

# Competitiveness of small and medium sized enterprises - a possible analytical framework

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## Abstract

Since the appearance of the Lisbon Strategy, and in particular since its renewal in the 2005, strong, well-run small and medium sized enterprise sectors have been more and more often included into the documents of the European Union, emphasizing the role of their competitiveness. For this reason, definitions of the competitiveness of SMEs, as well as development of analytical possibilities have become important tasks in research. This research, on the basis of a study of competitiveness of companies, defines the competitiveness of small and medium sized enterprises, as company groups, and, after having presented methods of analysis for enterprise competitiveness, systematizes the competitiveness of SMEs factors on the basis of the following criteria: macro - and micro - environmental, ex - ante and ex post, external and internal factors, as well as input and output side factors. The study on testing the macro environmental efficiency factors proposes the STEEP analysis, then the so-called "Complex model" will be established which systematizes the competitiveness of the micro-environmental factors of the SMEs in accordance with the criteria listed.

## 1 Introduction

According to the European Commission's document, entitled "Think small first!", "the small and medium sized enterprises form the backbone of the European economy and are key players in the creation of new jobs and economic growth as well". (EU 2007a: 1) According to this, successful implementation of the two major objectives of the renewed in 2005 Lisbon strategy (growth and employment) is possible only with involvement of well-run and developed SME sector, covering just 99% of the companies of the European Union, and two-thirds of employment. (COM(2005)24final: 17) Since basic objective of the Lisbon strategy is to enhance the competitiveness of the European Union, therefore, the essence of the above quoted statement is that there cannot be competitiveness in Europe without a competitive SME sector.

On the basis of this background, importance is given to the following questions:

- How the competitiveness of small and medium-sized companies - as a group - could be defined?
- How the competitiveness of the SME sector could be assessed? Including:
  - What are the factors affecting the competitiveness of the sector, and what are the results of its existence and changes?
  - What theoretical framework should the referred factors be put in?

This study aims to seek answers to these questions. Since competitiveness of small and medium-sized companies is essentially determined by the competitiveness of companies in the sector, the study, starting off from the definition of competitiveness of companies and methods of analysis found in the considered literature, commences to define the competitiveness of the SME sector, and then to develop an analytical framework, which could help systematization of competitiveness factors of small and medium enterprises. In view of the fact that these factors and the number of indicators used for their measuring and description are basically infinite, the study cannot undertake full account of them, thus its principal aim is their systematization.

## 2 Business competitiveness

### 2.1 Formation of the concept

Definition of the concept of competitiveness is characterized by a scientific debate which has been going on for several decades, and still has not been finished. In accordance with the so-called standardized competitiveness defined in the OECD's documents, which was later also applied by the European Union, "Competitiveness is the capability of companies, industries, regions, nations and supranational regions to create a relatively high income factor and relatively high employment levels on a sustainable basis, while permanently being exposed to international competition." (OECD 1994: 23) Although the definition of corporate competitiveness has induced much less professional literary debates than national economic competitiveness, it cannot be considered as finally explained. (Chikán 2006: 43) In spite of the diversity of approaches, research positions are characterized by a consensus of at least two aspects:

- Business competitiveness of companies cannot be separated from the competitiveness of products, services created by them, which is influenced by the "price" and "non-price" factors similarly.
- Business competitiveness is a combination of a number of factors shaping competitiveness, and should not be tested in a given moment, but should be evaluated dynamically, taking into account tendencies of changes.

According to Botos (1982: 33), the *competitiveness of products (services)* is expressed in the fact that:

- the price of the product is lower than that of the competitors (taking into account the payment terms as well),
- the quality, technical value of the products are better than those of the competing goods,
- related services (delivery times, packaging, service, spare parts, etc.) are more favourable for the customers than those of the competitors.

According to the author, a product is considered to be competitive if it covers at least two of the three listed properties.

This approach alone combines the competitiveness factors of price and non-price; however, these criteria should be supplemented by additional ones. (on the basis of Szentes et al. (2005: 112-113)):

- The "lower price" can only be the "competitive price", if it provides return of the costs for the seller, and even includes a profit.
- The "higher quality" should embody affordable properties, as well as actual value for the customers.
- Marketability of products and services, in addition to associated services, is influenced to a large extent by the level of marketing activities (market research, advertising and other marketing communication activities, distribution network).

The above stated is completely consistent with Chikán's (2006: 44) perception, according to which a company carries on a "double value" activity, because it has to create a consumer value (sufficient level of needs satisfaction at a reasonable price) and a property value (profit) within the same process.

The shown above characteristics, directly related to the product, determine the ability to retain and increase the company's market share, however they are only single components of the company's competitiveness. In addition to the interpretation of competitiveness of companies, it is reasonable to take into account the following as well (on the basis of Findrik-Szilárd (2000: 25-27), Szentes et al. (2005: 114-115) and Chikán (2006: 43-44)):

- Competitiveness includes the ability to enhance business efficiency, which is the basis of profitability (profit rate). In terms of efficiency improvement, besides most important other things, development of productivity, unit labour costs, the level of used technology, utilization of capacity and flexibility of production system are really important.
- The company also competes with the market of resources (as a buyer); therefore its competitiveness is also seen in the ability to access inputs and in its dynamics.

*Table No.1: Types of factors of company competitiveness*

MACRO LEVEL	MICRO LEVEL		
EX ANTE approach	EX ANTE approach		EX POST approach
EXTERNAL factors	EXTERNAL factors	INTERNAL factors	INTERNAL factors

*Source: Personal redaction*

- Formation of strategy and the ability of its implementation have become the essential features of competitive businesses in the last two decades, being the fundamental conditions and means of adaptation to the dynamically changing environment. In this context, previously unknown factors have become value creative, such as organizational upgrade, project management, change management, quality assurance or social responsibility.
- The "human factor" plays crucial role in the fulfilment of the above mentioned skills, which includes the quality of used labour (education, experience, continuous capability to develop, etc.), as well as the standard of management (organizational and management skills, creativity, conflict management, communication skills, etc.). Growing "knowledge capital" is the integral part of the human resources, which has become the most important factor of production today. Research and development, which is the basis of knowledge, as well as the standard of innovation activities which implement new knowledge, have become decisive factors in company competitiveness.

It is a challenge to create a definition that would bear in mind all the criteria listed, it maybe even an unrealistic expectation, taking into account the requirements of compactness. In my opinion, the following definition focuses on the most important elements: "Competitiveness is a sum of properties and activities of a given production unit, by means of which it can increase its market share and / or its profit on a given market, during a given period." (Findrik-Szilárd 2000: 23)

The definition of the Research Centre for Competitiveness, which has been refined for many years, takes into account several aspects of the above mentioned definition, and, in my view, is the most complete definition found in the literature: "Business competitiveness, in our perception, is the company's ability to permanently offer consumers products and services, which are in compliance with the standards of social responsibility, and for which they are willing to pay more than for the competitors' products, ensuring profitable conditions for the company. Condition of this competitiveness is that the company should be able to detect changes in the environment and within the company, by performing permanent better market competition criteria compared to the competitors." (Czakó-Chikán 2007: 3)

## 2.2 Options of analysis

Business competitiveness of companies can be tested from the side of the factors affecting competitiveness (ex ante approach) on the one hand, and, from the side of results (ex post approach), on the other hand. The results are clearly linked to the company, or are on the micro level, but the affecting factors can come from the company's macro environment (national economy or level of integration), as well as external (outside the company) or internal (within the company) micro environments.

Types of factors of company competitiveness are included in Table No.1.

In the following part I will present the models of systematization of factors of competitiveness related to the macro-and microenvironments of companies, which can be found in professional literature and can be implemented best.

Table No.2: System of STEEP-factors

SOCIAL factors	TECHNOLOGICAL factors	ECONOMIC factors	ECOLOGICAL factors	POLITICAL, LEGAL factors
<i>Social</i>	<i>Technological</i>	<i>Economic</i>	<i>Ecological</i>	<i>Political</i>
<ul style="list-style-type: none"> <li>▪ Demographic elements (population, age and gender composition, etc.)</li> <li>▪ Cultural elements (education, training, religion, lifestyle, habits, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>R &amp; D spending</b></li> <li>▪ <b>Innovation</b></li> <li>▪ ICT development</li> <li>▪ Patent System</li> <li>▪ Other</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Development of GDP, GNP</b></li> <li>▪ Inflation</li> <li>▪ <b>Unemployment</b></li> <li>▪ <b>Rate of investment</b> (including FDI)</li> <li>▪ Other</li> </ul>	<ul style="list-style-type: none"> <li>▪ Spread of environment-conscious way of thinking</li> <li>▪ Environmental technology</li> <li>▪ Green Movements</li> <li>▪ Other</li> </ul>	<ul style="list-style-type: none"> <li>▪ Legislation (competition law, labour law, company law, etc.)</li> <li>▪ Economic Policy (fiscal policy, development and support policy, etc.)</li> <li>▪ Other</li> </ul>

Source: Personal redaction on the basis of Józsa (2003: 50-62) and Kotler-Keller (2006: 79-95)

### 2.2.1 Macro level factors - ex-ante approach

One part of external factors affecting competitiveness of the company comes from the company's *macro environment*, first of all from the system of conditions in the country where the company is located. There are several examples in the domestic literature<sup>1</sup> for presentation of this system of conditions, for clustering affecting factors, but in my opinion, the most complete and best-established models are related to the name of Philip Kotler. Kotler presents elements of macro environment as parts of company's marketing environment. According to him, these are external forces and effects, which the company is not able to influence, but their constant monitoring and adaptation to them are necessary conditions for successful market operation, (Kotler 1991: 135), i.e. they are essential for the competitiveness of the company.

According to Kotler-Keller (2006: 79-95) the elements of macro environment are:

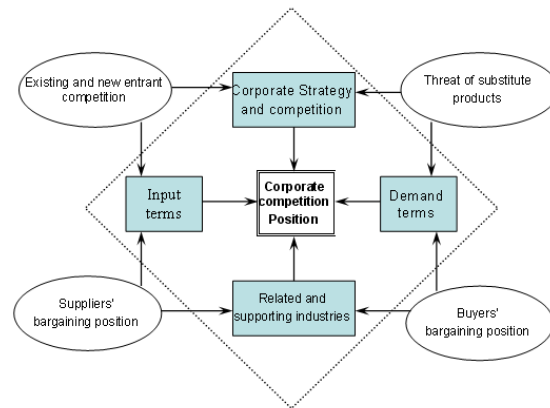
- Demographic environment
- Economic environment
- Social and cultural environment
- Ecological environment
- Technological environment
- Political and legal environment

The STEEP-analysis, often used and popular in the domestic literature, is based on the above classification, which can be considered as minor change to Kotler's systematization. The STEEP-factors, and their main elements can be found in Table No. 2.

In case of the majority of the above shown factors, we can agree with the statement that we are talking about external forces which "cannot be controlled" by the companies, and the only thing the company can do is to adapt to them (components of social, ecological, political and legal environment are generally of this kind). At the same time, systematizations contain factors that are affected by corporate activities (in Table No.2. the activities that I consider to be the most important are **highlighted**), that is, interaction between a company and the environment can be observed. For example, research and development and innovation activities, the amount of added gross value, employment situation or the progress of investments are all aspects, which are defined by the level of national economy, on the one hand, and can be influenced by the active co-operation of corporate sector alternatively. In other words, macro environment has impact on the competitiveness of companies, while in respect of numerous components the micro sphere has repercussion on the environment, thereby affecting the macro (national) competitiveness.

<sup>1</sup>E.g.: Hoványi (1999: 1023), Chikán-Czakó-Zoltayné (edited) (2002: 35)

Figure No.1: Porter's diamond model and integration of the model of competitive forces



Source: Personal redaction on the basis of revision of Dinya-Domán (2004: 135)

## 2.2.2 Micro level factors - ex ante and ex post approach

### *Ex ante approach - external factors*

Another part of external factors affecting competitiveness of the company comes from the company's micro environment (business or market environment, in other words), the most accepted and the most widely used systematization of which is the Porter's diamond model. This model includes possible sources of *competitive advantages* of companies, industries and clusters, however, Porter developed another model as well, which systematizes *competitive forces* of industrial branches. Thus, the next five competition factors together determine the sharpness of competition in some industries (Porter 2006 [1980]: 30):

- Competition between companies which already exist in the industry
- Threat of new entrants
- Threat of substitute products
- Suppliers' bargaining position
- Buyers' bargaining position

While making comparison of the above stated competitive forces with the help of determinants of the diamond model, even by "superficial" inspection, the link between them can be observed, however exploration of the nature of this relationship requires more thorough consideration. I agree with the statement made by authors Dinya-Domán (2004: 134) that the company's competitive position results from intensity of the competition (competitive force), as well as external (and internal<sup>2</sup>) sources of competitive advantage, thus on this basis, the two models can be integrated. I also agree that development of competitive forces has an impact on the companies' competitive advantage, which can be exploited by them, consequently when unifying the competition models, the competitive forces "surround" the diamond model. However, I can accept the specific way of combining the two models suggested by the authors only by making small modifications. The essence of them is that in the integrated model cited in the study, "the buyers' bargaining power" and the "threat of substitute products" is inadequate in my opinion, and it should be more logical to replace them. The integrated model, which has been revised taking into account the above stated, can be found in the Figure No. 1.

An important note to the Figure is that the existing competitors and new entrants - unlike in the original Porter's model - are in one group because their impact on the situation of the competition can be regarded essentially identical, except for some time difference.

The integrated model illustrates the following relationships:

- Power and behaviour of *the existing and new entrant competitors*, and changes in them:

<sup>2</sup>These models do not include factors within company which also have influence on the competitive position of the company.

- obviously have influence on the intensity of the competition,
- at the same time have influence on the development of input terms, as the competition is often present on the same input markets as the company, that is they do not only compete for the buyers but for the acquisition of the resource as well.
- Strong or weak nature of the *bargaining positions of suppliers*:
  - has influence on the terms of acquisition of their inputs, and
  - making use of the potential competitive advantages residing in relations with the supporting industries, i.e. mainly the suppliers.
- The strength of the *bargaining positions of buyers*:
  - first of all plays role in formation of demand terms,
  - but also has influence on the supporting and connected industries, as influences their activities by way of derivative demand.
- *Threat of substitute products* (or the weight of already existing products on the market):
  - besides the influence on the intensity of competition can also have influence on its nature, making the former competitors co-operate in order to retain their market share (or even remaining on the market),
  - moreover, can alter the structure of demand, suggesting new alternatives to the buyers to fulfil their needs.

In my opinion, the two models developed by Porter, as well as their integrated version, provide suitable framework for analyzing competitiveness of companies, industries or clusters (with regard to the external micro factors), but determination of specific competitiveness factors within some of the factor groups, and their operationalization in particular can be a major challenge for researchers and analysts.

#### ***Ex ante approach - internal factors***

Competitiveness of companies is not only affected by external but also by *internal factors* as well. They are amply explored in management- and management science literature, in case determination of the criteria of an effective and profitable company is also regarded as identification of the factors of competitiveness within the company. Over the past decade, it has become increasingly evident for the researchers that besides the so-called "classical" competitive advantages (e.g., lower spending, lower price, better quality, better marketing job, higher levels of related services), "new types" of competitive advantages have determined business competitiveness of companies. These can be the following: concentration of capital, technological development trends, the global market structure (Hoványi 2000: 605), possession of intangible assets such as skilled and experienced workforce, patents, know-how, software, strong customer relationships, brands, unique organizational design models and processes (Lev 2004: 109). Not least, they also include preparedness of the management: the managers are required more and more to identify the environmental changes in time, even the so-called "weak signals"<sup>3</sup> and to have the ability to respond rapidly to them. (Hoványi 2002: 38)

According to Hoványi's (2000: 601) view, nowadays and in the near future successful companies will originate from two business circles: from the group of international giant companies, as well as from the group of micro, small and medium-sized enterprises. In case of the two "poles" of companies, different criteria of competitiveness that can be influenced by the companies are determinant, and are summarized in the Table No.3.

The obviously expandable circle of listed factors explains the relevant factors of criteria of business competitiveness, but at the same time it is not the author's purpose to order measurable, comparable indicators to certain factors and to facilitate practical application of the criteria.

In respect of the international and domestic literature it can be said that it is not specific to establish indicator systems and competitiveness indexes for measuring business competitiveness of a company. In this respect, the Competitiveness Research Centre<sup>4</sup> can be regarded as the one doing pioneering work, the *Business Competitiveness Index* (BCI) developed under management of Attila Chikán, is consistent with both scientific and theoretical proofs, measurability (good measurement properties) and criteria of practical application.

<sup>3</sup>Hoványi gives explanation of the concept of the Weak Signals Oriented Management - WSOM (2002).

<sup>4</sup>The Competitiveness Research Centre, besides the presented index, has developed a theoretical model highlighting the internal structure of corporate competitiveness, which is based on the link between customer value and corporate competencies, which are described in the following study together with the results of empirical testing: Chikán-Gelei (2007).

Table No.3: The most important internal criteria of competitiveness in the two business circles

Term	International giant companies	Micro, small and medium-sized enterprises
Strategic	Keeping pace with global technological development	Sensitivity to environmental impulses (weak signals) and capability of immediate response
	Corporate assets larger than minimal global competitiveness resources	
	Financial stability and relevant international market share	Development of professional skills in an area that provides long-term competitive advantages
	Risks smaller than maximal global competitiveness	Preservation of flexibility
Possibilities from opportunities arising from the use of local competition benefits		
Operative	Corresponding difference between risk-weighted yield and expense	More full adaptation to customer needs
	Use of local opportunities for the growth of results	Reasonable prices for customers
Both	Development of optimal rate of individual and collaborative work	Making use of benefits of teamwork

Source: Personal redaction on the basis of Hoványi (2000: 606-607)

Theoretical basis for the development of the index is given by definition of corporate competitiveness composed by Competitiveness Research Centre, - at the end of the chapter 2.1. - by the resource-based company theory, as well as the dual theory of value.

According to the resource-based company theory, the potential carriers of company's success are their own - not reproducible or just difficult to be copied - resources, capabilities. To exploit their potential a well-chosen and implemented strategy is needed, which requires constant reproduction of resources and characteristics providing competitive advantage, based on forecasts (proactive adaptivity) adaptive to the environmental changes. On this basis, two basic conditions of business competitiveness are *functionality* and continuous maintenance of *ability to change*. (Chikán 2006: 43)

According to the dual theory of value, creation of both consumer and shareholder values should be done in the operation of the business, the evaluation of which plays a key role in corporate *performance* measurement. (Chikán 2006: 44)

On the basis of above principles, the formula of the index of created business competitiveness (C - competitiveness) is the following<sup>5</sup>:

$$C = (M + V)T$$

where  $M$  = functionality,  $V$  = ability to change,  $T$  = performance.

According to the contents of the index: "... measurement of competitiveness is the proportion of co-share of capability to change and functionality, recognized by the market". (Chikán 2006: 44)

The author uses indexes and indicator groups shown in Table No. 4 for the measurement of the three variables, determining of a specific value of which is made on the basis of the data occurring from business inquiries (a total of 71 evaluation questions on a five-grade scale).

It is necessary to supply the next two explanations to the method of analysis:

#### **Ex post approach - internal factors**

The ex ante approach of competitiveness emphasizes opportunities and skills, which involves analyses of a lot of qualities, "soft" factors that are sometimes not easy to quantify. By contrast, application of ex-post approach focusing on *results*, applies almost exclusively examination of the quantitative factors, therefore the "scalability" is not a central issue here (as they are given), but definition of the scope of relevant factors from the aspect of competitiveness can be a real difficulty.

Empirical studies show that improvement of corporate performance is associated with better market performance and higher profitability (Chikán-Czakó-Zoltayné (edit.) 2002: 50), that is, operating-, market- and financial

<sup>5</sup>Mathematical relationship established between the variables is confirmed by economic considerations and mathematical and statistical analysis. (Chikán 2006: 48)

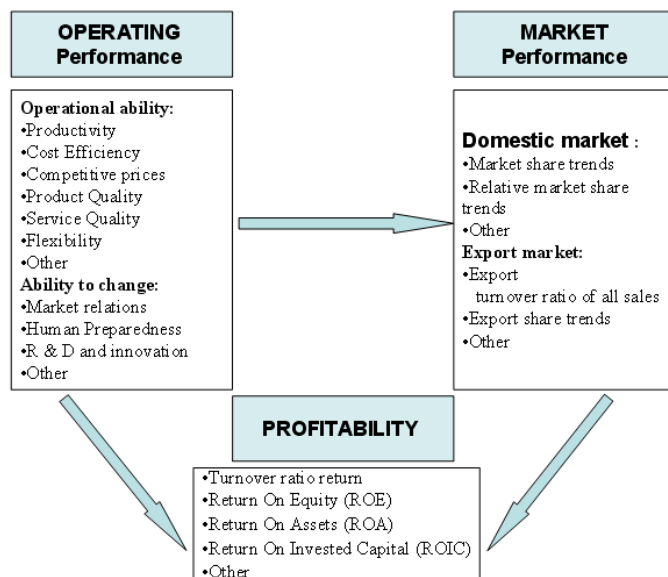
Table No.4: Components of business competitiveness index

Variables	Indicator groups
M	<b>Cost / price</b> (cost-effectiveness, productivity, competitive prices)
	<b>Quality</b> (product quality and manufacturing standards, quality of raw materials)
	<b>Time</b> (delivery time, delivery accuracy)
	<b>Flexibility</b> (flexible response to consumer demands, flexibility of production system, flexibility of logistics)
	<b>Service</b> (range of products, quality of customer service, organization of distribution channels, ethical behaviour)
V	<b>Market relations</b> (immediacy of the relationship with customers, the ability to anticipate market changes, innovative sales promotion methods)
	<b>Human Preparedness</b> (staff training, quality of management)
	<b>Organizational ability to answer</b> (modernity of decision/operating methods, level of technology, R & D spending levels)
T	<b>Property values</b> (industry-average turnover, profit)
	<b>Consumer values</b> (industry-average market share)

Source: Personal redaction on the basis of Chikán (2006: 46-47)

performance are based on each other. Operating performance can be characterized by operating ability and ability to change, summarized in Table No.4, which influence competitiveness of companies in ex ante way. These factors have influence on market performance and profitability, which, however, in an ex post way characterize competitiveness of a company. Figure No.2 shows the relationship of the three areas, and related, most commonly used indicators of competitiveness (including but not limited to).

Figure No.2: Areas of corporate performance assessment and their relationship



Source: Personal redaction on the basis of Table No. 4

Improvement of competitiveness or its descent can be measured from the side of results (ex post), hence, with development of indicators characterising market performance and profitability. Operational performance, according to the referred empirical research, has an impact on the market success and through this on profitability, however, may influence it directly (e.g. through more efficient use of resources) as well.

Arrows seen on Figure No. 2 show "primary" effects, yet the market success and profitability (can) have an effect on the operational performance: higher profitability provides more opportunities for product-, technology- and organization development, for application of innovative sales methods, or for increasing the standards of



human resources than lower profitability. That is why, in my opinion, positive changes occurring in factors on the input side of competitiveness in dynamic approach can also be regarded as results, i.e. can show improvement in competitiveness in ex-post way. For example, increase of the R & D spending, the number of employees, or even involvement of foreign capital (not occasional, but manifesting long-term tendency) can be of such kind, all of which characterize companies mostly successful in market competition, i.e. competitive companies.

### 3 Theoretical framework for analysis of competitiveness of small- and medium-sized enterprises

#### 3.1 Explanation of competitiveness of small- and medium-sized enterprises

In the last few years, both the analytical economists, and politicians are increasingly stating the opinion that: "There is no doubt that SMEs are essential for more intense, sustained growth and for establishment of more and better jobs". (COM(2005)551final: 3) They also agree that all means should be used to help the enhancement of small and medium- sized enterprises, as their competitiveness is crucial in terms of competitiveness of regional, national economies as well as of the economy of the European Union. However, neither in the official documents of SME development and support, nor in the issues of literature I have found a definition, which would define specifically competitiveness of small and medium-sized enterprises as group of companies. In my opinion, this may be due to the fact that vast majority of users of the definition understand the competitiveness of SMEs as competitiveness of companies creating the sector, so it does not require a specific definition. In my view, this position is acceptable in the sense that the sector's competitiveness really depends on the competitiveness of enterprises; however, this problem can not be regarded as closed with this definition.

In determining the competitiveness of small and medium enterprises, it is practical to begin with general definition of business competitiveness, nevertheless there may be features resulting from the company size first of all, and from macro-economic role that is undertaken by the sector and sectoral structure, that distinguish the large and transnational companies from SMEs from the point of view of competitiveness. In this context, the following statements are worth consideration:

- Small and medium-sized enterprise sector is a crucial player in the economy in employment, establishment of jobs and, in this context, in increase of social welfare. Therefore, in the unified definition of competitiveness used in the European Union in light of the renewed Lisbon goals in particular, when defining competitiveness of SMEs, their role in employment must not be left out.
- Internationalization of operation of small and medium-sized enterprises, their integration into the global economy is an important objective<sup>6</sup> of the European Union, for the achievement of which it is absolutely necessary to improve the international competitiveness of SMEs. This means increased export of SMEs (including the "indirect" exports, i.e., encouragement to become a supplier) on one hand and increased position in the ever-growing import competition on the other hand. Nevertheless, I do not agree with the view that: "Competitiveness . . . can only be understood regardless of the size and, to some extent, of the operating area of the companies, only on the international level". (Kerepesi-Opitz-Tóth 2006: 21) On the one hand, it is a fact that today only a fraction of the European SMEs, is able to export<sup>7</sup> (Futó 2001: 3), on the other hand, there are some sectors typically covered by mainly small and medium-sized enterprises, where, because of the nature of activity, nor exit to export market, nor the domestic appearance of foreign competitors (import competition) is typical<sup>8</sup>. Naturally, major part of SMEs have to compete with foreign competitors either on domestic or international markets, while in case of number of companies on the domestic markets, maintaining position in competition with domestic players is crucial, the "duality" of which, in my opinion, should be taken into account in determining competitiveness of SMEs.

In addition to the above considerations, while defining the competitiveness of small and medium-sized enterprise sector, I use the following principles:

- Competitiveness of small and medium sized enterprises as company group can be especially seen in capability to promote competitiveness of the region, the country or the macro region where SMEs reside.

<sup>6</sup>This objective is formulated in the following documents: COM(2005)121 final: 29, COM(2008)394 final: 18.

<sup>7</sup>This is supported by the fact that only 15.5% of the revenues of SMEs operating in Hungary in 2006 were from exports (the same ratio was 41.9% for large companies). (Kállay et al. 2008: 145)

<sup>8</sup>These may be some economic services (e.g., accounting services, tax advice, etc.), or certain public services as well (e.g. hairdresser, beautician, painter and decorator, etc.).

- Competitiveness of small and medium-sized enterprises depends on the competitiveness of companies that make up the sector, therefore adaptability and operating capability determining the performance of corporate performance, as well as the requirement of "double value" should also be reflected in the definition.

Taking into account all of the above stated, I find the following definitions suitable to express the essence of the competitiveness of small and medium sized enterprises, and helpful in selection of main directions for analysis:

*Small and medium-sized enterprise sector of a region, country or macro region can be considered competitive, if it is able to contribute substantially and if possible increasingly to the development of economic performance of the geographical area and raise the level of employment. Condition of this competitiveness is that the sector's companies, making use of flexibility resulting from their dimensions, should be able to adapt to changes within and outside the company, as well as to exploit the environment for competitive advantages, and, by doing this, to improve their position on domestic and / or international market by ensuring improvement of conditions for gaining profit to the owners.*

### 3.2 A possible framework for analysis

Generally, competitiveness, and thus the competitiveness of small and medium sized enterprises in particular, can be also assessed on the bases of a wide range of approaches and criteria. The analytical framework being presented is one of the possible variants, in the creation of which I tried to take into account the full range of affecting factors and results of the macro-and micro level, ex-ante and ex post, external and internal, input and output sides, though, because of virtually endless number of factors, I have to notice that "including but not limited to". Thus my first and foremost aim is systematization, besides highlighting the most important factors.

#### 3.2.1 Analyses on macro level - STEEP-factors

In part 2.2.1., the macro level factors influencing business competitiveness naturally have influence on the small and medium sized enterprises as well, that is why I consider the STEEP- analysis for their systematization, which is used for examination of competitiveness of SMEs, appropriate. The elements of macro environment, listed in Table No. 2, define the same criteria for any size company, and therefore can be treated as a single SME sector in macro-level analysis. The sole exceptions perhaps are some components of legal and economic environment, if there are differences in accounting and tax legislation for individuals and joint ventures, or there are specific forms of support for micro-enterprises, etc., but these do not fundamentally affect the uniform handling of the sector.

On the basis of my research, two very important STEEP factors are considered to be really important in influencing the competitiveness of small and medium sized enterprises: one of them is the macro-economic environment, and the other is the political (primarily economic), and legal environment. In my opinion, general state of the economy (development of economic growth, inflation, unemployment, etc.), company legislation, as well as guidelines and actions of economic policy (in particular the policy on development and support of SMEs,) affect most directly functioning and performance of most companies in the sector.

#### 3.2.2 Analysis on micro level - complex model of competitiveness of SMEs

As competitiveness of small and medium-sized enterprises, as a group of companies, is based on the competitiveness of corporate competitiveness, therefore the framework for analysis presented in chapter 2.2.2 is suitable as a starting point for examination of micro level of the sector competitiveness. On the basis of internal and external factors and the results systematised in ex-ante and ex post approach, as well as taking into account the fact that competitive factors can be associated with the input and output side in the value system, I will make an attempt to cover the micro level components of the competitiveness of small and medium sized enterprises into a complex system (Figure No.3).

The model integrates a possible way of approach of analysis of competitiveness of micro-level enterprises (input - output, ex ante - ex post, external - internal), as well as uses the system of conceptions of Porter's diamond model and competition models, as well as the system of conceptions of Chikán's business competitiveness index, with addition of possibility to present analysis of the ex-post input side.

*While designing the model:*

- I was trying to provide a uniform and transparent system of all the approaches and main factor groups, which, after having studied the literature, I found applicable for the analysis of micro level competitiveness of small and medium-sized enterprises.

Figure No.3: Complex model of competitiveness of small and medium-sized enterprises

		Terms, affecting factors (ex ante)			Results (ex post)
		External		Internal	
		Environment	Participants	Competition	
Input side	<b>Input terms</b> •Natural features •Human resources •Capital resources •Infrastructure features (ICT logistics, etc.)	<b>Related and sponsors</b> •Suppliers' quality and bargaining power •Sponsor presence •Features of making clusters	<b>Strategy and competition</b> Strength of competition for inputs: •with competitors •threat of the new entrants	<b>Operational ability</b> •Productivity •Cost Efficiency •Prices •Quality of products •Standard of production •Terms of Delivery •Standard of services •Flexibility	<b>Results on Input Side</b> •Progress of employment •Progress of R&D expenditures •Progress of the extent of raising capital
	<b>Terms of demand</b> • Volume of demand and its sophistication •Consumers and users' needs •Consumer Protection and other requirements	<b>Terms of demand</b> •Customers' bargaining position •Features of making clusters	<b>Strategy and competition</b> Strength of competition for buyers: •with competitors •threat of the new entrants •threat of the substitute products	<b>Ability to change</b> •Market relations •Employees' qualification •Preparedness of management •Methods of decision/operation •R&D and innovation	<b>Market Performance</b> •Domestic market share and turnover •Export market share and turnover <b>Profitability</b>

Source: Personal redaction

- It was not my purpose, and because of numerousness of these factors could not be my goal, to list all the possible conditions and results of competitiveness, but I have indicated in each factor group the elements I consider to be the most important.

*Internal content of the model, its structure:*

- External conditions of ex ante approach are essentially based on the integration of Porter diamond model and the model of competition shown in Figure No.1 with the addition that it takes into account links of some determinants to input-output side. In the "environment" column there are micro-environmental abilities and conditions in wider sense, in connection with which major tasks of the companies are to adapt, or to exploit the competitive advantages or to neutralize disadvantages. In the column of the "participants" there are such members of the company environment in a narrower sense, whom the company has direct business relationship with (customers, suppliers and sponsors), and, it is important to highlight, there may arise an opportunity to organize clusters with them. That is why in this area there may be a possibility for the company to influence external terms, as in the case of previous factor group. The 'competition' column shows that the company is in competition both on the input and on the output markets, in addition, not only with the already existing, but also with competitors intending to enter the market as well.
- In the column of internal conditions there is no sense to isolate the input-output side, as the company's internal characteristics, functionality and ability to change (or to adapt), are stated (on the basis of Chikán's competitiveness index).
- In the approach on result side (ex post) there is no sense to distinguish external and internal elements, as the results are primarily always within the company, which, alternatively, obviously contributes to the "results" of the company group, industry, region, country, and ultimately to competitiveness as well. However the results of the input and output side can be distinguished, as it was referred to earlier.

*Applicability of the model:*

- Method of application depends on how *the subject* of competitiveness analysis is determined:
  - If we analyse a specific *company's* competitiveness, all the components of the model can be clearly analyzed.
  - When a group of companies (e.g., regional cluster, sector, small and medium sized enterprises) is the subject of examination, then we must take into account the following individual factor groups:

- \* There are factors, especially among the internal affecting factors and results, which can be interpreted first of all for a given company. If you do use these factors for company groups, in that case a kind of an aggregate or average value can be used (e.g. in case of employment, R & D expenditure, market share, etc.), or some kind of general characterization can be given, mainly based on business interviews (e.g. standard of management, quality of products and services, etc.).
  - \* In my view, the sectors and regional clusters could be treated as "a whole" in respect of all the components of the model, however, for small and medium sized enterprises it is not necessarily similar. Approaching the sector's competitiveness from both ex ante and ex post sides, there can be significant differences between company sizes (micro, small, medium), and between various sectors too. This is confirmed by the fact that the analysis of competitiveness of small and medium-sized enterprises is almost always broken down by size<sup>9</sup>, or alternatively may be taking into account specificities of the sectors; also available data sources<sup>10</sup> for the sector mainly contain data about small and medium-sized enterprises based on size.
- Another question of application is the *operationalization* of the model, namely measurability of certain factors of competitiveness, particularly of the qualitative elements, or at least definition of ordinal comparable indicators. Specific methods of these can be extremely diverse, which among others depend on the purpose of research and the range of available or obtainable data, information.

## 4 Further research directions

Further directions of research clearly mean summarization of scientific results connected to the competitiveness of companies and their further development, with establishment of definition of competitiveness of small and medium-sized enterprises, as well as practical application of analysis framework. To achieve this, there is need for the most important factors of competitiveness of SMEs, as well as for the definition of indicators used for their measurement and characterization. Only after having done this, it will be possible to characterize competitiveness of the domestic SME sector, which, with dynamic approach and requirement of international comparison, I would like to introduce within the frames of a doctoral dissertation that will be submitted in the near future.

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