEs, they play a role of stabilizers of economy. Also important are their flexibility and their capacity for absorbing innovations. That is why economic policy at the national level and economic policy in the EU level pay attention to SMEs and support them. This support can be also understood as protecting SMEs from negative effects of globalization. However, there remains the question, whether is it effective?

The aim of this article is i) to analyze development of the performance indicators and progress of high-tech enterprises in the Czech Republic in relation to growth of the Czech wealth, ii) to compare the development of SMEs operating in high-tech services (SME HTS) with that of SMEs operating in high-tech manufacturing industry (SME HTI) and iii) to attempt to answer the question whether there is the reason why to promote SMEs as market stabilizers linked to the issue of employment, or as contributors to the knowledge-based economy performance, and iv) whether support tools correspond to trends and needs of SMEs in the Czech Republic.

## 2. Material and Methods

This research is focused on high-tech manufacturing sector, since this industry is considered to be a driving force in advanced economies, and on high-tech services with a view to dynamically increasing contribution of the tertiary sector to the wealth creation. In accordance with the OECD methodology (Hatzichronoglou, 1997), into the SME HTI group there are included

- the “pharmaceuticals” industry,
- the “manufacture of office machinery and computers” industry,
- the “manufacture of radio, television and communication equipment and apparatus” industry,
- the “manufacture of medical, precision and optical instruments, watches and clocks” industry,
- the “manufacture of aircraft and spacecraft” industry, while into SME HTS group there are included:
- the “connections” industry,
- the “activities in the field of computer technology” industry and
- the “research and development” industry .

For the current research, secondary data are used, mainly data from special surveys of the Czech Statistical Office. It is examined the period 1995 – 2005 as a period of a relatively stable progress of the Czech economy.

There are compared performances of both groups, i.e. SME HTI and SME HTS, using the added value created by them (added value as a residual of production and production consumption) in comparison to total added value created by high-tech enterprises of both SME groups. There is also assessed the correlation between this indicator and total added value in the Czech economy. Total added value has been chosen as an indicator that is included in the indicator of gross domestic product

and that is monitored by sector. There is a residual between production and intermediate consumption that represents about 90 % of gross domestic product with almost one hundred percent correlation rate in the long term (Kraftová, Kraft, 2009).

For both groups of SMEs, there is assessed the development of their performance (measured as revenues from their own products, services and merchandise at current prices) and of the number of their employees (measured as average number of employees in natural persons) – both in absolute values and as a share in total values (i.e. including the so-called large enterprises). Related to this, there is assessed the labour productivity in monitored groups of SMEs in comparison with large enterprises of the SMEs' groups. Special attention is paid to the analysis of the SMEs' support tools in the EU and especially in the Czech Republic with emphasis on the financial engineering instruments.

### **3. Results and Discussions**

Results of the research can be divided into three headings: first, it is consistency of total value added created in the Czech economy with the creation of value added in high-tech manufacturing industry and services with emphasis on SME HTI and SME HTS, both on development of performance (and thus of importance) of SME HTI and SME HTS in terms of the volume of revenues and their employment and labour productivity in comparison to the large enterprises. The third part is assessment of current and upcoming SME support tools.

#### **Value added in high-tech sector in comparison to the creation of total value added**

The knowledge-based economy is characterized by creating high added value. When it comes to consider the inputs of enterprises with knowledge-intensive production, the most important input mentioned is the added value and not production consumption. Its very important components are wages and salaries or depreciation of assets. In the period 1995 – 2005, there was found an upward trend of total added value in Czech economy, which was quite steady and, when measured at current prices, the total added value doubled. It is a positive aspect that the added value increased with a higher dynamics in high-tech industries: in manufacturing sector, the 2005/1995 index reached the value of 2.4, while in services sector it was of 3.08. Different trend were registered in SME HTI and SME HTS. The first group was lagging slightly in dynamics of added value while the second one exceeded the dynamics of total added value in the Czech Republic (almost double), as shown in Table 1.

In Table 1, there are illustrated the shifts in contribution of some high-tech groups to total added value. There are differences between manufacturing industry and services. It can be seen that there was an increased contribution to total added value in manufacturing industry as a whole. The most important element there was

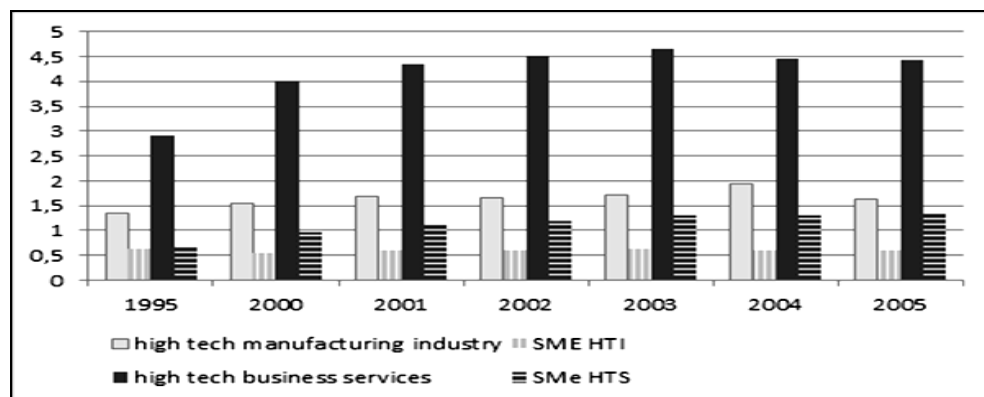
represented by the large enterprises that enabled this increase, while SMEs operating in high-tech manufacturing industry decreased their contribution to total added value for the period 1995 - 2005.

**Table 1.** The 2005/1995 growth index of value added in selected high-tech groups and the index of their contribution to total value added in the Czech Republic in the period 1995 – 2005

	Index 2005/1995
Value added created in high-tech manufacturing industry	2,48
Value added created in SME HTI	1,94
Value added created in high-tech services in business sector	3,08
Value added created in SME HTS	3,90
Total value added	2,02
Share of value added created in high-tech manufacturing industry in total value added created in the Czech Republic	1,23
Share of value added created in SME HTI in total value added created in the Czech Republic	0,96
Share of value added created in high-tech services in business sector in total value added created in the Czech Republic	1,53
Share of value added created in SME HTS in total value added created in the Czech Republic	1,93

Source: own elaboration based on Český statistický úřad (2005), Český statistický úřad (2007b)

On the contrary, high-tech services industry as a whole increased its share in total value added and the most dynamic elements were the SMEs. Chart 1 shows that the annual changes were not dramatic within the period.



**Chart 1.** Comparison of each segment shares in total value added (%)

Source: own elaboration based on Český statistický úřad (2005), Český statistický úřad (2007b)



There should be mentioned the fact that the highest growth rate in high-tech services was recorded in the computer technologies industry (more than 300 %) between 1995 and 2005. The lowest increase was recorded in the research and development industry (about 125 %), which was related to the decrease of employment in this industry with about 1/3.

It is obvious that high-tech sector in the Czech Republic was driven by information and communication technologies that currently represent the infrastructure base of economic globalization.

The evolution of total added value and the evolution of each high-tech sector segment show a high correlation coefficient: above 0.95; the highest correlation coefficient was found for SME HTS (it was more than 0.99); high-tech services were also approaching this value (higher than 0.97).

### Revenues, employment, productivity

Besides value added, there can be considered revenues as a performance indicator (i.e. revenues from own products, services and merchandise).

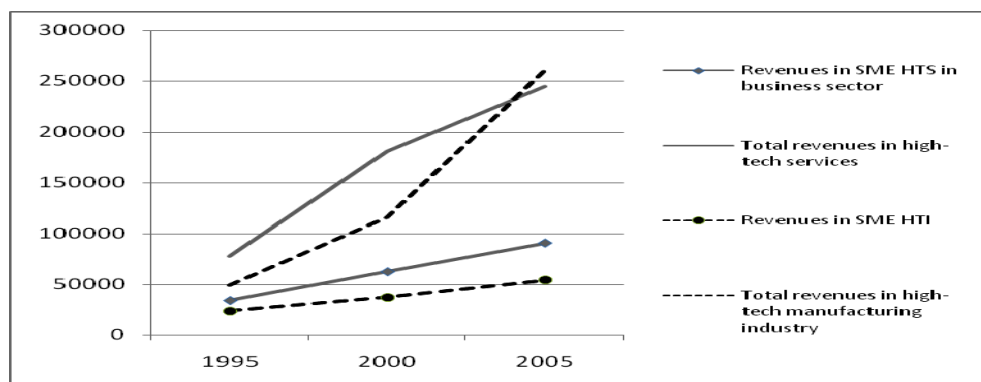
Table 2 illustrates the evolution of revenues and their 2005/1995 growth index. The share of SME HTI revenues in total revenues of HTI decreased from 48 % to 21 %. The share of SME HTS revenues in total revenues of HTS also declined but this decrease was not so significant, from 44 % reached in 1995 to 37 % in 2005.

**Table 2.** Revenues and the 2005/1995 growth index (in million CZK at current prices)

	1995	2000	2005	Index 2005/1995
Total revenues in HTI	49 382	115 896	260 401	5.27
Revenues in SME HTI	23 482	37 134	54 422	2.32
<i>Share of SME HTI revenues in total revenues in HTI</i>	<i>48 %</i>	<i>32 %</i>	<i>21 %</i>	<i>0.44</i>
Total revenues in HTS in business sector	78 149	181 467	244 782	3.13
Revenues in SME HTS in business sector	34 120	62 641	90 835	2.66
<i>Share of SME HTS revenues in total revenues in HTS in business sector</i>	<i>44 %</i>	<i>35 %</i>	<i>37 %</i>	<i>0.85</i>

Source: own elaboration based on Český statistický úřad (2005)

The 2005/1995 index shows a generally increase in revenues and a decrease of SMEs' share in total revenues. Chart 2 shows the decline in SMEs' revenues compared with total revenues.



**Chart 2.** The evolution of revenues in the selected groups of enterprises (revenues in million CZK at current prices)

Source: own elaboration based on Český statistický úřad (2005)

Growth of revenues in SME HTI (index 2.32) was affected by the upward trend in the “manufacture of aircraft and spacecraft” industry (9.61) and in the “manufacture of office machinery and computers” industry (3.96) most positively. The lowest increase was monitored in the “manufacture of radio, television and communication equipment and apparatus” industry (2.09).

The highest increase in revenues in SME HTS (index 2.66) was found in the “activities in the field of computer technology” industry (3.07), the lowest increase in the “research and development” industry (1.26).

Another part of this analysis focuses on the number of employees (i.e. the average number of employees in natural persons). Overview of the basic data is in presented in Table 3.

There was an increased in the total number of employees (index 1.16) in HTI for 1995 – 2005. The number of employees in SME HTI increased with higher dynamics (1.23), which means an increase in total number of employees from the original value of 37 % to 39%.

The total number of employees in HTS in business sector dropped slightly (index 0.98). However, this decline did not concern SME HTS because on the contrary, their number increased significantly (1.66). A consequence of these shifts was an increase in the proportion of employees in SME HTS from 23 % to 39 %.

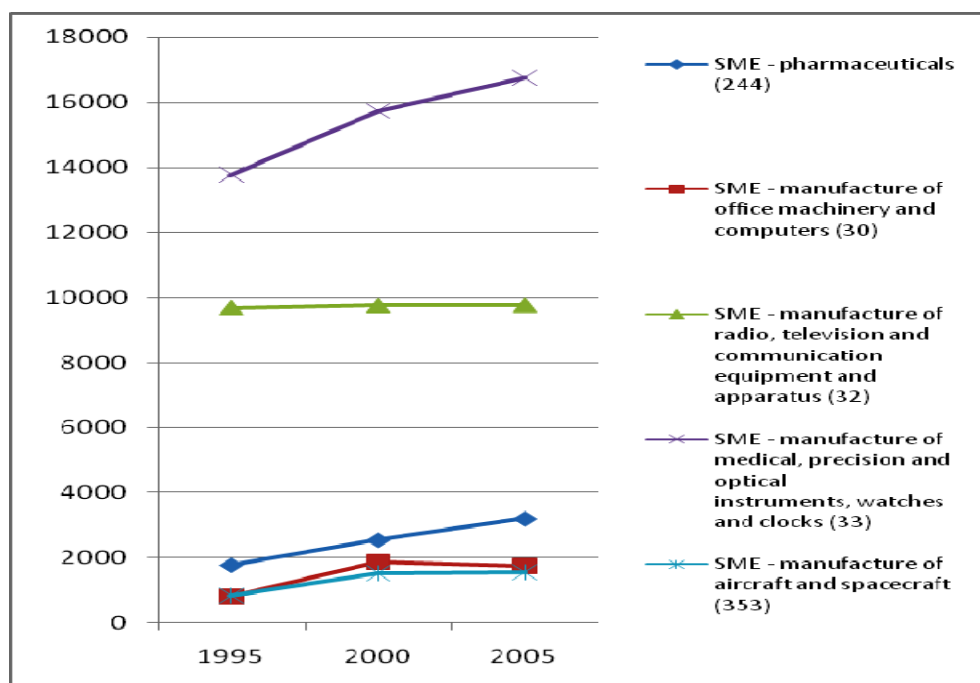
In the monitored period, there were balanced both groups of SMEs when it comes to the indicator of share of the number of employees in total number of employees, for both groups it was the same value of 39 % in 2005.

The number of employees' distribution and their changes in each SME HTI and SME HTS industry are presented in Chart 3 and Chart 4. An interesting progress was registered in HTS, where the number of employees in the “activities in the field of computer technology” industry doubled; a drop by one-third in the number of employees was registered in the “research and development” industry.

**Table 3.** Number of employees and the 2005/1995 growth index

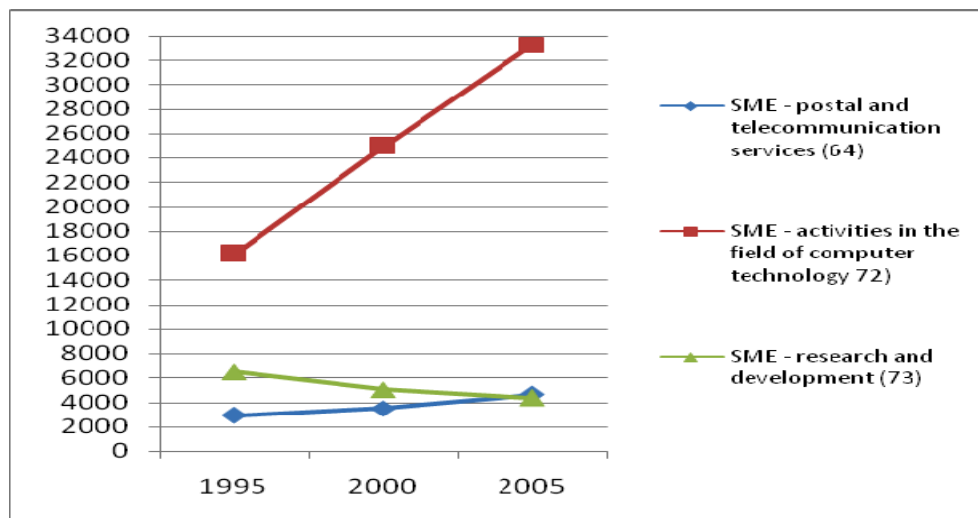
	1995	2000	2005	Index 2005/1995
Total number of employees in HTI	72 299	72 959	84 038	1.16
Number of employees in SME HTI	26 874	31 469	33 044	1.23
Share of the number of employees in SME HTI in total number of employees in HTI	37 %	43 %	39 %	1.06
Total number of employees in HTS in business sector	111 544	105 642	109 463	0.98
Number of employees in SME HTS in business sector	25 490	33 453	42 258	1.66
Share of the number of employees in SME HTS in total number of employees in HTS in business sector	23 %	32 %	39 %	1.69

Source: own elaboration based on Český statistický úřad (2005)



**Chart 3.** Evolution of the number of employees in SME HTI

Source: own elaboration based on Český statistický úřad (2005)



**Chart 4.** Evolution of the number of employees in SME HTS in business sector

Source: own elaboration based on Český statistický úřad (2005)

The last of examined indicator is the labour productivity. This indicator was constructed as a ratio of the added value (in million CZK at current prices) and of the number of employees (the average number of employees in natural persons). The result is represented by the added value (in million CZK) per employee.

**Table 4.** Labour productivity and the 2005/1995 growth index

	1995	2000	2005	Index 2005/1995
Labour productivity in HTI	0,25	0,42	0,52	2,13
Labour productivity in SME HTI	0,32	0,34	0,50	1,57
Labour productivity in HTS business sector	0,35	0,75	1,09	3,14
Labour productivity in SME HTS business sector	0,36	0,59	0,85	2,35

Source: own elaboration based on Český statistický úřad (2005), Český statistický úřad (2007b)

Table 4 illustrates an increase in labour productivity in all monitored groups of companies for the period 1995 - 2005. Labour productivity in HTS in business sector was higher than labour productivity in HTI; even higher its growth dynamics. The same conclusion can be drawn when SME HTS in business sector are compared with SME HTI. Generally, large enterprises have done better than SMEs because there were found higher growth dynamics in the whole group in both cases, than for each group of SMEs.

## **SMEs' support tools in the Czech Republic**

Czech SMEs have been supported by both national and pan-European programs. The aim according to Ministry of Industry and Trade of the Czech Republic (2010) is to promote SMEs' performance and competitiveness in order to reduce disadvantages resulting from their low economic strength (Ministry of Industry and Trade of the Czech Republic, 2010). Since the Czech Republic accessed the EU, the development of SMEs has been focused on their qualitative characteristics, the need to strengthen quality of SME sector being considered as most important. These characteristics should generate the abilities to compete internationally (Ministry of Industry and Trade of the Czech Republic, 2006), not only because of cheap labor, but also due to the increasing efficiency of business activities, and the ability to recognize and respond, in a flexible way, to business opportunities (Ministry of Industry and Trade of the Czech Republic, 2006). Currently, SMEs' support has been funded mainly from the EU programs and was supplemented by the national programs that are available for enterprises of all sizes. The European Union (EU) aims to make finance accessible to SMEs due to favourable regulatory environment, enhancing access of SMEs to markets and by supporting and promoting entrepreneurship.

Czech SMEs' support is regulated by the Act No. 47/ 2002 Coll., on support of Small and Medium-Sized Enterprises and by the Act No. 218/ 2000 Coll., on budgetary rules, and by the Commission Regulation No. 800/ 2008, which defines areas of public promotion compatible with the common market, and by the Commission Regulation No. 1998/ 2006 on the application of articles 87 and 88 of the Treaty to de minimis aid. National programs are implemented by the Ministry of Industry and Trade of the Czech Republic (CR), by the Ministry of Agriculture of the CR and also by the Ministry of Labour and Social Affairs of the CR within the active employment policy.

The Act No. 47/ 2002 Coll., on support of Small and Medium-Sized Enterprises, defines as projects, which can be supported, the following:

- investment, especially investments related to environmental protection;
- educational and training projects within the curricula of secondary schools completed with vocational certificate;
- projects improving skills, economic and technical consultancy;
- projects concerned with development of SMEs and with strengthening SMEs' market position or obtaining information on business;
- projects related to research and development, which results are used by SMEs;
- projects enabling job creation;
- projects establishing contacts and cooperation with foreign partners, participation in national and international exhibitions and fairs;

- projects concerned with the implementation of systems enabling the increase of production and management quality and the utilization of services supporting the increase in competitiveness,
- projects in regions with active public support and in other regions, which support is desired for other reasons. Act No. 47/2002 Coll

Forms of support are [Act No. 47/2002 Coll.] repayable financial assistance, subsidies, financial contributions, guarantees or loans with reduced interest rate.

Within institutional support, there could be found mainly the Ministry of Industry and Trade, the Investment and Business Development Agency (CzechInvest), the Czech Trade and the Czech-Moravian Guarantee and Development Bank<sup>4</sup>. Business and innovation centres play also an important role; it is the example of the Science and Technology Parks Association CR and other business innovation centres. These centres support the creation and development of innovative businesses. They offer assistance in business plans creation, fund-raising for SMEs, and help to integrate SMEs into European networks and programs. There also provide the so called CzechPOINT, which aim is to reduce administrative burden and facilitate communication with authorities and institutions.

For the 'Conception of support for small and medium-sized enterprises 2007 – 2013' was provided the amount of up 19.3 billion CZK from the state budget; in the previous period the support was of about 16 billion CZK (Ministry of Industry and Trade of the Czech Republic, 2006).

The aim of the 'Conception' is to create a sustainable basis for providing direct support for SMEs through guarantees, soft loans and venture capital. The aim is supposed to be fulfilled through allocation of Structural Funds. There is desired an increase in interest of private capital providers, of banks especially, in funding of SMEs' progress, especially funding of modernisation of technical equipment of SMEs, and to extend the infrastructure through science and technology parks, business incubators and clusters, again through allocation of Structural Funds.

Direct SMEs' support is based on the following principles (Ministry of Industry and Trade of the Czech Republic, 2006):

- the principle of increasing the utilisation of programmes making capital accessible to SMEs, especially private capital. These programmes are based on the principle of full or partial return and on risk diversification.
- the principle focusing on grants for the knowledge-based economy development and on support to counselling, information and education services, integrating the support projects for increasing SMEs' competitiveness with regional support enabling the differentiation of support intensity and increase in support for projects with high benefits for domestic economy and regional development

<sup>4</sup> The Czech-Moravian Guarantee and Development Bank provils assistance to SMEs, facilitates the implementation of the Government nation-wide economic strategy and regional policy related to economic sectors, which require support of public finance.

(i.e. job creation in some regions, especially in regions with active public support, saving energy, development of selected industries).

- then it is the principle of support oriented toward products with greater finality and better utilisation of inputs and with favourable impact on the environment.

Support programmes should arise, primarily, from the identified weaknesses of entrepreneurial environment. The survey Český statistický úřad (2007a), which was provided by Czech Statistical Office, showed that entrepreneurs establishing a company have the biggest problems with fund-raising, establishing contacts with customers and with administrative burdens. Further progress of companies is limited mainly by legislative and administrative burdens and by corporate profitability. Table 5 shows the current support programmes valid in the Czech Republic with allocation in 2009.

**Table 5.** Overview of funds paid for SMEs' support in the Czech Republic in 2009 (in million CZK)

<b>Programmes</b>	<b>CR public funding</b>	<b>EU public funding</b>	<b>Financial market (ČMZRB)</b>	<b>Total</b>
OPPP (Operational Programme Industry and Enterprise)	19.8	59.36		79.16
OPPI (Operational Programme Enterprise and Innovation)	651.6	3 693.10	80.2	4 424.90
MPO (Ministry of Industry and Trade) - Záruka	787.5			787.5
MPO – Výzkum, vývoj	1 261.20			1 261.20
MPO – Zahraniční veletrhy a výstavy	95			95
CIP (Competitiveness and Innovation Framework Programme) – TC (Technology centres) and SC (Centres of strategic services)	318.152			318.152
MPO - Úspory energie	16.29			16.29
Informační místa pro podnikatele	48.962			48.962
BISONet	19			19
PRV (Podpora rozvoje venkova, i.e. Rural Development Programme)	265.975	797.925		1 063.90
<b>Total</b>	<b>3 483.48</b>	<b>4 550.39</b>	<b>80.2</b>	<b>8 114.06</b>

Source: Ministry of Industry and Trade of the Czech Republic, 2010

Note: ČMZRB: Czech-Moravian Guarantee and Development Bank

The ‘Operational Programme Industry and Enterprise’ was valid in the period 2004 – 2006 primarily but its validity was extended to June 30, 2009. Currently, this programme was replaced by the Operational Programme Enterprise and Innovation. Its aim is to increase the competitiveness of industry and entrepreneurship, to maintain

the attractiveness of the Czech Republic, its regions and cities for investors, to support innovation, faster uptake of results of research and development, especially through stimulation of demand for research and development results, through commercialisation of research and development results and through utilisation of new technologies and new information and communication technologies. For funding from the operational programmes, there is typical co-financing of the EU and the Czech Republic.

The “Záruka” programme is another of the national programmes and concerns the guarantees needed to secure loans provided by the Czech-Moravian Guarantee and Development Bank.

The national programme “Zahraniční veletrhy a výstavy” is promoting the participation in fairs and exhibitions, and offers support for technology centres and strategic services. Its aim is to promote investment into innovation activities in the field of high-tech products.

Part of national programmes is also the programme of energy saving and renewable resources (the “Úspory energie” programme).

Information is freely available for entrepreneurs in some information points working for them (the “Informační místa pro podnikatele” programme).

BISONet is part of the Enterprise Europe Network and provides educational events for entrepreneurs, access to databases matching supply with demand, technology transfer, fund-raising guidance, intellectual property protection etc.

The Rural Development Programme falls within cognizance of the Ministry of Agriculture and its aim is to support the expansion and diversification of economic activities in rural areas in order to help the development of entrepreneurship, to create new jobs and to reduce unemployment in the countryside.

For evaluating effectiveness of public support, there are some measurable indicators for each programme. There are compared values of selected economic indicators achieved by the end of the third year of providing support to values of indicators achieved in a year preceding the grant/ support (Ministry of Industry and Trade of the Czech Republic, 2010).

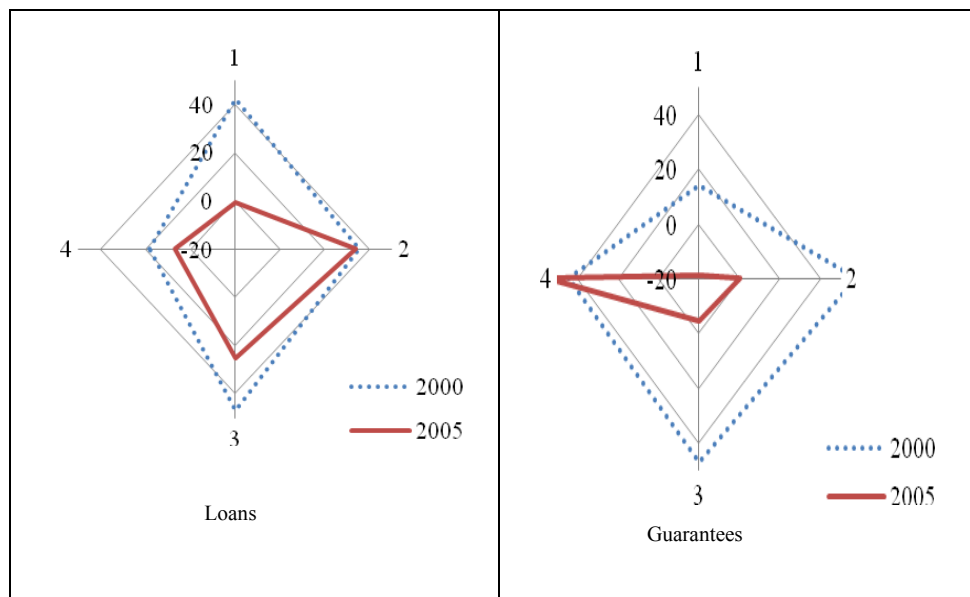
Preferential loans and guarantees, which were part of the national support, were properly focused and successfully implemented in cooperation with banks and with growing involvement of banks in financing the investment-oriented projects. Public support was effective, disposal of application forms and response to shifts in demand were flexible with positive effects on employment growth.

The demand for subsidies to develop competitiveness and innovative projects exceeded supply. An assessment of support to investment-oriented projects from Czech-Moravian Guarantee and Development Bank was made and the result, when compared to situation preceding support, was an increase of the added value to 7.76 CZK on average and an increase in employment to 20.5 % on average per 1 CZK of public support during three years, until the completion of projects (Ministry of Industry and Trade of the Czech Republic, 2006).



In the long term, guarantee and credit programmes were able to support the implementation of capital disadvantaged, riskier projects with quite a high success rate appreciated at 85% to 90% (Ministry of Industry and Trade of the Czech Republic, 2006).

Some effects of SMEs' support in the form of loans and guarantees are plotted in Figure 1.



**Fig. 1.** Effectiveness of public support in form of loans and guarantees implemented by the Czech-Moravian Guarantee and Development Bank in the Czech Republic in the period 2000 - 2005

Source: own elaboration based on Ministry of Industry and Trade of the Czech Republic, 2010

Legend:

- 1 increase in employment (number of employees at the end of the third year of providing support-number of employees at the time of application)/number of employees at the time of application
- 2 increase in EBIT (value of EBIT at the end of the third year of providing support-value of EBIT in the year prior the year of providing support)/value of EBIT in the year prior the year of providing support
- 3 increase in performance (value added at the end of the third year of providing support-value added in the year prior the year of providing support)/value added in the year prior the year of providing grant
- 4 proportion of successful projects

Figure 1 shows different effectiveness of loans (the PROGRES, TRH, KREDIT and the START programmes) and of guarantees (the ZÁRUKA programme) using four indicators. The first one is the increase in employment, which trend was positive for both forms of support in 2000; guarantees enabled the increase in employment with 13.9 %, while loans with 42.1 %. The trend of this indicator was negative in 2005, for guarantees it decrease with 18.7 % and for loans with 0.7 %.

The second indicator represents the increase in EBIT, and shows a positive trend for both forms of support in both years, loans enabled an increase of 35.4 % in 2000 and of 34.2% growth in 2005. Guarantees enabled an increase of 57.7 % in 2000 but only a 0.3% growth in 2005.

The third indicator is the increase in performance, where there was registered a declining trend. Loans enabled increase in performance with 46.9 % in 2000, but only with 25.3 % in 2005. Guarantees increased performance of companies at about 47 % in 2000, the trend was declining to 4.7 % in 2005.

The last indicator is the proportion of successful projects, the long-term trend was declining for loans (from 18.4 % in 2000 to 6.8 % in 2005), while there was an increase in performance for guarantees (from 44.4 % in 2000 to 55.2 % in 2005).

Although loans appear to be more effective support tool of SMEs than guarantees, the volume of guarantees having been provided by the Czech-Moravian Guarantee and Development bank was greater than the volume of provided loans that had a decreasing trend (Českomoravská záruční a rozvojová banka, 2011). This is the way how to support more enterprises.

Related to the SMEs' funding issue, there have occurred shifts from conventional financial instruments to the financial engineering instruments, which should constitute more efficient way of funding. Related to finance resources, an important role is played mainly by the European Regional Development Fund, and by the European Social Fond occasionally. In institutional terms, the important players are the European Investment Bank and the European Investment Fund.

Financial engineering instruments include mainly: venture capital, micro-credits, guarantees and mezzanine finance.

These instruments represent direct or indirect forms of support for SMEs.

- The role of venture capital was highlighted first in the Risk Capital Action Plan in 1997; currently has been implemented into different SMEs support programmes although there still has not been used at its full potential. Venture capital is implemented into the European financial system through the JEREMIE initiative. It is also a part of the Competitiveness and Innovation Programme Framework through the GIF1<sup>5</sup> and GIF2<sup>6</sup> instruments (European Investment Fund, 2010b). The European Union also invests in specialized funds providing venture capital for SMEs. These funds are known as the

<sup>5</sup> The aim of GIF1 is to facilitate the access to finance for innovative SMEs in their early stage.

<sup>6</sup> The aim of GIF2 is to facilitate access to finance for innovative SMEs in their expansion stage.

Dahlia fund, the NEOTEC fund, the Dachfonds, the Istanbul Venture Capital Initiative, the LfA-EIF Facility, the Portugal Venture Capital Initiative, the UK FTF L. P. (European Investment Fund, 2010c). These funds are limited by territory and usually also by industry.

- Micro-credits have been provided in Europe since the mid of the 1990s; the micro-credit market has been supported by the European Union by increasing the capital strength of national micro-credit providers. This is the case of the European Progress Microfinance Facility or the JASMINE initiative. Micro-credits as a financial instrument supporting SMEs directly are a part of the JEREMIE initiative.
- The European Union has been providing guarantees to secure debt financing since 1998 as a part of promoting growth and employment. The aim is to support the growth potential of SMEs that can be sometimes excluded from credit markets because of higher risk of SMEs' business projects or their inability to provide collateral. Guarantees are provided by the European Investment Bank in the European Union. This instrument is a part of the Competitiveness and Innovation Programme Framework, namely it is the SME Guarantee Facility<sup>7</sup> (European Investment Fund, 2010a). Guarantees are also a part of the European Progress Microfinance Facility, which is supposed to support the micro-credit market, or the JEREMIE initiative.
- Mezzanine finance is supported by the Mezzanine Facility for Growth programme, which is a fund established to invest in hybrid debt or equity funds throughout Europe, especially for shareholding reorganization and expansion for more mature businesses.
- Debt financing programmes, which are not intended only for SMEs; for example the Risk-Sharing Finance Facility, which is an instrument enabling funding of projects with high risk in the field of research and development.

#### **4. Conclusions**

The current analysis reveals the important role of SMEs' as market stabilizers and significant contributors to performance of high-tech sector, both in industry and services, where their contribution to performance showed quite an upward trend in the Czech Republic. The added value created in SME HTS was strongly correlated with the development of total added value in Czech Republic.

The evaluation of SMEs' efficiency was highlighted through the evolution of revenues, which corresponded to growth of revenues in large enterprises in the case of high-tech manufacturing industry, although their contribution was lower than in the case of the SME HTS. In addition, there was found a much higher upward trend

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<sup>7</sup> This instrument comprises four business lines: loan guarantees, micro-credit guarantees, equity guarantees and securitisation.

of revenues in SMEs than in large enterprises in high-tech services in business sector. There was confirmed that the development of the Czech high-tech sector has been driven by information and communication technologies that created the infrastructure basis of economic globalization.

Besides this, in terms of employment – that showed also a general upward trend – there was found a slight decline in the number of employees in high-tech manufacturing concerned with information and communication technologies, while the number of employees in high-tech services in business sector concerned with computer technology increased. A steady decline in the number of employees in research and development in SMEs appears to be ambiguous; this was accompanied by increase in the number of employees in large enterprises in the period 1995 – 2000. In the following period 2000 – 2005, there was found a slight decline. This fact is not positive mainly with regard to declared desire and rational needs of the Czech Republic to build the knowledge-based economy.

There was an effort to find an answer to the question if development of the indicators concerned with high-tech services was adequate to the upward trend of the tertiary sector contribution to the wealth creation, compared to the indicators concerned with high-tech manufacturing industry. The answer seemed to be ambiguous, development of the indicators was adequate in the period 1995 – 2000 but for the period 2000 – 2005, there was registered a higher growth dynamics in high-tech manufacturing industry than in high-tech services. This long-term high-tech services issue could slow down the economic growth.

With regard to the SMEs' performance and their stabilizing role, it makes sense to deal with the search for effective support tools, both related to administrative burdens and to fulfilling the Small Business Act principles (there are areas as the Responsive administration, Finance, Single market and the Internalisation, which values are below the EU-27 average in the Czech Republic).

Support tools are available for each industry and support has a form of funding and of consultancy or entrepreneurship promotion. Nevertheless, there can be identified some barriers of utilisation of financial resources due to administrative burdens in relation to obtain subsidies or the lack of information about the EU funding possibilities. Soft loans and guarantees appear to be adequate instruments of the SMEs' support. But not all entrepreneurs are interested in debt financing, therefore there should be found other financial instruments as private equity financing at the national level.

Such instruments are a part of the financial engineering instruments of the European Union. These ones should become a more efficient form of support than traditional subsidies and should respond to trends of development of SMEs.

However, the SMEs are affected by level of interest and tax rates, capital market complexity, regulatory environment, level of protection of competition, etc. To find solution to these problems might be as important as the SME support programmes in the Czech Republic since Czech enterprises have been facing to administrative burdens of entrepreneurship and to difficult law enforcement.

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## HOW INDONESIAN SME GARMENT MANUFACTURERS SURVIVE?

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**ABSTRACT.** In this paper we analyse the Information Technology (IT) support of the Indonesian SME Garment Manufacturers (ISGMs). We address three research questions: (1) to what extent should the ISGM managers be supported by information technology? (2) how do Indonesian financial experts analyse the performance of the ISGMs? and (3) how can a hybrid knowledge-intensive system (KIS) support the managers?

To answer these questions we followed a research methodology that consists of three stages, viz. literature review, fieldwork (surveys and case studies), and analysis of the results. The findings of the study indicate that most of the ISGM do not follow accounting standards while monitoring and evaluating the financial statements. This issue is particularly relevant since most ISGMs want to communicate to external parties such as a bank and a supplier that they are in good health and have fair prospects.

The findings of the study indicate that the ISGM managers need the support of financial experts in analysing their financial statements for monitoring and evaluating purposes. However, because of their unique characteristics, the ISGM owners struggle with the question how to analyse and interpret the performance of an ISGM. In the paper we consider the use of a hybrid KIS that consists of an Accounting Information System (AIS) and a Decision Support System (DSS). We conjecture that in the long run ISGMs will follow the accounting standards and harmonize the provision of accounting information in financial statements. Using a hybrid KIS, ISGM managers will be able to learn how to evaluate and monitor their companies' performances, especially in using financial analysis methods and in obtaining the insight into their own companies.

**Keywords:** *financial analysis, hybrid knowledge-intensive system, accounting information system, decision support system, Indonesian SMEs garment manufacturers*

**JEL classification:** D83

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## **1. Introduction and Review of Literature**

The way of human thinking is a rather complex issue. Various artificial intelligence techniques have been developed to mimic the way of human thinking. Each of the techniques has its own advantages and drawbacks. The accumulation of these techniques aims at understanding the way of human thinking, with the assumption that humans usually decide logically (to some extent). Our research focus is: can a Knowledge-Intensive System (KIS) understand the financial results of an ISGM?

The outline of this section is as follows. Subsection 1.1 presents efforts to support managers by using a KIS. Subsection 1.2 discusses the KIS development stages. Subsection 1.3 describes four artificial intelligence methods. Finally, subsection 1.4 presents three research questions.

### ***1.1. Support of Managers by KIS***

When a decision support system (DSS) has to deal with really complex issues, the time needed to design and implement such a DSS will be long. Currently, researchers investigate to what extent a DSS can be combined with a KIS. KIS is one of the artificial intelligence products that it is able to deal with experts' knowledge in a specific field. It has a structured reasoning method by which it performs a task as adequately as a human expert would do (Wahdan, 2006).

The primary objective of a KIS is exploiting the stored knowledge to provide support for decision-making. Empirical studies identify improvements in decision processes when such a KIS is used (Antony & Santhanam, 2007). A KIS is primarily developed to help users in their decision-making activities. But as an unintentional consequence, the KIS may stimulate the users to learn more about a problem (Antony & Santhanam, 2007). This learning process even takes place implicitly. Moreover, the KIS can be used as a change agent to improve the user's knowledge (Wahdan, 2006).

Wen et al. (2005) mention four components of the KIS. For a proper understanding, we repeat their line of research below. The four main components are (1) a database management subsystem, (2) a model base subsystem, (3) a knowledge acquisition subsystem, and (4) a dialogue subsystem. The database management subsystem is a relational database that consists of a collection of historical financial data. The model-base subsystem is a place for statistical methods, scientific management models, or other quantitative models that provide the analytical or forecasting capabilities to predict future outcomes. In the knowledge acquisition subsystem, analytical outcomes for managers are stored. The dialogue subsystem is for providing a friendly environment for the user to interact with the KIS.

### ***1.2. KIS Development Stages***

When people develop a KIS, it commonly involves three activities, namely designing the knowledge engine, building the program, and installing or implementing the program in a company. In the first activity, there are five stages in the KIS

development, namely (1) knowledge acquisition, (2) knowledge analysis and representation, (3) knowledge validation, (4) inference design, and (5) explanation and justification.

In the five stages of the KIS development we see the following. In the first stage, we have the knowledge acquisition. Knowledge acquisition is a process of gathering knowledge to categorize it in a knowledge base. More precisely, it is a process of transferring knowledge extracted from domain experts into the representation that computers can process. The knowledge may be related to (1) problem categorization, (2) identifying financial ratios or other financial methods, (3) establishing evaluation criteria, (4) encapsulating knowledge frames, and (5) refining knowledge frames.

The sources of the knowledge can be documents (textbooks, journal articles, technical reports) and human experts. Shiue, Li, and Chen (2008) defined three critical points of attention for a KIS to be successful, namely (1) *adequate* knowledge acquisition, (2) be aware of the potential shortage of domain experts, and (3) secure the presence of knowledge experts. These three points are in the focus of our research when conducting in-depth interviews and submitting questionnaires.

In the knowledge acquisition stage, the Unified Modeling Language (UML) can be used as a tool for capturing the characteristics of a system (Chung & Pak, 2006). UML is the blueprint of a software system that specifies, visualizes, and models the artifacts of a software system.

Wagner, Otto, and Chung (2002) underlined that the knowledge acquisition is the most difficult phase in a KIS development process. In line with them, L.-C Wu, Ong, and Hsu (2008) and Wong and Aspinwall (2005) indicated that the challenging problem is: how to acquire efficiently the specific knowledge for a well-defined problem domain from one or more experts? The next problem then is: how to represent the knowledge in an appropriate computer format?

In the second stage, the system analyst uses the data from knowledge acquisition to build an appropriate model. The data from knowledge acquisition are converted into an intermediate representation. The intermediate representation will structure the representations (code the knowledge) so as to store it in a knowledge base. In stage three, Knowledge validation is applied: the knowledge from the KIS is verified against the experts or the knowledge sources. Stage four deals with the inference design. It is meant to provide an easier way for a manager or a user to communicate with the KIS. In stage five, the explanation facility will be designed for adequate explanation or justification of the reasoning and the conclusions resulting from the KIS.

### ***1.3. Related Artificial Intelligence Methods***

Depending on the complexity of the problem, the interpretation of a result as arrived at by the KIS is not always easy and can lead to different conclusions. To prevent this, researchers developed various methods such as (1) model-driven, (2) data mining, (3) case-based reasoning (CBR), and (4) Fuzzy methods. All of these techniques are developed in order to create a higher precision on mimicking

the complexity in the expert's thinking. When dealing with a complex managerial issue, the combination of various techniques is preferred (see Xidonas, Mavrotas, & Psarras, 2009). Below we discuss the four methods and in Subsection 3.3, we return to the possible combinations.

When a model-driven system is used, the analyst will be able to analyze the problem based on the model and the intrinsic relations. The experts' way of thinking in solving a problem can be recorded in these built-in relations. However, the system analyst and designer need additional time in developing the model when the complexity of the problem becomes more complex. Thus, one of the weaknesses of this technique is that the model building needs a huge amount of time.

When data mining is used, unique patterns can be found in the historical data. By learning trends and patterns available in the historical data, a company's performance can be identified. Then, system analyst can obtain an in-depth insight into what happened in the past. By observing and investigating the patterns, he<sup>6</sup> may advice a manager to give more attention to a specific issue. However, the identification of a pattern may be difficult.

The data mining techniques are used for analysing a business performance. The source of the information is an Accounting Information System (AIS). The AIS records the daily transactions based on the accounting procedures. Until now, the data stored in the AIS was transformed into useful information for a manager when deciding a business decision. The AIS should be the primary system for a KIS in providing the relevant information needed to perform the daily management activities.

The AIS is a system that (1) collects, (2) records, (3) stores, and (4) processes financially-related data to produce information for decision makers (Romney & Steinbart, 2006). The current accounting standard followed by the AIS is The Financial Accounting Standards for Entities *without* Public Accountability (Standar Akuntansi Keuangan Entitas Tanpa Akuntabilitas Publik or SAK-ETAP). The SAK-ETAP was implemented since January 2011 and it is intended to be used by an entity that has insignificant public accountability. The SAK-ETAP should hold for every Indonesian SME Garment Manufacturers (ISGM) and is in line with the spirit of the International Financial Reporting Standard for SMEs.

CBR aims to solve new problems based on solutions of similar problems in the past. Efforts in identifying the significant problems and in investigating the root of the problems are crucial when supporting the manager on how to handle the problems in the future. Without the knowledge of the garment experts, the KIS will need more time in identifying the root of the problem. For instance, there is a common case in ISGMs of customers returning their products bought. So, ISGMs suffer great loss because of inappropriate customers. Sometimes the "inappropriate" customers return intentionally the product. Usually, the defect has happened unintentionally. However, in some cases, the defects of the products are made intentionally by the customer.

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<sup>6</sup> Henceforth, for brevity we use 'he' and 'his' whenever 'he or she' and 'his or her' are meant.

These irresponsible customers attempt to minimize their risk of their failure when selling the products. In order to be able to return the product, they intentionally make quite some damage on the products (Winarto & Gunawan, 2008).

Fuzzy rules are used for reasoning with a fuzzy concept, such as high debt and high risk. It is quite difficult to determine what the level of high is. When a *current ratio* shows 2.0 as a result, the figure means that the company has an adequate liquidity position. However, the figure 2.0 can also be interpreted as a bad signal when it is combined with the results from other financial ratios. In the real world, there is a possibility that the result of a financial calculation can be placed simultaneously in two or more different groups or clusters. This fuzzy concept is crucial in interpreting the result of complex financial data.

#### ***1.4. Our Research Questions***

In line with previous researchers who advised to integrate several artificial intelligence methods and techniques for complex problem solving (cf. Huang, 2009., Shue et al., 2009), we suggest developing a hybrid KIS supported by continuously up-to-date information from an AIS and a DSS. The information from the AIS together with the knowledge stored in the DSS can be used as a KIS for the ISGM managers, in particular in monitoring and evaluating the impact of the ISGM strategy on the financial performances.

We address three research questions: (1) to what extent should the ISGM managers be supported by information technology? (2) how do Indonesian financial experts analyse the performance of the ISGMs? and (3) how can a hybrid KIS support the managers?

The outline of this paper is as follows. Section 2 presents material and methods used in the research. Section 3 presents the results and a discussion. Finally, section 4 presents our conclusion.

## **2. Material and Methods**

Our research methodology consists of three stages, viz. literature review, fieldwork (surveys and case studies), and analysis of the results. Literature review is a basic ingredient of this research and has been dealt with in Section 1. Below we discuss the design of the fieldwork in subsection 2.1; it is followed by a brief discussion on our respondents in subsection 2.2.

### ***2.1. The Design of the Fieldwork***

For the fieldwork, we follow the ideas by Wagner et al. (2002). They stressed five knowledge acquisition techniques, namely (1) unstructured interviewing techniques, (2) structured interviewing techniques, (3) protocol analysis, (4) psychological scaling, and (5) card sorting. Below we briefly describe each technique and communicate our choices.

- Unstructured interviewing techniques allows exploring the topic freely with open-ended questions, however in the same time the use of the unstructured interview is one of the biggest failings for developing a KIS. This technique is an inefficient process and time-consuming. Yet, the unstructured interview can provide a general discussion of the domain and it may lead to providing a list of topics and concepts that is important for supporting a manager's decision.

- Structured interviewing techniques are applicable in situations where knowledge from experts is elicited. The goal is to dig on expert's experience and knowledge related to specific cases. The structured interview may register the expert's particular problem-solving skills. Starting with a real-life problem, the expert is challenged to solve the problem; it is a problem they usually deal with during their working life. By observing the each step of the expert when analysing the problem, a specific personalized approach can be established. The transcript of the experts' verbal stories is called a protocol.

- Protocol analysis is a technique that guides a process where human experts show their competences without any intervention so that they are able to focus on a specific task. The weakness of protocol analysis is the human expert himself as the source of knowledge must verbalize all his actions and he sometimes is unable to express his knowledge (called as paradox of expertise).

- Psychological scaling is a ranking technique to discover the human expert's preference within a problem domain by asking him to rate the similarity of different cases. The ranking is usually performed via a seven-point scale, ranging from no similarity to completely similar.

- Card sorting is a technique that makes a hierarchy. It does so by asking the human experts to sort cards consisting of various identified objects, experiences, and rules into groups. In this method, the experts are provided with a series of cards, and with the names of domain concepts written on the cards. Then, the experts are asked to arrange the cards into clusters, in such a way that the cards in each cluster have something important in common. Based on the clusters, we may obtain the most significant concept.

In our research, we combine the first three methods. The acquired knowledge was validated by letting the experienced-financial experts review the result of the knowledge acquisition process. Identification of the problem categorization will be performed by mean of (1) interview with experienced financial experts, (2) identified financial events, and (3) required financial and accounting methods from the literature review. Then, protocol analysis will be held to uncover the processes of experienced financial experts' problem solving when evaluating a company's performance. Next, problem behavior graphs (PBG) will be used to figure out the financial experts' solving strategy (W. Shiue et al., 2008).

## **2.2. Respondents**

Thirty-one garment owners (or owner/managers) from different companies were interviewed in our sample. The goal was (1) to obtain their knowledge in managing the ISGMs and (2) to obtain information on financial statements. As most of them were interested to use the software for free later on (which was promised), they were willing to spend their time.

In order to obtain the knowledge of financial experts regarding the financial issue in the ISGM, we constructed a new case study, derived from the input given by five ISGMs. The five companies were willing to participate even to a larger extent by providing their restricted financial data for our analysis. In return, the five ISGMs remained anonymous and we were only allowed to process the data for our research. The remaining twenty-six ISGMs did not want to participate in providing their financial data because of tax issues.

Owing to the limited number of ISGM owners who were willing to provide their financial statements, we attempted to obtain the general ISGM's financial conditions by using the archival research conducted annually by the BPS-Statistics Indonesia. From the 23,430 manufacturers (on average from 2001 till 2008), which participate(d) in the annual manufacturing survey, a sample of 2,504 garment manufacturers (on average) is used for the purpose of our study.

Using the financial data in the new case study, in-depth interviews were conducted to obtain knowledge from the financial experts (affiliated to the banks and the financial service providers). Twenty-five financial experts participated in our survey.

## **3. Results and Discussions**

In this section, we answer the three RQs described in subsection 1.4. Subsection 3.1 presents the outcome on the challenging idea to use IT for supporting ISGMs managers. Subsection 3.2 describes financial analysis methods used by the financial experts in Indonesia to investigate ISGM's performance. Finally, Subsection 3.3 presents the hybrid KIS.

### **3.1. To what extent does IT support the managers?**

In this subsection we answer RQ1. We discuss the importance of SMEs for Indonesia's economy in 3.1.1. In 3.1.2, we explain the high employment absorption level of ISGMs. In 3.1.3, we describe the impact of the AFTA (ASEAN Free Trade Area) implementation for the ISGMs. In 3.1.4, we summarize crucial obstacles faced by the ISGMs. In 3.1.5, we present an idea to overcome ISGMs' obstacles using KIS. Finally, in 3.1.6, we answer RQ1.

#### **3.1.1. The role of SMEs for the Indonesian economy**

Recent investigations on the financial crisis impact to Indonesia show that (A) SMEs always survive from economic crises, and (B) they frequently remain

the biggest contributors to the Indonesian economy (CDASED, 1998; Rice, 2000a, 2000b; Tambunan, 2009). As to (A), The committee of Donor Agencies for Small Enterprise Development or CDASED (1998) observed that SMEs show their strength by always surviving from an economic crisis. Their strengths are: (1) a more flexible organization, and (2) faster decision making processes.

As to (B), in the past, Rice (2000a, b) showed that SMEs have made quite important contributions to Indonesia's development. We believe that they will continue to do so in the future. Our belief is in particular based on (1) employment generation and (2) income generation. The first finding is the result of a research conducted eleven years ago. The importance of SMEs for employment generation and for income generation is currently relevant. In Indonesia, there are 49.8 million SMEs, they absorbed 97.3% of the total employment and contributed up to 53.6% of the total Gross Domestic Product (GDP) (BPS-Statistics Indonesia, 2008). So, we may conclude that SMEs are crucial of the Indonesian economy.

### *3.1.2. High employment absorption level*

In 2008, The Indonesian State Minister for Cooperatives and SMEs (2008) declared that till 2007 manufacturing had the highest employment absorption level (42.2%). The truth of this statement is based on the fact that textile and garment industry are two of the manufacturing types that have such a high employment absorption level. Textile industry deals with fabrics (the basic material), while garment industry focuses on apparel (such as shirt, shorts, pants, pyjamas). Therefore, the Indonesian Ministry of Industry coined textile and garment industry a "strategic industrial sector". So, the ISGM has been proved to be a good source contributor for employment.

Over the last three decades, the Indonesian garment industry has grown from a small sector to a major contributor to the country's total industrial revenue (Coster, 2007). In addition, the garment industry plays a significant role for the textile industry. The export performance of the garment industry has a tight relationship with the export performance of the textile industry. Jamaludin, chairman of the committee Asosiasi Pertekstilan Indonesia (API – Indonesia Textile Association), stated that a decrease in the garment export usually leads to a significant decrease in the textile export. The garment export performance typically contributes to about 60% of the textile export performance (Kabarbisnis.com, 2009).

The high employment absorption level in ISGMs is important because Indonesia is categorized as a country that has a huge number of populations with a lack of social security funds. So, ISGMs help the Indonesian government to minimize the unemployment rate. Hence, the ISGMs' sustainability is instrument to strengthening the growth of the Indonesian economy.

### *3.1.3. The implementation of the AFTA policy*

During the period of 2001 till 2008, there was a growth in the number of ISGMs, but in the same time there was a relatively higher growth of discontinuing ISGMs. If the number of discontinuing ISGMs will remain to increase, the unemployment

problem will become a huge issue for Indonesia's economic stability. Since 1994, the competitiveness of Indonesia's garment industry has decreased in comparison with the strong competitors in the upcoming developing countries, in particular in China, Vietnam, India, and Bangladesh (Thee, 2009). This is the reason for concern.

The weakening of Indonesia's position for Indonesian garment products is also observable by the percentage of products sold on the domestic markets (only 20%). Ernawati, Deputy for Cooperation and SMEs' Marketing and Business Networking, stated that Indonesia's malls and markets contain about 80% foreign garment products. This is an indicator that the continuity of the Indonesian garment manufacturing by SMEs is in danger (Silitonga, 2006).

The situation can even become worse after implementation of the AFTA policy (ASEAN Free Trade Area). Under AFTA, the ASEAN leaders have agreed to eliminate all import duties by 2010 for the six original members of ASEAN, including their partners (e.g. China, Japan, and the Republic of Korea). This implementation can have both positive and negative impacts on Indonesia's economy. Remarkably, two Indonesian groups look from different perspectives at the AFTA implementation, namely (A) textile and garment businessmen who rely on the export market, and (B) textile and garment businessmen who only rely on the domestic market (Wirawasta, 2010).

Ad (A) The ISGM owners who rely on the export market are optimistic on AFTA. Their opinion is based on the in-progress recovery of the world economy. The recovery leads to an increase of the import level of some major importing countries such as (1) US, (2) European Union, and (3) Japan (Wirawasta, 2010). The implementation of the AFTA also creates a bigger opportunity for exporting to other ASEAN countries. This intra-ASEAN cooperation is essential for Indonesia. AFTA can certainly enhance the export possibility. We note that big garment manufacturing will be supported by AFTA, especially when the currency exchange is stable. However, only 19.2% of the ISGMs (in the archival data of BPS) exported their products. A majority of the ISGMs depend on the domestic market only.

Ad (B) The ISGM owners who only rely on the domestic market will argue that SMEs garment industry is affected negatively by AFTA. Supported by the Indonesian Chamber of Commerce and Industry (KADIN Indonesia), they urge the government to cancel the implementation of AFTA (Wirawasta, 2010). Their opinion is based on the fact that the China garment products have filled more than a third of Indonesia's domestic garment market. For instance, data from the Indonesia Textile Association exposed a 380% growth of imported China garment products to Indonesia in the period of 1999 to 2004. For a proper understanding, we communicate that the huge import number is calculated only by the officially garment import; it does not include the illegal import. Indeed, with AFTA, China garment products, legally and illegally, will be dominating easily the domestic market. Some experts forecasted that the increasing number of China garment export to Indonesia will cause about a 30% decreasing on SMEs garment manufacturing domestic sales (Kabarbisnis.com, 2010).



#### 3.1.4. *Obstacles faced by the ISGM*

Most of the ISGMs are not able to fulfil the requirements for obtaining benefits of the fiscal policy. Still, for encouraging the growth of domestic industries (that will ultimately improve the competitiveness of national economy), the Indonesian customs office has announced a fiscal policy of cost reduction (implicit and explicit). The fiscal policy for Indonesia domestic industry is divided into two subpolicies: (1) customs incentives, and (2) customs protection. For example, export-oriented companies will obtain suspension of the imposition of value added tax to the exemption of import duty. However, when analysing the investment status of the companies in our archival data, we may distinguish three groups. First, 83.7% ISGMs in our archival data is categorized as companies which do not obtain any tax facilities from Indonesia government. Then, 9.8 % of the ISGMs are categorized as domestic investment, and subsequently 6.5% are categorized as foreign investment. The latter two categories obtain the tax facilities from the government.

Further analysing the location of the ISGMs, we observe that 93.1% of the ISGMs are located outside the industrial estate. Only 6.9% of them are located inside the industrial estate. This figure supports the fact that ISGM is commonly a home industrial business. The owners started the ISGM from scratch. They use the place that they have, such as their house. When the company survives, then they expand the business. There was no clustering plan in establishing the garment industry in Indonesia. We also note that only 980 ISGMs managed to establish their business in 5 consecutive years and 2,819 ISGMs succeed to survive for minimal 3 years (the data is from the annual manufacturing survey conducted by the BPS-Statistics Indonesia).

The main problem for the ISGMs is that their production costs are often higher than the selling prices of the similar China garment products. So, the production costs should be reduced considerably for the ISGMs in order to be competitive. The outcome of a thorough investigation on the discontinuation of some ISGMs indicates that the ISGM owners should improve the managerial capabilities in their company. Facing the international price competitions, a manager of an arbitrary ISGM has the task to reduce the company's transaction costs. But in the same time, his task is also to enhance the quality of the products. It is a hard work for the ISGM managers because most of the firms have (1) a lack of capital, (2) a lack of skills, and (3) problems in productivity business development (Abduddin, 2006; Indarti, 2006; Soetrisno, 2009).

The ISGMs' managerial weak points will be given as a twofold challenge (see Gunawan, Wahdan, & van den Herik, 2010). The first challenge is how to make adequate decisions based on effective monitoring and controlling the activities. The monitoring and controlling ISGMs activities with a good implementation of accounting management methods are crucial for supporting the manager's decision. The second challenge is the inability to interpret financial statements and management reports adequately. The ability in interpreting financial statements is important in order to obtain support from ISGMs partners, such as suppliers, customers, and banks. We believe that these two challenges hamper the Indonesian economic development.

### 3.1.5. *Can We Overcome ISGMs' Problems by a KIS?*

The findings of a previous study (see Gunawan, Wahdan, van den Herik, & Kornarius, 2011) indicate that most of the ISGMs do not follow accounting standards in monitoring and evaluating the financial statements. Most of them use their own techniques in recording the business performance. Moreover, they use another report for reporting their tax income. As soon as they wish to increase their funding by banks, they faced difficulties because of the issue of accounting standard. This issue is in particular relevant since most ISGMs want to communicate to external parties such as a bank and a supplier that they are in good health and have fair prospects.

The findings of the study mentioned above also indicate that the ISGMs need the support from a professional manager and/or financial expert in analysing their financial statements for monitoring and evaluating purposes. For this support, there are three obstacles. First, the salary for a competent professional manager is too high for most ISGMs, in particular because the ISGMs are not willing to spend their money for a professional expert with a result of minimum profit margin. Second, there is a low level of trust in a manager who is not family related to the owner of the SME, in particular when it concern financial information. Third, most of the ISGM owners are the sole manager of the company. Such an owner deals with every issue in the company. They do not have the slightest intention to give the management position to another person.

Whatever the case, the ISGMs need to solve their management problems in order to be competitive in the national and international scenes. An attempt to increase the ISGM owners' managerial capabilities is crucial (cf. Rice, 2000b., Miles et al., 2009). Our solution (to support ISGM owners by intelligence software) is derived from the ISGM owners' preference; it is more acceptable to be supported by an intelligent software program than to have a newcomer as the manager.

Having said this, we will focus on e-management such a change is based on the Knowledge-Intensive System (KIS) framework. Here we would like to refer to the previous successes of a KIS implementation into the financial domain (viz. Wahdan, 2006., Khan and Wibisono, 2008., Shiue et al., 2008., Huang, 2009).

### 3.1.6. *Answer to RQ1*

Based on the analysis above, we may answer RQ1 as follows. Using the KIS properly, the ISGM managers can be supported with trustful information about their company's condition when they have to make any decision. With the KIS, the managers may obtain a professional guidance as if it comes from a human financial expert. Based on the experience in using the KIS, managers can learn by themselves on how to make better decisions for the ISGM. This learning process will help the ISGM owners to increase their capabilities.

### ***3.2. Analysing ISGM's performances***

In this subsection we will answer RQ2. Therefore, we conducted interviews with the help of a constructed case (see subsection 2.2). Based on the way how the financial experts analyse the financial statements, we created a financial statement analysis model for our KIS. The goal is to provide some indicators to the manager for monitoring and controlling the activities. The indicators are used to navigate the ISMGs in the financial world. In 3.2.1, we present the use of the DuPont Model for analysing the ISGM's financial performance. Then, in 3.2.2, we present the use of other financial statement analyses for confirming the interpretation of the DuPont Model. Finally, in 3.2.3, we answer RQ2.

#### ***3.2.1. The use of the DuPont Model***

In the interviews with the financial experts (see subsection 2.2), it turned out that their first step in analysing the ISGMs financial performances was based on Return on Equity (ROE). ROE analysis is the most comprehensive framework for evaluating a company performance (Libby, Libby, & Short, 2009). In general, ROE measures how much the business earned for each Indonesian Dollar (IDR) of the owner's investment. Libby et al. (2009) emphasize that financial experts use ROE to assess the effectiveness of the business' overall strategies (containing its operating, investing, and financing strategies). Therefore, changing the operating, investing, and financing strategies will have a significant impact on the changes of the business' profit.

In order to analyse the changes in the ROE over the years (and sometimes over the months), the respondents agreed to use DuPont model as the initial analysis technique. The DuPont model was originally developed by F. Donaldson Brown, a staff person in DuPont's treasury department (Narayanan, 2010). Soliman (2008) highlights that the DuPont model is a useful tool of financial statements analysis. In line with Soliman, Albrecht et al. (2011) argue that the DuPont model can be used as a framework for calculation of financial ratios. Financial ratios will yield a more in-depth analysis of the strengths and the weaknesses of a business.

Using the DuPont model, the manager may gain a better appreciation of the interrelationship between the income statement and the balance sheet statement, without becoming overloaded by the details (Milbourn & Haight, 2005). The DuPont model provides an overview on the business' operating, investing, and financing strategies that affect the profitability of a business (Libby, et al., 2009). The DuPont model enables us to evaluate the ROE by three factors: (1) net profit margin, (2) asset turnover, and (3) financial leverage. Libby et al. (2009) describe that these three factors are the profit drivers of a business. These three factors describe the three ways that management can improve the ROE. By observing the changes in each of those factors, the ISGM managers will be able to evaluate their own policy and relate it to the observed changes (see Gunawan, Wahdan, van den Herik, Athuri, & Tan Lian Soei, 2011).

Based on the results from the DuPont model, the financial experts will investigate the source of changes observed in the financial statements. For instance, a decrease on the ROE may be caused by at least one of six possibilities, namely (1) a decrease in net profit margin, (2) a decrease in sales, (3) an increase in cost of goods sold, (4) an increase in operating expense, (5) an increase in interest expense, and (6) an increase in taxes. Moreover, the decrease on the ROE also can be caused by various changes on three kinds of accounts, namely (a) assets, (b) liabilities, or (c) equities. Trying to identify the significant source of these changes, the financial experts may obtain in-depth insight into what happened in the ISGMs, specifically in which area does the management have to put more attention. Based on the interpretation, the ISGM manager should develop an adequate strategy to minimize the negative changes or to support the positive changes.

### *3.2.2. The use of other financial methods*

The interpretation of changes is a kind of fuzzy concept. The resulting numbers from the DuPont model can be interpreted as a good signal for the ISGMs, but when the financial experts use more comprehensive techniques, the number can be interpreted in a totally different way. In order to interpret the outcome more accurately, the financial experts need to check the changes using other financial techniques. Therefore, the next stage in analysing the financial statements is by checking the changes with other financial statement analysis tools.

Although there are numerous tools, in general, there are three techniques for analysing financial statements, namely (A) comparative financial statements analysis, (B) common-size financial statements analysis, and (C) ratios analysis (Shue et al., 2009). Based on Shue et al (2009), each of these techniques is best suited to a specific need. The comparative financial statements analysis focuses on reviewing changes and trends in a specific period of time. The common-size financial statements analysis focuses on reviewing changes and on a composition of (1) asset, (2) liability, (3) equity, (4) income, (5) cost, and (6) expense. The ratios analysis focuses on reviewing the relationships among two or more items in the financial statements. Additionally, the financial experts can conduct (D) sensitivity analysis for providing a broader understanding of the effect of the different parameters (Hawes & Duffey, 2008). So, we have in total four techniques for analysing financial statements.

By comparing the results from those financial techniques, a financial expert can give a clearer illustration to the ISGM manager. Then, the manager can understand clearly about what makes his financial performance become to be like that. By monitoring ISGMs performance indicators and the financial statements, the manager obtains support in deciding policies to control the ISGMs for achieving better financial performances.

### *3.2.3. Answer to RQ2*

Based on the analysis above, we may answer RQ2 as follows. As the first stage, the financial experts use the DuPont model to obtain a general impression of

the ISGM's performances. Then, four kinds of other financial methods are used for obtaining better interpretation, namely (1) comparative financial statement analysis (with the industry average and time series), (2) common-size financial statement analysis (time series), (3) ratios analysis (time series), and (4) sensitivity analysis (optimistic scenario, most likely scenario, and pessimistic scenario).

### ***3.3. How KIS supports the managers***

In this subsection we answer RQ3. First, we present two challenges in constructing a KIS for ISGMs in 3.3.1. In 3.3.2, we answer the first challenge by the use of automatic AIS. In 3.3.3, we present our effort to increase the KIS' interpretation capabilities by using various data and methods. Finally, in 3.3.4, we answer RQ3.

#### ***3.3.1. Two KIS Challenges***

There are two challenging issues in developing a KIS for ISGMs. The first challenge arises as most of the ISGMs do not follow accounting standards in recording their accounting reports. The main cause of this behaviour is because most of them, in particular the manager from the older generation, do not have the knowledge in adequately recording business activities under an accounting standard. Therefore, the ISGMs must be supported by a system that can ensure that it follows easily the accounting standard. Without following the accounting standard, the numbers resulting from the financial techniques will be useless.

The second challenge is caused by the complexity of the interpretation of the financial statement analysis. When a professional financial expert observes the result of a financial technique, he can formulate an adequate conclusion. However, the conclusion may change when he observes the result from another financial technique. In order to have a full picture of the company's financial performance and condition, a financial expert need to have an abundance of figures from various financial techniques. This issue makes the interpretation of financial statement analysis a challenging issue for a novice manager or a non-financial manager.

#### ***3.3.2. Automatic AIS***

In order to deal with the first challenge, we use several modules that can record daily transactions into a structured format of SAK-ETAP. Supporting with automatic AIS, the manager will have an advantage owing to the automatic accounting recording feature. The financial statements resulting from the AIS will automatically follow SAK-ETAP. Thus, these financial statements can be analysed using the DuPont model and the other financial statement analysis methods.

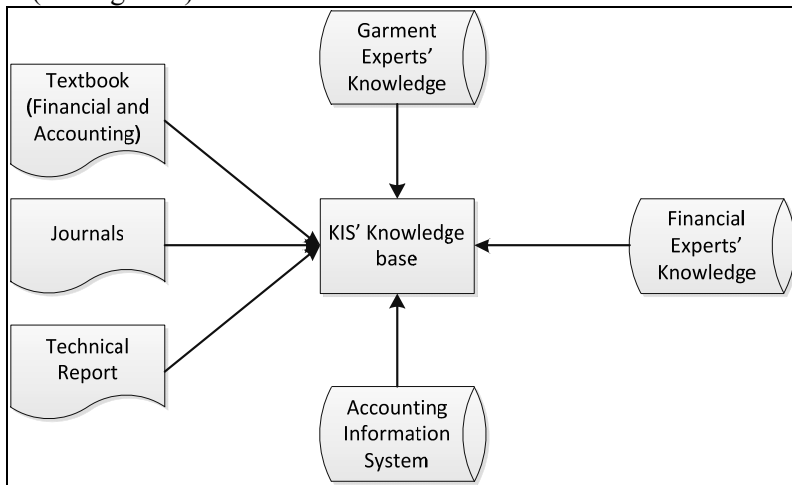
For obtaining a significant impact on the improvement of the ISGM manager's managerial capabilities, both knowledge on financial accounting and knowledge on management accounting are needed. A financial manager can use financial accounting methods to provide a good picture about the company's financial performances. Most of the information from the financial accounting will be used to obtain more

recognition and trust for external parties such as banks, suppliers, and customers. So, management accounting methods will be used in monitoring and controlling key performance indicators (KPIs) of the ISGMs. There are sixteen KPIs. These sixteen KPIs are categorized into six categories, namely KPIs related (1) to suppliers, (2) to cutting employees, (3) to production employees, (4) to partners, (5) to customers, and (6) to management itself (see Gunawan, Wahdan, van den Herik, & Kornarius, 2011).

Having an automatic computational interpretation of the DuPont model by the data from the AIS, ISGM managers will be able to learn easily how to conduct the analysis. Then, they will be more willing – at least that is what we assume – to follow the standard accounting system after they have understood the advantages of using the financial model for analysing the impact of their strategies on the changes in the business performance.

*3.3.3. Increasing the KIS' Interpretation Capabilities*

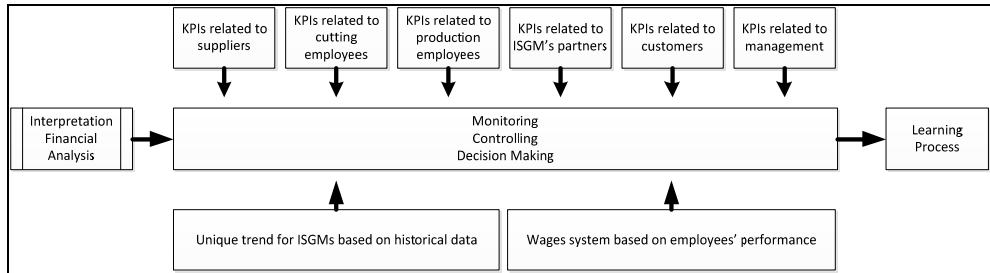
To answer the second challenge, we use KIS with a knowledge-base from financial experts, garment practitioners, and existing financial publications (textbooks, journals, and technical reports). The combination of a DSS and an AIS into a KIS provides knowledge on managerial level and knowledge on the ISGM's financial condition (see Figure 1).



**Fig. 1.** The sources of KIS' knowledge base

To develop a KIS that is capable to make an adequate interpretation, we may combine six kinds of artificial intelligence methods, namely (1) rule-based techniques, (2) case-based reasoning (CBR), (3) exemplar-based reasoning, (4) instance-based reasoning, (5) fuzzy reasoning, and (6) data mining (cf. Hamburg, 2005). The KIS then will provide kind of early warning information for the manager in his decision making.

The KIS provides (1) sixteen KPIs (see 3.3.2), (2) interpretation on a trend on the financial data, and (3) a wages system that is based on employees' performance (see Gunawan, Wahdan, van den Herik, & Kornarius, 2011). Using the KIS frequently, the ISGM manager will be able to learn how to improve their managerial skills in those three activities, namely (1) monitoring, (2) controlling, and (3) decision making (see Figure 2).



**Fig. 2.** Overview of the KIS

In this paper, we provide some examples on KIS contributions in supporting the ISGM managers to have adequate monitoring, controlling, and decision making activities. The examples are related to three entities, namely production employees, financial analysts, and customers.

First, the KIS helps the ISGM managers in monitoring and controlling the employees by providing an automatic report on each employee's performance (from the KPIs). The report illustrates the employees' working behaviour based on two factors: (A) rate of employee productivity per hour (for each group product) and (B) rate of damage products by employee errors (for each group product).

The rate of employee productivity per hour is needed to understand the employee's behaviour. The report provides (1) average value, (2) maximal value, (3) minimal value, and (4) modus value for each employee's productivity. Based on these values, the KIS categorized the employees into four groups, namely an (A) extraordinary competent employee group, (B) competent employee group, (C) ordinary employee group, and (D) novice-unskilled employee group.

When an employee becomes more productive or skilled, the KIS will suggest the manager to re-categorize the employee to a higher group level, and vice versa. This function will support ISGM companies that want to implement performance-based wages system.

The rate of damage products by employee errors is also crucial for an effort to optimize the quality of garment products. Quality is a very significant issue, in particular for the ISGMs that sell its products to foreign companies. Foreign companies usually put higher inspection level on the garment quality. ISGMs' inability in providing constant quality has become the top ISGM weaknesses.

With the information provided in the report, the ISGM managers will be able to decide (1) whether the employee is more suitable to be assigned on a specific job, (2) whether personal discussion with the employee is needed for the case of the employee's lower productivity, or (3) whether further investigation is needed to track the reason for a specific issue. Moreover, with this information, the manager can ask supervisor to give more encouragement to a specific employee or in a specific period of time.

Second, besides supporting the managers in monitoring the production processes, the KIS can support financial analysts. The KIS has a capability in calculating the ISGM financial data according to several financial methods (see section 3.2). Then, the KIS use financial experts' knowledge stored in its database to provide an automatic interpretation on the result of those financial methods.

Third, with regard to customers, the KIS provides conclusion about the ISGM's performance and suggests several possible scenarios regarding the possible causes or some suggestion for improvements. For example, when an ISGM in our sample has a debtors turnover for 48.6 days, 62.7 days, and 72.5 days (for three continuous year), the KIS categories this trend as "unfavourable substantial increase in the number of days debtors conversion". Then, the KIS interpret the significance of the trend as: "it takes the business longer to convert a given value of trade debtors into cash". Finally, the KIS provides four possible reasons for the trend: (1) lack of credit control over new and existing account customers, (2) failure to follow up overdue accounts, (3) inadequate incentives (e.g. discounts) to encourage prompter payments, and (4) too much emphasis on credit sales. With these possible reasons for the trend, the ISGM managers will be guided to investigate the real root of the problem and to make adequate decision to overcome it.

#### *3.3.4. Answer to RQ3*

Based on the analysis above, we may answer RQ3 as follows. The KIS supports the ISGM manager in three activities, namely (1) monitoring the ISGM, (2) controlling the most significant activities, and (3) supporting his decision. The knowledge in the KIS supports those three activities by providing interpretation on financial statement analysis (using the knowledge of financial experts and historical data in the AIS), and by providing information from accounting management (using the knowledge of garment experts and historical data in the AIS).

## **4. Conclusions**

Our main question is how ISGM survive? We have seen that increasing ISGMs' managerial capabilities in accounting management and financial accounting is a challenging issue. In this paper, we have proposed to support the ISGM managers with a KIS that mimic the logic of thinking of both ISGM managers' expertise and financial experts' knowledge.

In this section, we present our answer for the main question in subsection 4.1. Then, in subsection 4.2, we suggest an effort to increase the KIS' capability in the future.



#### ***4.1. Answer to RQs***

Our answer is yes, an adequate KIS can be used to support an effort in increasing ISGMs' managerial skills. By learning and knowing how (1) to monitor the company, (b) to control the most significant activities, and (c) to make adequate decision, the ISGM managers have bigger chance in their efforts to survive when facing the impact of globalization (positive impacts and/or negative impacts). Moreover, the KIS is an automatic computer tool that supports the decision making and the learning process of the ISGM managers. However, the final decision is still to be made by the manager himself.

We conjecture that in the long run ISGMs will be in compliance with the accounting standards and will harmonize the provision of accounting information in financial statements. Using the KIS, ISGM managers will be able to learn and know how to evaluate and monitor their companies' performance, especially in using financial analysis methods and in obtaining the insight into their own companies.

#### ***4.2. Future Research***

The result of an effort to mimic human logic of thinking is hardly to reach 100% precision. It happens because, in most of the cases, human reacts illogically when facing huge obstacles. The illogical reaction can be happened because of five reasons, namely: (1) the managers have different objectives and attitudes, (2) the managers have to decide with incomplete information (asymmetric information), (3) the managers suffer from a limited abilities and skills to deal with all the problems, (4) the managers face emotional and psychological biases, and (5) the managers tend to make decision about the future based on the history, without understanding why the history happened (Parry & Kemp, 2009).

Human behaviour is a social study that is hard to be predicted accurately. The point of this research is not to find solutions of making the manager more 'rational' decision makers, but to provide better information available to them. In order to be more precise in mimicking the financial experts, the KIS has to be able to investigate other external factors such as macroeconomic indicators, political stability, and the development of new technology. Supported with accurate and proper information, the KIS will be able to provide better results.

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