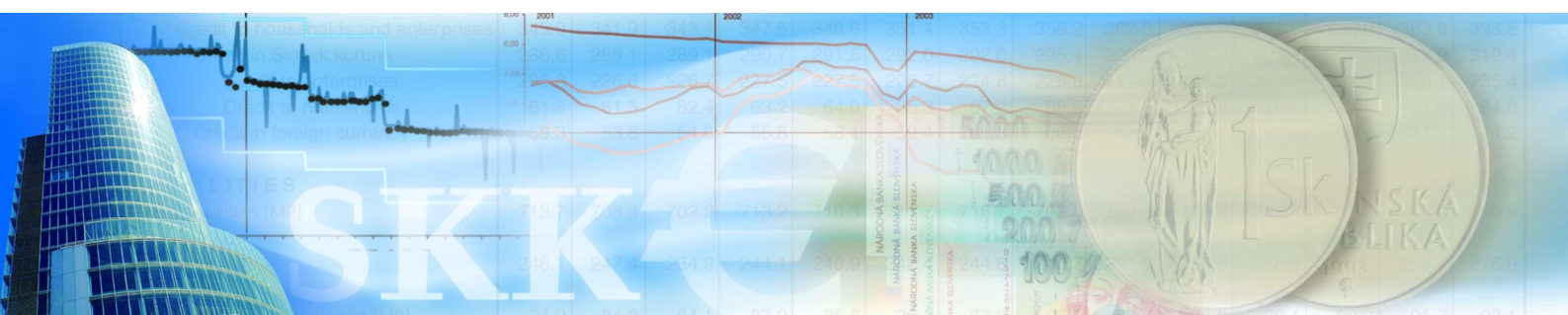




NÁRODNÁ BANKA SLOVENSKA

Tibor Lalinský

# COMPETITIVENESS FACTORS OF SLOVAK COMPANIES



Working Paper  
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## Competitiveness Factors of Slovak Companies\*

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### Abstract

This paper examines factors affecting the competitiveness of leading Slovak companies, using results obtained through a questionnaire survey. The results imply that companies are aware of the key role of consumers. By putting emphasis on production modernisation and extensive use of information and communication technologies, the companies are successful in placing their products on foreign markets, but the final customers are beyond their reach. The results confirm that the most important factors of competitiveness are intra-company factors, above all company management and cost reduction. Other factors considered to have a strong impact are the EU membership of Slovakia and energy costs. The planned adoption of the euro in Slovakia was seen as increasing competitiveness. Companies are starting to realise the need for transition to a higher level of competitiveness, one based on innovation. Among the main threats to competitiveness is the potential exacerbation of labour market imbalances.

JEL classification: C42, D21, L10, L25, O12

Key words: company competitiveness, SWOT analysis, questionnaire survey

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## Introduction

As economies become more open and integrated, we can observe the increasing significance of mutual comparisons of individuals, organisations, countries and regions. In order to maintain long-term growth, it is essential to objectively evaluate current position, opportunities and abilities in comparison with competitors. Competitiveness – although no longer a new or unknown term – is still difficult to measure, mainly due to its complexity, but also to its particularity. The research of competitiveness focuses mostly on the identification and description of core factors. The most important factors include the nature of competitive advantage, the technological level of the production process, the ability to innovate, and the amount of expenditure on research and development (R&D), but also other factors such as the trustworthiness of the police and the willingness to delegate authority. The most studied factors are probably unit labour costs and the real exchange rate. The business sector, which is the main source of a country's competitiveness, may perceive many of the factors as unimportant. This study aims to identify the main factors influencing competitiveness from the viewpoint of companies. Given that the economic development of Slovakia is predominantly shaped by the development of its corporate sector, we believe that the results of this study may serve as an input for economic policy decisions.

This study builds on the work of M. E. Porter. The business environment creates conditions for the competitiveness of companies; this is reflected in the competitiveness of the country, which is based on the abilities, decisions and real performance of companies. More sophisticated strategies and more productive activities require better educated people, more detailed information, more effective government decisions, better infrastructure, developed research institutions, etc. Higher quality, productivity and the market performance of companies is subsequently reflected in the export performance of the country, in its economic growth and ultimately also in a higher living standard of its population. This approach enables us to see companies in the context of the many factors affecting them. A detailed description of the theoretical basis is given in the first chapter.

In this study, we look for answers to practical questions at the company level. The major part of our research consisted of the preparation and conduct of a questionnaire survey, developed on the basis of the theoretical assumptions described in the first chapter. Its aim was to identify the key factors of the present and future competitiveness of Slovak companies. We addressed 200 leading companies in the Slovak Republic and obtained a 45% response rate. The respondent companies constitute a substantial proportion of the value added in, and exports from, Slovakia. The content, methodology and timing of the survey are the focus of the second chapter.

The third chapter presents the results of the questionnaire survey. We focused mainly on evaluating the most important macro-level, sectoral, and company factors of competitiveness, and identified differences between present and future factors. Based on the conclusions regarding the present level of factors affecting competitiveness, we also performed a SWOT analysis of Slovak companies.

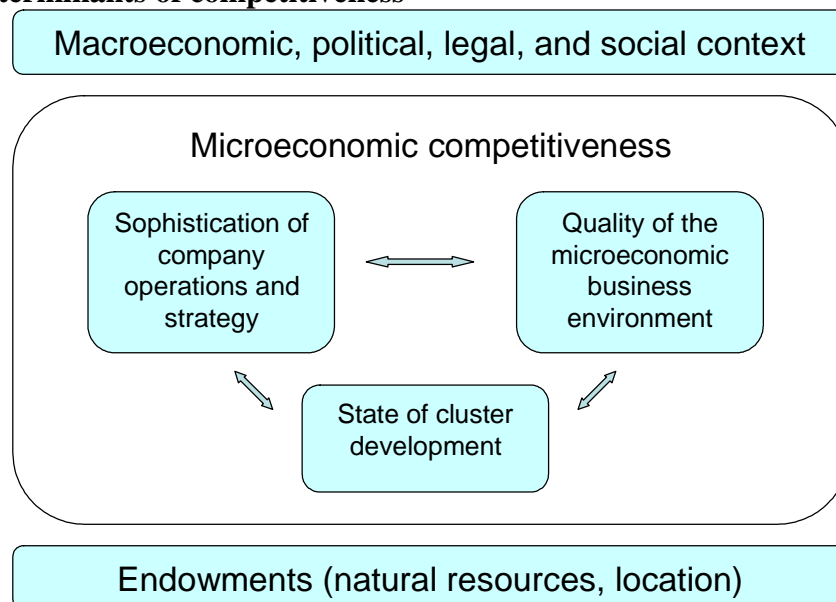
In the final chapter, we compare our results with the conclusions reached by similar studies. A detailed view of the original questionnaire and responses are provided in the appendix.

## 1. Theoretical basis

A company is influenced by a multitude of various factors. Most of the literature on the nature of company competitiveness is focused on the impact of one or a few factors. The number of publications dealing with the present impact of a larger number of factors is limited. So far, to our knowledge, there have not been any Slovak studies investigating a wide spectrum of business competitiveness factors.

Our study is primarily based on the findings published by M. E. Porter, who connected vertical levels of competitiveness and provided a systematic approach enabling the interpretation and prediction of company competitiveness. According to him, higher levels (regional, national, etc.) create conditions for competitiveness, or for the creation of wealth, but they do not produce the wealth. Wealth is created on a micro-level, where human, capital and natural resources are transformed into products and services. This depends on the capabilities of firms to produce valuable products and services by utilising effective methods, and on the quality of the business environment. The productivity of a country is based on the productivity of the companies operating in it. In this sense, more productive business strategies and processes also require better educated and more experienced people, a higher quality of information, infrastructure and suppliers, more advanced research, and so on.

**Figure 1: Determinants of competitiveness**



*Source: Porter, 2007.*

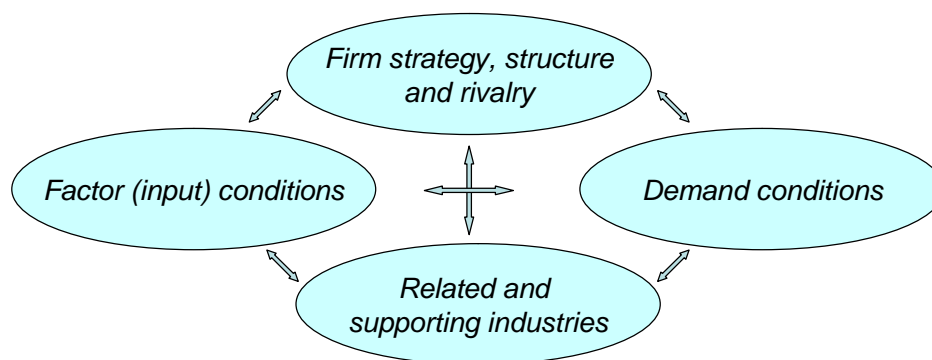
For the purposes of economic development, companies and countries have to improve their capabilities and forms of competition. It is important to consider the shift from competitiveness in resources and inherited merits (comparative advantages) towards the creation of competitive advantages based on differentiation and effectiveness of products and processes. Porter (1980) defined three stages of competitive ability. In the first stage, the country exploits cheap labour and natural resources. In the second stage, the efficiency of

production becomes the source of comparative advantages. The third stage concerns the production of innovative products and services. What was considered a strength of the company at a lower level of development may be a weakness at a higher level, due not only to the different level of productivity, but also to the postponement of necessary changes (as current practices are still profitable and routine procedures are deeply embedded). The author also points out that the process of raising competitiveness must be understood as a marathon, not a sprint.

The selection of companies' competitiveness factors resulting from their own operation was based on a value chain analysis.<sup>1</sup> Under this approach, the company is understood as a set of partial activities that contribute to the total value produced. We differentiate between primary value-creating activities (related to the creation and marketing of the product, its delivery to customers, and accompanying services), and supporting activities that ensure inputs, and complete conditions for the performance of primary activities.

The task of increasing competitiveness is difficult, and because improvement in an individual area does not ensure an increase in competitiveness, progress in multiple areas is necessary. The present and also future success of a company is largely predetermined by the environment in which the company exists, i.e. by the conditions for the development of business activity in the respective area. The business environment can be outlined in the form of a diamond.<sup>2</sup> It consists of four interconnected areas: 1. Production resources and the related quality, efficiency, and specialisation; 2. Customers, their demandingness and sophistication; 3. Existence of related and supporting industries; 4. Firm strategy and rivalry. Virtually all the factors affecting a company can be included in these areas.

**Figure 2: Microeconomic business environment**



Source: Porter, 1990.

The "five competitive forces" approach defined by Porter (2006) was taken into account when assessing factors affecting a company within its sectoral environment. The behaviour of a company is determined not only by current competitors, but also by the behaviour of suppliers and customers, substitute goods and potential new competitors. Strong

<sup>1</sup> Porter, M.E. (1993), *Competitive advantage. How to create and retain above-average performance*, Victoria Publishing, Prague.

<sup>2</sup> Porter, M.E., Ketels C. and Delgado, M. (2006), "The Microeconomic foundations of prosperity: Findings from the Business Competitiveness Index", *The Global Competitiveness Report 2006 –2007*, WEF.

competitive forces may be viewed as threats, which worsen the conditions and may lead to a decrease in profits. Weak competitive forces, on the other hand, may be treated as opportunities that create a favourable competitive environment and allow the company to increase profits.

The influence of the most important factors forming the competitiveness of the corporate sector, and subsequently the competitiveness of the economy, is subject to regular evaluation in the Global Competitiveness Report, on the basis of the Business Competitiveness Index (BCI).<sup>3</sup> The BCI reveals the fundamentals of competitiveness and/or prosperity of countries and it consists of two sub-indexes (the Index of Companies' Operations and Strategies and Index of National Business Environment). In this case, the variable used as a proxy for expressing competitiveness is GDP per capita in purchasing power parity (PPP). Using econometric methods, a relationship is estimated between the development of GDP per capita (PPP) and the number of explanatory variables. In line with the basic thesis on the key role of the business sphere, the most important identified determining factors are the capabilities and opportunities of companies and the quality of the business environment.

A rival publication is the World Competitiveness Yearbook (2006), which does not place such emphasis on the business environment. The so-called business efficiency is one of four main areas of competitiveness. However, this publication observes twice the number of indicators, and therefore it became an important source of additional factors in our survey.

The aforementioned approaches are often a target of criticism. Most frequently criticised are the weights of factors and the method of calculating the ranking of countries. Several authors, for example Sahin et al. (2006) propose alternative weights and methods. Furthermore, Krugman (1994) criticises the application of the term competitiveness beyond the scope of a company and warns against the misuse of the term "decreasing international competitiveness" to cover economic problems that are domestic in origin. Even though to a certain extent we take into account also the weights of individual factors in this study, the major reason for the selection and use of the two mentioned publications was the complexity and variability of the business sector factors they take into consideration. The subsequent implications for national competitiveness were used only to illustrate the importance of the business sector.

There is no doubt that foreign investments are an important engine of economic development in Slovakia. The most important drivers of inward foreign investment were identified on the basis of the World Investment Report 2006. In defining the group of macroeconomic factors, we also utilised valuable information from the publication Doing Business in 2007, which rates the business environment of countries primarily in terms of degree of state regulation.

In this paper we tend to use the broadest possible definition of competitiveness, taking into account all available criteria. At company level we can more or less agree with Buckley's (1988) statement that competitiveness is a synonym of long-term achievement of profit, an ability to come to a settlement with employees and provide above average returns for the owners. This enables us to take into account many factors other than those originally identified as crucial to the profitability or success of a company. If we accept the thesis of

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<sup>3</sup> In addition to competitiveness at the micro-level, this regular study also follows competitiveness in economic development represented by the Growth Competitiveness Index (GCI).

Beneš (2006), which understands competitiveness as a reflection of competitive advantages, determined by specific market situations, we can extend our list of factors by factors important to the achievement or sustainment of competitive advantage. Oral et al. (1999) connect competitiveness with the level of productivity.

The existence, progress and growth of a company's competitiveness are to a large extent predetermined by its field of business and by the nature of its production. Other significant internal factors identified by Porter (2006) are the level of education of employees, the source of competitive advantage, the willingness to delegate authority, and the innovativeness of the company. At the highest stage of development, based on innovation and services, there is increasing focus on the customer and on the utilisation of marketing. The least important factors are predominantly macroeconomic factors, such as government decisions favouring selected partners, the trustworthiness of the police, access to the domestic stock market, and cooperation in the employee/employer relationship. Government subsidies are not a factor in the success of Slovak companies either, as demonstrated, for example, in the work of Grznár and Szabo (2002).

At present, economic growth increasingly depends on the ability of people to work with information and on investment in information technologies. The implementation of information technologies changes the nature of the classic competitive environment and we can define a new type of competition, so called "e-competition".<sup>4</sup> The strong and statistically significant contribution of information systems has also been confirmed by Brynjolfsson and Hitt (1996).

Important factors of company competitiveness growth are the improvement of current production, the increase in the utility value and functionality, and the simplification of usage, all accompanied by a reduction in production costs. That is why the weight of R&D investment, as one of the main factors, increases in the transition towards production with a higher value added and a higher degree of sophistication. Voinea and Simionescu (2005) identified a strong positive correlation between competitiveness and the existence of specialised R&D departments in companies. Grupp (1997) discovered that the scientific potential of firms is a major determinant of their profitability and competitiveness.

Cooke (2001) emphasises the ability to innovate and to learn continuously. However, his study followed the work of Acs and Audretsch (1998) and therefore the innovations in small and large companies are governed by different fundamentals. Cantwell (2003) praises inter-company cooperation in the development of knowledge and innovation. With growing technological complexity, the importance of human capital is increasing. Companies often claim that people are their most valuable asset, but surveys among top managers confirm that the development of human capital is rarely ranked among the top priorities. According to Ravindran (2004) the most frequently mentioned factors are increasing sales, cost reduction, and R&D costs. Gregorová (2006) notes the relationship between the performance of a company and the management of human resources, including details such as the influence of a high-quality motivational system.

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<sup>4</sup> Rouvinen, P. (2002), *Competitiveness in the New Economy*, Research Institute of Finnish Economy.



Slovakia's entry into the EU increased the need to monitor the international environment and to differentiate between the "broad" and "narrow" international environment. Involvement in international business is now a key resource for company development. According to Sršňova and Füzyova (2003), a company operating exclusively on the domestic market cannot develop systematically in the long-term horizon. Trends in national and international competition, but also other factors,<sup>5</sup> increase the need for the internationalisation of companies. Internationalisation therefore becomes a decisive step in the progress of a company's competitiveness (Salwan (2007)).

Porter (1990) also states that the most successful firms in international competition are those that face strong competition in the domestic market. And in his next paper,<sup>6</sup> using Japan as an example, he adds that only companies hardened in strong domestic competition will stand their ground against international competition, even in the case of a domestic recession.

The competitiveness of companies depends on the quality of their management.<sup>7</sup> In other words, it depends on whether top management is able to create efficient development strategies, to ensure the long term prosperity of the company, and to use efficiently the decisive factors of company development. Under the term "quality of management", we primarily understand the professional performance of managerial functions. When the company is successful, managers take the most credit, but when the company is not doing so well, they have a tendency to lay the blame on external influences. We may object at this point by saying that the task of management is also to ensure adequate company flexibility and the skills needed to exploit changes in the environment for the benefit of the company. Hambrick and Mason (1984) confirmed that the strategic decisions and performance level of a firm depend on the nature of company management. When searching for factors of success of companies, it is easy to come to the simplistic conclusion that the manager is behind everything. It was a conclusion that Collins (2005) sought to avoid in his research. Although he could not rule out the substantial influence of management, he found that the long term success of a company cannot be ensured by a managerial hero emblazoned with legends and hired from the outside.

More extensive surveys targeted on finding key factors of competitiveness were done mainly on a sample of small and medium-sized enterprises. Morone and Testa (2005) base their findings on a survey conducted among small and medium-sized enterprises, and confirm the importance of the ability to innovate and invest into human capital. Furthermore, they also identified a strong effect of participation in international cooperation.

In Slovakia, surveys containing questions about the competitiveness of companies were conducted as part of a project entitled "Innovative capacity of small and medium-sized enterprises", under the patronage of the National Agency for the Development of Small and Medium-Sized Enterprises.<sup>8</sup> The most recent survey took place in November 2004 on a

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<sup>5</sup> In particular: rapidly growing R&D costs; shortening of the product and technology lifecycle; high capital requirement; development of information and communication technology; improvement of transport infrastructure; and broadening and deepening of services suitable for internationalisation.

<sup>6</sup> Porter, M. (2000), *Can Japan compete?*, MacMillan, London.

<sup>7</sup> Vincúr, P. et al. (2005), *Theory and practice of economic policy*, Sprint.

<sup>8</sup> National Agency for the Development of Small and Medium-Sized Enterprises (2005), *Innovation capacity of small and medium-sized enterprises*; Bratislava.

sample of more than a thousand small and medium-sized enterprises, most of them trade service companies. The results showed that the sources of competitiveness are, firstly, reliability in observing contractual terms, secondly, a high quality of product, and, thirdly, the ability of the company to adapt to change.

A further questionnaire survey, more extensive in both its content and scale, has been conducted by the Research Centre for the Competitiveness of the Czech economy. They studied the responses of 432 companies located in the Czech Republic, from the sectors of processing industry and construction. In addition to direct questions regarding the factors of competitiveness, the questionnaire included a very high number of additional questions used to define the company. The initial results<sup>9</sup> indicated that factors making the strongest positive contribution to company success were an ability to adapt elastically to customer requirements, production quality, and customer care.

## 2. Survey methodology

The primary goal of our questionnaire survey was to identify the most important factors of competitiveness of Slovak companies.<sup>10</sup> There is a wide range of expert literature in this field. We were interested in the how companies themselves see their competitiveness and the factors that affect it.

### Survey phases and timetable

Originally, we wanted to address the most successful Slovak companies indirectly through the most influential business associations. We requested cooperation from the Business Alliance of Slovakia, Club 500, and the National Union of Employers.

We expected that our survey would take around three months to conduct, considering the time needed by business associations to process our requests and subsequently to address the relevant companies, as well as the time required for replies. However, the approach of addressing firms indirectly did not prove suitable, since in three months we received replies from only 14 private companies and one non-profit company. Besides, four of the responses were from small companies, none of which achieved exceptional (absolute or relative) financial results. Nor did they belong to generally recognised firms well known for their image, technological sophistication of production or other characteristic, such that would justify their inclusion among the most influential Slovak companies despite their small number of employees and low turnover.

Given the weak response from companies addressed indirectly through business associations, we decided to contact leading Slovak companies directly.<sup>11</sup> We addressed 190 companies

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<sup>9</sup> Blažek, Ladislav et al. (2007), *Competitive ability of companies (primary analysis of results of empirical research)*, 1st edn, Masaryk University, Brno.

<sup>10</sup> In this study, we consider Slovak companies as companies doing business in Slovakia and registered in the Slovak business or trade register. The nationality of the owners is of no significance.

<sup>11</sup> Leading members, mainly CEOs, or other members of the top management were addressed by a letter signed by the member of the NBS Bank board responsible for the area of research. They also received a hard copy

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included in the Trend Top 200 list for 2006. During the course of two months, i.e. from the middle of May until the middle of July, we received 41 replies. Therefore, we achieved approximately a 22% response rate in the second round. Similarly to the first round, most of the companies replied electronically. We subsequently tried to contact the remaining companies again, by telephone, and managed to get through to almost 140 of them.

The majority of the firms addressed apologised that they were unable to answer our questions immediately, mainly due to their heavy workload. They promised to reply within a few days, or by a later date proposed by us – the end of August 2007. In the end, 20 of them sent us the completed questionnaire by the end of August.

A frequent reason given for non-participation in the second round of the questionnaire survey was that the top management or registered office had been changed and the request had not been delivered. In these cases, an additional official written request was sent to the companies.<sup>12</sup> Two companies were unable to participate in our survey due to a language barrier (non-Slovak management).

In the third round of the survey, we contacted companies by telephone and received a promise of participation from more than 120. By the beginning of September 2007, we had received 31 replies. We achieved a response rate of approximately 25% in the third round, bringing the overall response rate up by 15%.

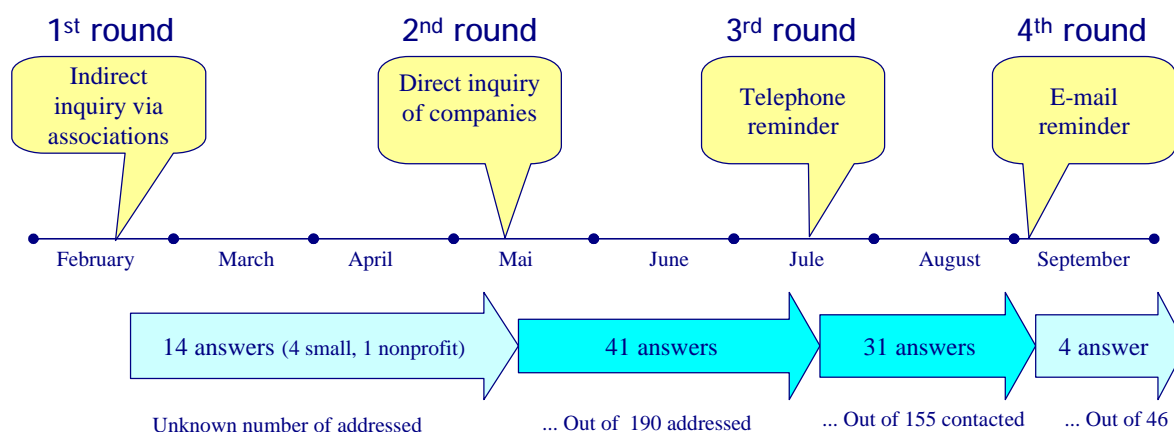
In the final round, we further prompted those companies that had promised to send us a completed questionnaire electronically and had provided their e-mail address. We sent them a request to complete and return the questionnaire as soon as possible. Out of 46 companies addressed in this round, we received four replies. In total, after four rounds, we had received replies from 90 companies and reached a response rate of 45%.<sup>13</sup>

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of the questionnaire and a link to the electronic version which was available for download from the NBS website, or could be requested by e-mail. Most of the respondents chose to download the electronic version, which simplified the subsequent processing and analysis of questionnaires.

<sup>12</sup> In addition, we also addressed five companies (from the automotive and electro-technical industry) which were not included in the Trend Top 200 in 2006, but which we assumed would be among the most prominent companies in 2007. However, we did not receive a reply from any of them.

<sup>13</sup> The original sample covered 200 companies included in the Top Trend 200 rating based on financial results for 2006. We do not know how many companies were addressed indirectly in the first round. Furthermore, we additionally contacted 5 new companies. Some of the companies had split up, or changed their name, therefore the total number of addressed companies exceeded 205.

**Figure 3: Survey phases and timetable**

With the aim of achieving the highest response rate possible, our survey took longer than we originally predicted. The survey lasted twice as long as originally planned, and it was impossible to conclude the analysis in accordance with the original timetable, by the end of 2007. However, considering the nature of the questions, the time difference between the replies had no distorting influence on the results.

### Survey participants

The survey was focused on the most prominent companies in Slovakia. In total, more than 200 companies were contacted. The specific number is not available, because in the first phase the companies were contacted indirectly through business associations. In the end, 90 companies actively participated in the survey.

The respondent companies selected for the survey were drawn from the 200 companies that have the highest annual turnover and exert a key influence on the development of the Slovak economy. In Slovakia, the largest companies can be considered to be competitive. This is evidenced not only by their export performance, but also by their share in the value added and profit produced by the entire Slovak corporate sector. The advantage of the selected sample of respondents is that it could be quantitatively analysed in depth without the need for additional lengthy gathering of data, since the basic information and economic indicators of these companies are available in a publication issued by Trend.<sup>14</sup> This allowed us to focus exclusively on the factors of competitiveness and to ask the companies a higher number of competitiveness-related questions than would otherwise have been practical.

The companies that participated in our survey constitute a negligible proportion of all the companies in Slovakia, but their economic power is significant. They employ just over 5% of the total workforce in Slovakia, but they account for 20% of the value added and profit of the non-financial sector. They generate approximately one quarter of the total production, and their share in the total exports from Slovakia is more than one-third.

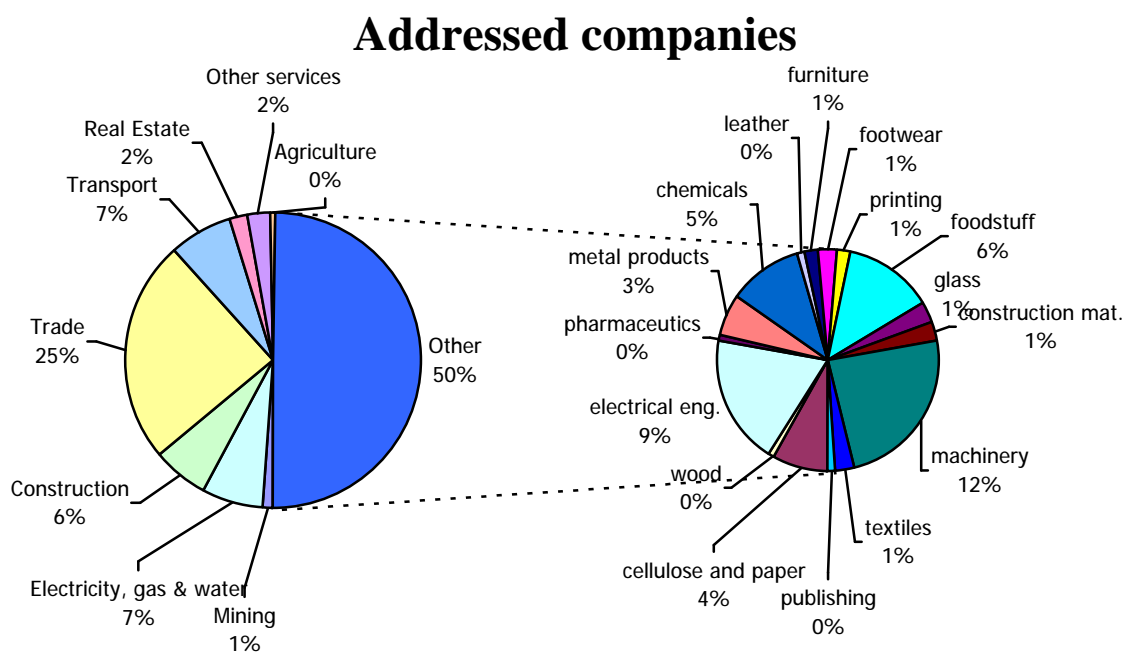
<sup>14</sup> The complete database of individual data of non-financial companies in SR (2007), Trend Holding, s.r.o., Bratislava.

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The sectoral composition of the top 200 companies is different to that of all companies in Slovakia, mainly in regard to representation of services. In 2007, companies in the sector of *wholesale and retail trade / repair of motor vehicles and motorcycles* constituted 37% of the total number of companies in the economy and approximately 25% of the number of companies in the top 200. In the survey, the proportion of respondents from this sector was less than 17%. Companies in the sector of *real estate, renting and business activities*, represent a relatively small proportion of top 200 companies (2%) and did not feature at all in our survey, but they make up 25% of all the companies Slovakia. Several other sectors are not represented in the survey, but they are not represented among the top 200 companies, either.<sup>15</sup>

The sectoral structure of the addressed companies (those which were contacted), more or less corresponds with the sectoral structure of the respondents (those which replied). The sectors that had a greater representation among the respondents than among all the addressed companies included the manufacture of cellulose, paper and paper goods sector and the chemical industry sector.<sup>16</sup> Detailed sectoral conclusions regarding factors of competitiveness of companies could not be made, considering the small number of respondents from some sectors. We did not receive any replies from companies in the sectors of pharmaceuticals, IT services, leather processing, sales of automobiles and fuel, publishing, and freight forwarding. When applying the survey results to the business sector as a whole, it is important to consider the lower proportion of service-sector companies in the survey.

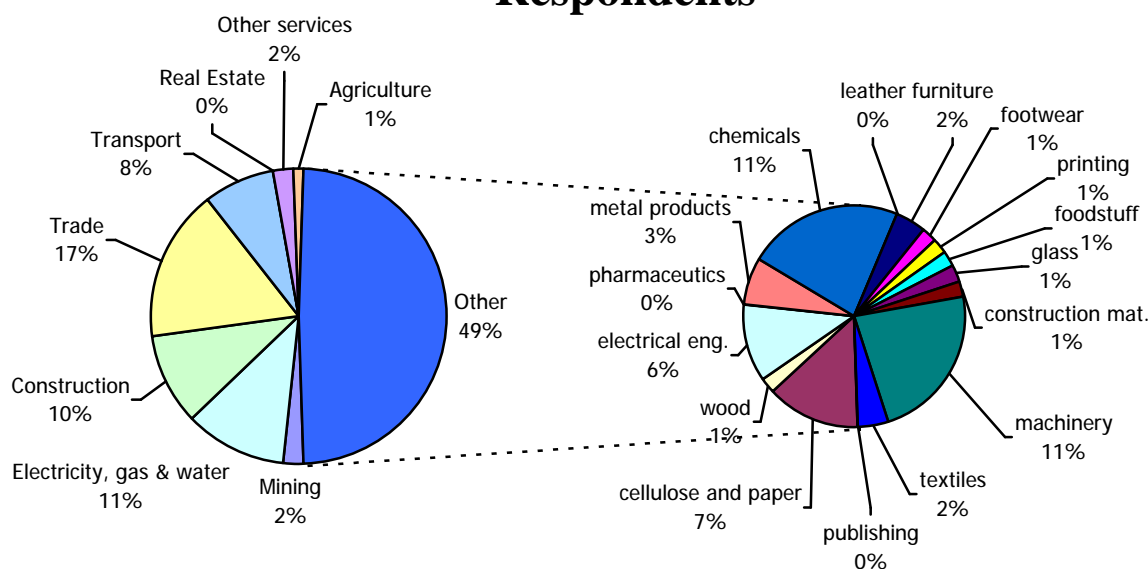
**Figure 4: Sectoral composition of respondents and addressed companies**



<sup>15</sup> Companies from the following sectors: hotels and restaurants, education, healthcare, and social services.

<sup>16</sup> Under the chemical industry sector, we include the manufacture of coke, refined oil products and nuclear fuels, the manufacture of chemicals and chemical products, and the manufacture of rubber products and plastics.

## Respondents



### Structure and contents of the questionnaire

The final selection of factors was based mainly on Porter's approach to the evaluation of country competitiveness. In this regard, the selection may seem unsuitable, but our eventual survey also covered factors other than those relevant to country competitiveness. The range of selected factors represents all the basic determinants of company competitiveness. At the same time, the survey provides valuable information that can be used to examine the vulnerability and competitiveness of the entire economy in which the addressed companies do business. The final list included several additional factors mainly regarding the motives of foreign investments and the description of infrastructure, taken from the sources specified in the chapter on theoretical resources.

Respondents expressed their views regarding the level, present impact and expected future impact of 73 sub-factors affecting their competitiveness. In accordance with the generally used classification of the business environment, the survey included internal, sectoral and macro-level factors. In line with the theory and practical experience mentioned in the previous chapter, 31 internal, 17 sectoral and 25 macro-level factors were selected. The questionnaire is included in Appendix No. 1.

In defining the internal factors, we tried to capture the entire value-creating process of a company. Considering the scope of active influences, we selected only the most important, many of them related to multiple parts of the value-creating process.

We did not focus on input and output logistics separately, but treated them as part of the production process. Among the factors that influence the production process, we took into

account the following: the corporate relationship with suppliers and customers, import intensity of production, investment in production expansion and modernisation, technological level of the production process, and the strategy of reducing production costs. We gave more space to evaluating the influence of suppliers at the sectoral level. As regards the area of marketing and sales, we included the following factors: the extent to which marketing is utilised, extent of orientation on customers, degree of control over foreign distribution, share of exports on sales, and the orientation on differentiation from competitors. We do not specify services in detail; the only one we examined separately was the significance of after-sale services. In the case of technological development, we asked about the utilisation of foreign technological licences, the quality and extent of the utilisation of information systems and communication technologies, the ability to innovate, and the extent of R&D investment. Among factors concerning human resources management, we studied the impact of good employee-employer relations, the level of education of employees, the extent to which authority is delegated, and the extent to which motivational rewards are utilised. The area of infrastructure includes in addition to the standard tangible infrastructure (the registered office of the company, office equipment, etc.), the qualifications of the management (efficiency of the company leadership and professionalism of management) and the level of performance in the managerial functions of planning, management and controlling in the company.

The group of sectoral factors was narrower, but it included all key elements affecting the company within the sector in which it operates. We based it on Porter's definition of the five competitive forces that characterise a sector and influence a company. We asked about the development of supplier sectors, the number and quality of domestic suppliers, the development of purchasers' industries and the demandingness of customers. We were also interested in the extent of domestic competition, the probability of the entry or establishment of new competitors, and the nature of the company's competitive advantage. By including the uniqueness of production and development of related sectors as factors, we examined the threat from substitutes of current products and services. Furthermore, we examined the total degree of regulation in a given industry. Considering the specific character of business conditions in Slovakia, we focused on factors related to sectoral quality and the availability of labour. Companies expressed their views regarding wage costs in their sector, the availability of specialised educational and research services, the supply of an adequately educated workforce with international experience, and the availability of qualified and experienced managers.

The number of macro-level factors was the highest, even though this level has a relatively weaker significance compared to the previous two. This fact relates to the diversity of a company's macroeconomic environment, which to varying degrees influences all business entities irrespective of sector and field of business. We concentrated mainly on the economic environment, political-legal environment, and the basic infrastructure in the country. As regards the economic environment, we were concerned mainly with the income tax rate and total tax burden, but also with the influence on company competitiveness of government subsidies and stimuli, liberalisation, and privatisation. In the area of monetary policy the important factors were stability of the price level and exchange rate, the prospect of the euro adoption, the interest rate level, and the overall availability of loans. The group of political-legal factors included political stability, the protection of economic competition and intellectual property, and the overall functionality of the legal system and observance of property rights. From the viewpoint of the transition to a knowledge economy, it was

interesting to examine the quality and availability of specialised educational and research services. Companies also expressed their opinions on such factors as the level of basic and technological infrastructure, the availability of land and office spaces, energy costs, office rents, and the quality and availability of telecommunication infrastructure in Slovakia.

In addition to the aforementioned factors, there were five specific questions related to current (or recent) monetary, fiscal and structural policy developments. We asked about the effect of Slovak koruna appreciation on competitiveness and about the expected impact of the euro adoption in Slovakia. We investigated whether tax reform, public finance reform and labour market reform have had any influence on company competitiveness.

The questionnaire was structured in such a way that respondent companies could add other factors which they considered significant, but which were not included in the list put forward by us.

### **3. Survey results**

We present the survey results in the structure corresponding to the questionnaire. The key point is that they are based on the current views of people who actually manage successful companies and decide about their priorities and further development. The study also provides a dynamic view of the competitiveness of companies, as it reveals not only present but also future factors of competitiveness. A detailed overview of the answers is provided in Appendix No. 2. In the following summary of the results, we will focus mainly on the factors that received the highest and lowest ratings and their present and future significance.

#### ***3.1 The present state of addressed companies***

##### **Internal environment of companies**

Companies evaluated their internal environment very positively. They utilise communication and information technologies to a great extent. Almost 70% of companies consider that communication technologies are utilised to a high or above average extent in the company. Only four companies (out of the total of 90) admitted low utilisation of information technologies.

The second highest rated internal factor is the professionalism of management. More than half of the respondent companies said they had a highly professional management. A majority of the respondents reported a high orientation on cost reduction or on cutting production costs, while only four companies admitted to a low orientation on these factors. As for orientation customers, it was high for more than 50% of the respondents and low for 8%.

The most successful companies are not dependent on usage of foreign technological licences. As for the question on utilisation of technological licences, the companies that considered it relevant reported an average or high degree of utilisation of foreign technological licences (a high degree of utilisation was stated by 14.5% of the companies).



## COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

For most respondents, both the utilisation of marketing and the degree of control over international distribution are low. Almost 60% of the companies have a low degree of control over the international distribution of their production. It is interesting that almost 70% of companies admitted to have either no or a low vertical and horizontal corporate relationship with other companies (i.e. relationship with suppliers, consumers and other companies operating in the given sector).

Approximately one-third of companies are exclusively oriented on the domestic market. The rest are strongly export-oriented, on average exporting 60% of their production and importing 35% of their inputs.

Most investments (almost half) are dedicated to the modernisation of production, and a further 30% (approximately) to the expansion of production capacities. R&D investment constitutes 9% of the total.

### **Sectoral environment**

According to our survey, sectoral factors have lower variability and achieve mostly average or below average ratings. The highest average value was assigned to the demandingness of customers, with almost 60% of companies considering their customers to be highly demanding.

The survey also shows that the development of the supplier and consumer related sectors is at a medium level. An important finding is that only 15 companies identified cheap production resources as the main factor of their competitive advantage. For almost 60% of the companies, the main source of their competitive advantage is production efficiency. The remaining companies (more than 24%) consider themselves to be innovators, i.e. the nature of their competitive advantage is innovation.

Respondents are aware of their often monopolistic or oligopolistic position on the market, and they do not feel threatened by their present or potential competition. In all, 70% of the respondents rated the degree of domestic competition as low or medium, and only 15% thought there was a high probability of the entry of a new competitor into the market.

Among the lowest-rated factors is the availability of labour with international experience, but also the quality and availability of specialised educational and research services.

An important and positive finding is the high share of domestic suppliers – 70% on average, and in some cases as high as 90%. We assume that this finding would be worth further examination in a sector-focused analysis.

### **Macro-level environment**

The macro-level factors achieved only slightly lower average values than the sectoral ones. Respondents rated them at mostly the medium level.

## COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

The respondent companies are aware of Slovakia's high level of integration into the European Union, and exactly 50% of them considered the probability of Slovakia adopting the euro to be high (only two out of the 90 companies considered it a low probability).

The quality and availability of telecommunication infrastructure, the availability of loans and the quality of office spaces were also rated high. The quality and availability of infrastructure was rated as sufficient or high by 95% of respondents. Access to loans was considered very easy by more than a third, and difficult by 12.5%. As for the availability of quality office spaces, 80% of the respondents said it was adequate or above average.

Among the most negatively rated factors were energy costs (rated high by 40% of the respondents), the amount of an employer's contributions to social security (rated high by more than a third), the quality and availability of specialised training and research services (rated low by just under a third), and the quality of transportation infrastructure (rated low by 33.3%). It is also interesting that one quarter of respondents still find the tax system to be complicated and that 60% consider the volume of government subsidies and investment stimuli as low.

### **Strengths, weaknesses, opportunities and threats**

Based on the above description of the current status of the internal, sectoral, and macro-economic environment of the respondent companies, it is possible to make a SWOT analysis for them. When interpreting the results, it is important to remember that the survey was conducted on a sample consisting of the largest companies in Slovakia, and therefore the results should not be generally applied to the country's business sector as a whole.

Strengths are apparent in all essential areas of the respondent companies. The results imply that the leading Slovak companies have highly professional management exercising efficient leadership, that they are aware of the key role of customers, and that by focusing on production modernisation and the extensive utilisation of information and communication technologies, they are successful in placing their production in foreign markets.

Nevertheless, they still have significant gaps in various areas. International distribution is not under their control; they export mainly sub-supplies for parent companies and they cannot influence final production. Furthermore, marketing is utilised to a low extent and the need to differentiate from the competition is low. From a long term viewpoint, their weaknesses include insufficient horizontal and vertical integration, which may mean missing out on synergic effects and being more vulnerable to strong upward pressure on domestic wage costs and/or to a drop in demand from final customers. Another weakness is the level of human resource management.

Slovak companies are already situated in the environment of developed supplier, related and consumer industries. The basic infrastructure is gradually improving. The telecommunication infrastructure essential for a modern company is in place and its availability and quality represents an opportunity for the companies. Further opportunities for Slovak companies are the country's EU membership, the prospect of advantages resulting from entry into the euro area, the availability of loans, and the availability of office space. Customer demands are

driving companies to achieve higher quality and efficiency, which will later reflect in their lower vulnerability and higher competitiveness.

A threat to companies is the weak availability of a workforce with international experience and adequate education. A negative sign in this area, and also for the overall development of the business sector towards the knowledge economy, is the low quality and availability of specialised educational and research services. In connection with the continuing high energy intensity of production, relatively high energy costs are a threat. As regards the creation of a favourable business environment, attention should be drawn to the weak functionality of the legal system and the low quality of transport infrastructure.

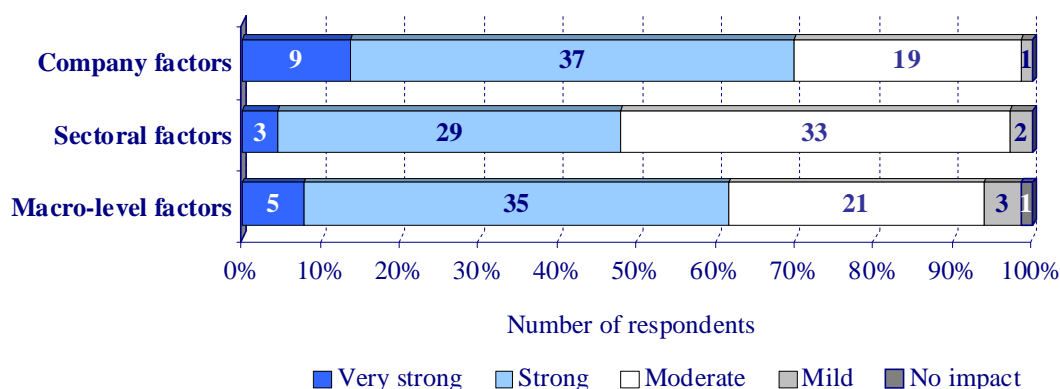
**Table 1: Strengths, weaknesses, opportunities and threats**

Strengths	Weaknesses
Utilisation of IS and communication technologies	Control over international distribution
Professionalism and efficiency of management	Horizontal and vertical integration
Orientation on customers	Utilisation of marketing
Share of exports in sales	Strategy of differentiation from competition
Focus on production modernisation	Management of human resources
Opportunities	Threats
Customer demandingness	Availability of a workforce with international experience and adequate education
Development of supplier, related and consumer sectors	Quality and availability of specialised educational and research services
EU membership and the prospect of euro adoption	High energy costs
Availability and quality of telecommunication infrastructure	Insufficient functionality of the legal system, distribution of investment stimuli
Access to loans and availability of office space	Quality of transport infrastructure

### **3.2 Factors of present competitiveness**

In line with our expectations, the respondent companies assigned the highest priority to company factors. Sectoral factors received the lowest average ratings, but the three levels did not differ significantly in this respect. Company factors had an average rating of 3.8 points, macro-level factors 3.6, and sectoral factors 3.5. Looking at the most rated factors, those at the company level and macro-level were rated with high influence and those at the sectoral level with medium influence.<sup>17</sup>

<sup>17</sup>The scale provided in the survey for rating a factor's impact on competitiveness was as follows: none, low, medium, strong and very strong. For the evaluation of the results, these levels of intensity were assigned values from 1 to 5.

**Figure 5: Impact of main groups of factors on present competitiveness**

The most important factors of present competitiveness are the professionalism of management, the quality and efficiency of performance of managerial functions, orientation on cost reduction, EU membership, and energy costs. Other highly rated factors were orientation on customers and customer demandingness.

### Company factors

Clearly the most important factor, not only among the company factors but among the entire set, is the professionalism of the company management. Fully 83% of the respondent companies said this factor had a strong or very strong influence on their competitiveness. The second highest rated factor was the quality of the company management, and another factor in the top five was efficiency of company leadership. More than 80% of respondents think these two factors have a strong or very strong impact on competitiveness. When evaluating the significance of such factors, it should be borne in mind that the responses to the survey were given by top managers of the companies addressed and that they may therefore reflect a certain subjectivity.

Other significant company factors were orientation on cost reduction and the extent of communication technology utilisation. Three-quarters of the companies rated cost reduction with a strong or very strong impact, and only two with a low impact. These results are more or less in line with generally observed facts. Slovakia is still ‘an assembly shop’ – a fact confirmed by its foreign trade structure. Besides having a high exports-to-GDP ratio, Slovakia has a high imports-to-GDP ratio, and a significant part of the imports are inputs for sectoral production. The situation is a little better among the respondent companies, as the share of their imports to total costs was only 35%.<sup>18</sup>

In addition to the set of factors put forward by us, the companies identified the following factors as having a very strong impact: production quality, fulfilment of customer demands, and investment in the development of a proprietary sales network.

<sup>18</sup> The ratio is further improved by the sector differences between the sectoral composition of the respondents and that of all companies in Slovakia.

The factor with the lowest impact on present competitiveness was corporate relationships with other companies in the sector, consumers and suppliers. Other factors with a relatively low rating were exports to non-EU countries, control over international distribution, and R&D investment.

### **Sectoral factors**

Customer demandingness was rated as a factor with a high impact and became the most significant sectoral source of competitiveness. Although customer demands may primarily be seen as a negative factor in the further development of companies (where excessive demands are met at the original price), they should also be seen as a driver of progress over the long term and also as giving a "head start" over the competition. Clear evidence of this is how the technological equipment of Slovak companies has improved in response to foreign customers' higher quality requirements for sub-supplies.

The second most important element of competitiveness at the sectoral level was the availability of qualified and experienced managers. The emphasis on this factor should, however, be evaluated in the context of the below-average perception of the present availability of qualified and experienced managers (mostly of Slovak origin).

The nature of a company's competitive advantage was a relatively highly rated factor, with most companies saying it had a strong or a very strong effect on their competitiveness. Three companies rated its impact as low, and one stated that it did not matter whether the competitive advantage was based on innovation, efficiency or cheap production resources.

In an environment of decreasing unemployment and a rising employment rate, Slovak companies are becoming increasingly aware of the importance of the workforce. The supply of an adequately educated workforce was typically rated as a strong source of competitiveness. Only seven of the 90 companies rated it as having no impact or a low impact.

Completing the top five of the most important sectoral factors is the existence of developed consumer sectors. Only a few respondents thought it had no or little impact on competitiveness. On average, the impact of the existence of developed consumer sectors was rated medium to strong.

The entry of new competitors is not seen as a threat to present competitiveness. Other factors with a relatively low impact are the availability of a workforce with international experience and the number of domestic suppliers.

### **Macro-level factors**

The most important macro-level factor is Slovakia's membership of the European Union, with approximately two-thirds of companies rating its impact on competitiveness as strong or very strong. Only two companies said it had no impact.

Considering the sectoral structure of respondents, energy costs are naturally one of the most important factors, since they constitute a substantial cost item of these companies. Fully one-third of the respondents rated energy costs as a very strong factor of their competitiveness.

## COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

The prospect of euro adoption and the actual adoption of the euro was the third most important macro factor, with its impact most often being rated as strong.

A very similar rating was assigned to impact of exchange rate stability. Its significance was only slightly lower than that of the euro adoption. Only three of the respondent companies considered the prospect and adoption of the euro to have no impact on their competitiveness.

Another key factor was the quality of transportation infrastructure. Compared with the previous four factors, it received a significantly lower proportion of strong or very strong ratings, but no respondents thought it had no impact.

Besides the factors put forward by us, one of the companies – a large foreign investor – added exemption from income tax and rated its impact on competitiveness as very high. Another respondent added external elements and the availability and price of retail space, considering them to be important.

The lowest rated macro factor was availability of office space. Other factors seen as having a weak impact on present competitiveness are government subsidies and investment stimuli, company privatisation, the level of office rent, and the availability of land.

The factor with the most consistent rating was efficiency of company management, which was seen as having a strong impact by most companies regardless of their size, sectoral focus, or other characteristics. Other factors also had only small differences in their ratings, including the development of supplier industries, professionalism of management, quality of leadership, and good employee-employer relations.

Initial results indicate that a company's sectoral affiliation and size probably affect how it perceives the impact on competitiveness of exports, the extent of domestic competition, government subsidies, control over international distribution, and the probability of the entry of competitors.

**Table 2: Basic statistical indicators of the most significant factors of present competitiveness.**

	Minimum	Maximum	Average	Mode
<b>Company factors</b>				
Professionalism of management	3	5	4.18	4
Quality of company management	2	5	4.12	4
Orientation on cost reduction (cost of production)	2	5	4.12	5
Efficiency of company leadership	3	5	4.11	4
Extent of communication technology utilisation	2	5	4.02	4
<b>Sectoral factors</b>				
Customer demandingness	2	5	3.88	4

## COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

Availability of qualified and experienced managers	2	5	3.80	4
Nature of competitive advantage	1	5	3.72	4
Supply of an adequately educated workforce	1	5	3.63	4
Existence of developed consumer sectors	1	5	3.6	3
<b>Macro-level factors</b>				
EU membership	1	5	3.88	5
Energy costs	2	5	3.84	5
Prospect of euro adoption and actual adoption of euro	1	5	3.79	4
Exchange rate stability	1	5	3.75	4
Quality of transportation infrastructure	2	5	3.71	4

### Additional questions

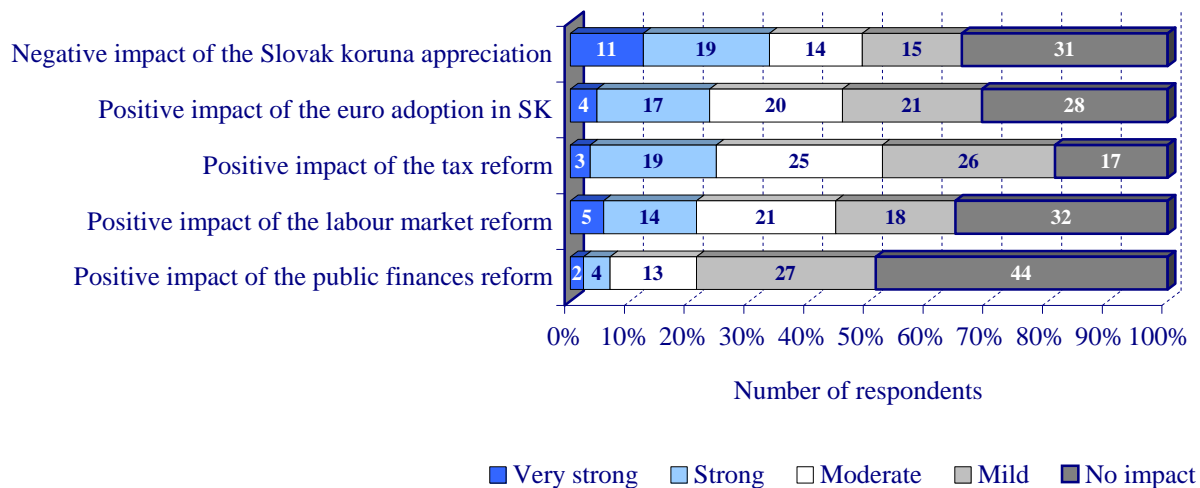
In addition to a spectrum of company, sectoral and macro-level factors, the questionnaire survey asked about the impact of the following on company competitiveness: key structural reforms, exchange rate movements, and the planned introduction of the euro.

The highest rated reform was the tax reform. Asked whether individual reforms affect their competitiveness, the respondents could reply either no, mildly, moderately, strongly or very strongly. The tax reform impact was rated as moderate on average and as strong or very strong by 25% of respondents. The labour market reform had a mild to moderate impact on average, and a strong or very strong impact according to one-fifth of companies.

The lowest rated factor in this group was public finance reform, with almost half of respondents saying that it had no impact on their competitiveness and a further 45% that it had a mild or moderate impact. Only six companies described its impact as strong or very strong.

The remaining two questions were related to monetary policy. Asked whether the introduction of the euro in Slovakia would increase their competitiveness, approximately 69% of the respondents said it would, with most rating the impact as mild and fewer as moderate. Only four companies thought this factor would have no positive impact. The other question was whether appreciation of the Slovak koruna reduces competitiveness, to which almost two thirds of the respondents answered affirmatively, with most of them rating the impact as strong. Taking into account the total number of companies, we may conclude that one-third of companies saw a strong Slovak koruna exchange rate as having a strong or very strong impact on their competitiveness; a further third perceived the impact as mild or moderate, and the other third was not affected by the development of the exchange rate. We assume that the results reflect sectoral differences among the companies.

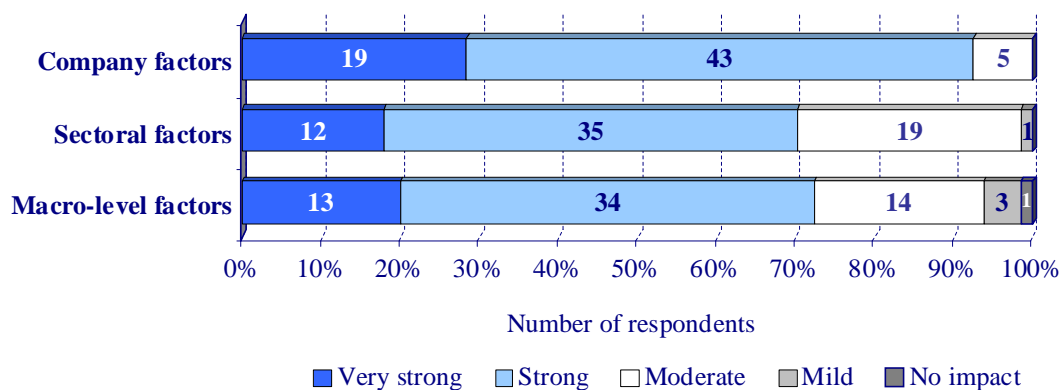
**Figure 6: Impact of changes in the economic and monetary area on company competitiveness**



### 3.3 Factors of future competitiveness

The respondents were also asked to rate each factor for its future impact on their competitiveness. In the case of the key factors, the differences between the evaluations of their present and future impact were not significant, although there was a slight decline in the impact of management quality and an increase in other company factors. The most significant factors of future competitiveness were orientation on cost reduction and orientation on customers, followed by the professionalism of management and the quality and efficiency of the performance of managerial functions. Information system and communication technology utilisation fell by one place from its position as a factor of present competitiveness. The significance of human resources as represented by the availability of qualified and experienced managers and the supply of an adequately educated workforce increased. The quality of transport infrastructure ranked among the most important factors.

**Figure 7: Impact of the main groups of factors on future competitiveness**





### **Future company factors**

The most rated factors of future competitiveness are broadly the same as those of present competitiveness. Companies expect increasing pressure to reduce costs and focus on customers. While professionalism of management, quality of management, and efficiency of company leadership will continue to be among the key factors, the professionalism of management will no longer be the single most significant factor.

The corporate relationship with other companies in the sector, consumers and suppliers will continue to have the lowest impact on competitiveness. The impact of exports to non-EU countries, control over international distribution, and the import intensity of production will also be low.

As for the factors added by respondents, such as production quality, the fulfilment of customer demands, and investment in the development of a proprietary sales network, their impact on competitiveness will remain very strong in the future.

### **Future sectoral factors**

According to the results, the weight of sectoral factors will increase in the future and their average value will be higher than the average value of company factors. The group of most important sectoral factors will not change, but their ranking will. The supply of an adequately educated workforce will rise to third place, while the nature of competitive advantage will drop from third to fourth.

The factor seen as having the lowest impact on competitiveness in the future is the probability of the entry of new competitors. The degree of business regulation in the sector and the number of domestic suppliers will also have relatively low significance.

### **Future macro-level factors**

The importance of macro-level factors on company competitiveness will rise in the future, but to a lesser extent than will factors at the two lower levels. Given the prospect of Slovakia adopting the euro, the respondent companies did not think exchange rate stability would be a key factor in their future competitiveness. The repercussions of shortcomings in basic infrastructure will become more prominent. The most important factor will be the quality of transport infrastructure, followed by energy costs, adoption of the euro, and Slovakia's EU membership. The fifth highest rated macro-level factor of future competitiveness of Slovak companies was the functionality of the legal system.

The factors added by respondents – exemption from income tax and the availability and price of retail space – will remain highly significant.

As for the lowest-rated macro factors, they will continue to comprise the availability of office space, company privatisation, the level of office rents, the availability of land, and government subsidies and investment stimuli. Their impact will increase.

When analysing the results for factors of future competitiveness, we noticed a lower variability compared to the factors of present competitiveness. The highest consistency was in ratings for management efficiency, quality of leadership, and professionalism of management.

## COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

A very similar level of consistency was found in responses about customer demandingness and orientation on cost reduction, which were also highly rated factors.

Differences between factor ratings were relatively large in the case of exports of production, control over international distribution, extent of domestic competition, government subsidies and the probability of the entry of new competitors. The five factors with the greatest differences were the same as in the analysis of factors of present competitiveness, except that their ranking changed when values of standard deviation were taken into account.

**Table 3: Basic statistical indicators of the most significant factors of future competitiveness.**

	Minimum	Maximum	Average	Mode
<b>Company factors</b>				
Orientation on cost reduction (cost of production)	2	5	4.56	5
Extent of orientation on customers	2	5	4.51	5
Quality of company management	3	5	4.47	5
Efficiency of company leadership	2	5	4.47	5
Professionalism of management	3	5	4.45	5
<b>Sectoral factors</b>				
Customer demandingness	2	5	4.38	5
Availability of qualified and experienced managers	3	5	4.30	5
Supply of adequately educated workforce	1	5	4.18	4
Nature of competitive advantage	1	5	4.06	4
Existence of developed consumer sectors	1	5	3.93	4
<b>Macro-level factors</b>				
Quality of transport infrastructure	2	5	4.21	5
Energy costs	2	5	4.16	5
Prospect of the euro adoption and the actual adoption of euro	2	5	4.12	5
EU membership	1	5	4.00	5
Functionality of the legal system	2	5	4.00	4

### ***3.4 Shift in the significance of factors***

From the theoretical standpoint, the ongoing changes in economic structure related to the Slovak economy's rapid development and its convergence to the European Union average should be reflected in changes in the significance of individual factors. We would expect that the weights of factors related to the rising significance of services and the transition to a knowledge economy would rise. This did not prove to be the case. One reason for this may be that the representation of service companies in the survey was lower than in the Slovak economy.

A simple comparison of the most important sources of present and future competitiveness shows the rising significance of company factors and the diminishing relative significance of macro-level factors. It also reveals the increasing power of the customer and the need for a sufficient number of adequately educated employees; this intersects with the increasing pressures to reduce costs. A closer analysis of all the factors, not just the key ones, reveals other essential facts as well.

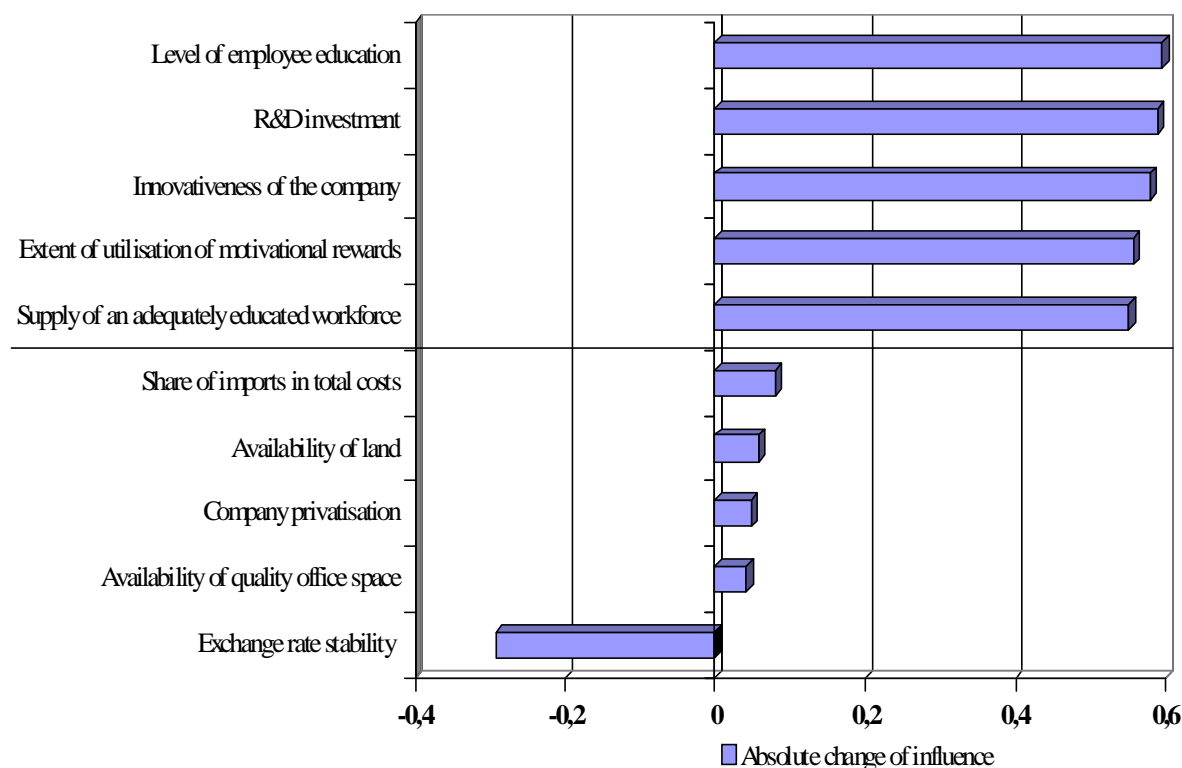
The only factor to record an absolute decline in its impact rating was exchange rate stability, which fell by 0.29 points. All other factors increased, with the lowest rise recorded by the availability of quality office space. Other factors whose impact rose negligibly were company privatisation, the availability of land, and the share of imports in total costs. The increases in these cases ranged from 0.04 to 0.08 points.

The largest increase was observed in the level of education of employees, its average value rising by 0.6 points. In no case did the average rating of a factor increase by one or more points. The second largest increase was recorded by R&D investment, followed by the ability to innovate, the extent of utilisation of motivational rewards, and the supply of an adequately educated workforce.

The highest relative change occurred in R&D investment, which increased by almost 25% from its original rating. Factors whose impact increased by just under 20% included the availability of a workforce with international experience, the company's relationship with suppliers, the provision of after-sale services, and the quality and availability of specialised educational and research services.

The group of factors with the least changed ratings is identical to the group of factors that recorded the lowest absolute change. The impact of exchange rate stability on future competitiveness will decrease by 8%. The availability of office space, company privatisation, the availability of land, and the share of exports in total costs will increase in a range from 1.5% to 2.8%.

This implies that companies are aware of the need to further improve the corporate environment, mainly the area of human resources management. Companies are starting to notice the need for a gradual transition to a higher level of competitiveness, while at the same time they expect that the influence of macro-level elements will be decreasing.

**Figure 8: Factors with the highest and lowest change in significance**

#### 4. Comparison of empirical and theoretical results

The primary goal of our survey was to identify the main factors of competitiveness at the company level. The list of sources of competitiveness identified by Porter, which served as our basis, was originally compiled for evaluating the business competitiveness of countries at different levels of economic development. We therefore omitted certain specific factors describing partial areas of the macro environment if they were not relevant (given Slovakia's level of development or the nature of its business environment).<sup>19</sup> These were mainly factors regarding aspects of transport infrastructure, the legal system, education, and company financing. However, we compensated for the impact of these factors by using others that were more generally defined.<sup>20</sup> Considering the country's regional affiliation and differences in company financing we did not take into account competitiveness factors such as number of patents registered in the USA or local stock market access.

We did not find unambiguous consistency between the significance of factors covered in our survey and the significance identified by Porter. Due to different scales of significance, we were comparing simple orders of common factors. The highest correlation was identified between present sources of competitiveness and factors of company competitiveness in countries with innovation-based growth. Slovakia, however, is still ranked among countries whose growth is based on investments. This result confirms that the selected companies

<sup>19</sup> In total, we used 36 of the 59 factors identified by Porter.

<sup>20</sup> For example, we did not ask about the individual impact of highway, railroad and air transportation, but only about the quality of transportation infrastructure in general.

are among the elite, and they are driving Slovakia up to the next level. However, the results regarding the future competitiveness seem conflicting. The correlation between the impact of expected future sources of competitiveness of Slovak companies and the impact levels found in innovation-based countries is lower. We, however, had expected at least a partial increase.

**Table 4: Relationships between the significance of factors according to the survey and the significance according to theory.**

	Present factors of competitiveness	Future factors of competitiveness
Country with investment-based growth	0.118	0.124
Country with innovation-based growth	<b>0.375</b>	0.330

The differences between theory and the survey results were most pronounced in the willingness to delegate authority (the respondent companies consider this factor to be relatively unimportant) and in transport infrastructure (which does not have a significant impact on competitiveness in countries where prosperity is based on innovation, but is considered by Slovak companies to be essential). Large differences were also observed in the ratings of the following factors: control over international distribution, availability of specialised training and research services, and access to loans.

When comparing the results of our survey with the results published by Porter, it is necessary to consider several important facts. The differing perception of the impact of individual factors may have been influenced by modification of the original list, i.e. the weight of some criteria may have decreased in favour of factors that we added to the questionnaire from other sources. The nature of respondents might play a significant role. It is not possible to deduce expectations for the further development of Slovakia's position in the BCI from our survey results, since companies perceive individual factors from a different perspective and pursue different goals.

The study of the National Agency for the Development of Small and Medium-Sized Enterprises was based on a survey which was only marginally related to factors of competitiveness and which considered only company factors regardless of potential development over time. In that survey, companies evaluated the influence of the following five possible factors in order of significance: reliability, production quality, flexibility, production costs, and product innovation. These factors are not directly comparable with our factors. We did not ask about company flexibility, but we did ask about a large number of factors creating conditions for ensuring overall flexibility and these factors were ranked among the most important. Our factor of orientation on cost reduction could be treated as an equivalent of production cost, which was ranked third out of all factors. In the survey conducted among small and medium-sized enterprises, it ranked after factors such as reliability, production quality, and company flexibility. Product innovation received the lowest rating. In our survey the ability to innovate received an average rating, since, as noted

above, the companies addressed by us were mostly large and their view of the key factors differs from that of small and medium-sized enterprises.

The results of the questionnaire survey conducted by the Research Centre for the Competitiveness of the Czech economy are characterised by better comparability, taking into account the focus and extent of the questionnaire. In a difference from our survey, their respondents rated also the direction of the impact of individual factors, i.e. they specified whether the factor had a positive or a negative influence. Only 14 out of the total number of 17 factors had an equivalent in our survey. We did not ask directly about flexibility (in this case understood to mean an elastic adaptability towards customer demands), but we did ask about a number of factors that create conditions for ensuring the overall flexibility of a company. We were also interested in the customer from the strategic viewpoint, by asking about the extent of companies' orientation on customers. As for production quality, we asked about the technological level and uniqueness of production. We understood customer care to mean the significance of after-sale services. Unlike our survey, the Czech survey allowed opinions on the impact of the company's reputation, market change, and corruption. The correlation between the significance of the factors identified in our survey and the Czech survey was low (less than 0.3). For Czech companies, the negotiating power of suppliers and the quality and supply of the workforce are not key factors. On the other hand, competition and access to financial resources have a relatively high positive impact on their competitiveness. Flexibility was consistently described as having a strong impact on competitiveness, while a low rated factor in both surveys was government subsidies or other public subsidies.

## Conclusion

The bulk of our research consisted of preparing and conducting the questionnaire survey. The goal of the survey was to identify key factors of present and future competitiveness of Slovak companies. We addressed 200 largest and the most prominent businesses in the Slovak Republic. Using a multi-phase inquiry we obtained responses from 90 companies. An important feature of the research is that it was based on the actual view of people who manage successful companies and decide about their priorities and further development. The results of our study are a suitable basis for inter-company benchmarks. Since the economic development of Slovakia is to a large extent shaped by the development of the business sector, the results might serve as an input for economic and monetary policy.

Based on the responses regarding the present level of factors affecting the competitiveness of Slovak companies, we made a SWOT analysis of the most influential Slovak companies. The results imply that these companies have highly professional management exercising efficient leadership, that they are aware of the key role of customers, and that by focusing on production modernisation and extensively utilising information and communication technologies, they are successful in placing their production in foreign markets. Their weaknesses may include insufficient control over international distribution and the low extent to which marketing is utilised. From a long term viewpoint, their weaknesses include insufficient horizontal and vertical integration. There is also scope for improvement in human resources management, particularly in the utilisation of motivational rewards, the delegation of authority and the further education of employees. Slovak companies operate in an

environment of developed supplier, related and consumer sectors. The largest opportunities for Slovak companies are currently the country's EU membership and the prospect of advantages resulting from entry into the euro area. Another opportunity is customer demandingness, which pushes companies towards higher quality and efficiency and should later be reflected in lower vulnerability and higher competitiveness. A threat to companies is the low availability of a workforce with international experience and appropriate education. A negative sign in this area, and also for the overall development of the business sector, is the low quality and availability of specialised domestic educational and research services. Another threat related to the continuing high energy intensity of production is relatively high energy costs. As regards the creation of a favourable business environment, we should not neglect the insufficient functionality of the legal system and the low quality of transport infrastructure.

The main part of this study is the analysis of competitiveness factors, which provides a dynamic view by covering present and future factors. As expected, companies assign the highest priority to company factors. Company factors and macro-level factors were assigned mainly high impact, while sectoral ones received a medium rating on average. The key factors of present competitiveness are the professionalism of management, the quality and efficient performance of managerial functions, orientation on cost reduction, EU membership, and energy costs. Also highly rated were orientation on customers and customer demandingness. Besides the factors put forward by us, the respondent companies added some other internal and external factors important for them. To the company factors, respondents added production quality, fulfilment of customer requirements, and investment in the development of a proprietary sales network, rating their impact as very strong. One of the large foreign investors extended the group of external macro-level factors by including exemption from income tax. Another respondent considered the availability and price of retail space to be important. In future, the significance of cost reduction and customer orientation will increase. The most important factors of competitiveness will continue to be the professionalism of management and quality and efficient performance of managerial functions. The influence of human resources will rise. The availability of managers and an appropriately educated workforce will be crucial. Furthermore, companies expect that the quality of transport infrastructure will remain very important.

In addition to the broad spectrum of various factors, we examined the impact of the most important measures of economic policy. The highest rated measure was tax reform, which on average was seen as having a moderate impact on competitiveness. The impact of the labour market reform was rated mild to moderate. The reform of public finances had the lowest effect. Approximately 70% of the companies expected the adoption of the euro to have a positive impact on their competitiveness, while two-thirds described the impact of Slovak koruna appreciation as negative (with half of the respondents rating such impact as strong or very strong).

The analysis of changes in the significance of individual factors indicates that companies expect increasing pressure on the labour market. They are beginning to see the need for a gradual transition to a higher level of competitiveness. At the same time, they expect that the relative influence of macro-level factors will be decreasing.

As for the individual factors identified by companies, their impact on competitiveness is similar to that of business competitiveness factors in countries with innovation-based growth. This confirms that the respondent companies are among the elite and that they are driving Slovakia up to the next level. However, the responses concerning factors of future competitiveness appear inconsistent with this statement, since they do not imply further development towards a knowledge economy based on innovation. This is seen, for example, in the respondents' expectations of stronger pressure to reduce costs and in their insufficient emphasis on transition to other sources of competitive advantage.

When applying these conclusions to the entire business sector in Slovakia, it is important to remember that the sectoral composition of the 200 leading companies is different from the sectoral composition of all companies in Slovakia. For example, the representation of service sector companies is lower in the survey than in the economy as a whole.

The number of respondents from several sectors was too low to make a detailed analysis of inter-sectoral differences. The results for companies in industrial production and trade sectors represent a possible basis for further analysis, which could be particularly useful for examining those company competitiveness factors that show the greatest variability in significance. It may also be worthwhile to conduct a quantitative analysis of relations between such factors and the companies' multiple indicators of economic development.

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# Appendix No. 1 Questionnaire

## Questionnaire

Factors of company competitiveness

Company name:  
Company address:


**1 Company factors**

- 2 Efficiency of company leadership
- 3 Professionalism of management
- 4 Quality of company infrastructure
- 5 Quality of company planning
- 6 Quality of company management
- 7 Quality of company control
- 8 Orientation on cost reduction (cost of production)
- 9 Orientation on differentiation from competition
- 10 Corporate relationship with other companies in the sector
- 11 Corporate relationship with suppliers or consumers
- 12 Innovativeness of the company
- 13 R&D investment (% of total investments)
- 14 Investment in production modernisation (% of total investments)
- 15 Investment in production expansion (% of total investments)
- 16 Share of imports in costs (% of total production costs)
- 17 Technological level of the production process
- 18 Utilisation of foreign technological licences
- 19 Extent of information systems utilisation
- 20 Quality of company information systems
- 21 Extent of communication technology utilisation in the company
- 22 Quality of company communication technologies
- 23 Good employee-employer relations
- 24 Level of education of employees
- 25 Willingness to delegate authority
- 26 Extent of utilisation of motivational rewards
- 27 Extent of orientation on customers
- 28 Extent to which marketing is utilised
- 29 Share of exports in sales (in %)
- 30 Share of non-EU exports in total exports (in %)
- 31 Degree of control over international distribution
- 32 Significance of after-sale services
- 33 .....
- 34 .....

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**35 Sectoral factors**

- 36 Development of supplier sectors
- 37 Number of domestic suppliers (share in %)
- 38 Quality of domestic suppliers
- 39 Existence of developed consumer sectors
- 40 Customer demandingness
- 41 Extent of domestic competition
- 42 Probability of entry of new competitors
- 43 Probability of establishment of new competitors
- 44 Nature of competitive advantage (1- resources, 2 - efficiency, 3 - innovation)
- 45 Uniqueness of production (services)
- 46 Development of related sectors
- 47 Degree of business regulation in the sector
- 48 Level of wage costs in the sector
- 49 Quality and availability of specialised educational and research services
- 50 Availability of qualified and experienced managers
- 51 Supply of an adequately educated workforce
- 52 Availability of a workforce with international experience

Level	Present Significance					Future Significance							
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# COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

	Level			Present Significance					Future Significance				
	1	2	3	0	1	2	3	4	0	1	2	3	4
<b>55 Macro-level factors</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56 Political stability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57 Government subsidies and investment stimuli	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58 Corporate income tax rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59 Complexity of the tax system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60 Amount of employer contributions to social security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61 Exchange rate stability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62 Price stability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63 Easy access to loans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
64 Interest rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
65 EU membership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
66 Prospect of euro adoption and actual adoption of euro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
67 Flow of foreign investments into the country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68 Liberalisation of the economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
69 Company privatisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
70 Observance of property rights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
71 Functionality of the legal system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
72 Protection of intellectual property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
73 Protection of economic competition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
74 Quality and availability of specialised educational and research services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
75 Quality and availability of telecommunication infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
76 Quality of transport infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
77 Energy costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
78 Availability of land	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
79 Availability of quality office spaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
80 Level of office rents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
81 .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
82 .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Additional questions:**

	No	Mildly	Moderately	Strongly	Very Strongly
83 Does appreciation of the Slovak koruna reduce your competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
84 Will the introduction of the euro in Slovakia increase your competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
85 Did the tax reform contribute to your competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
86 Did the labour market reform contribute to your competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
87 Did the reform of public finances contribute to your competitiveness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

88 We agree with the publication of individual results

Yes	No
<input type="radio"/>	<input type="radio"/>

Completed by (first and last names, position):

Contact information (tel., e-mail):

**Appendix No. 2 Overview of detailed results (response rate in %)**

	Level			Present significance				Future significance					
	Low	Medium	High	None	Low	Medium	High	Very high	None	Low	Medium	High	Very high
<b>Company factors</b>	<b>3.1</b>	<b>69.2</b>	<b>27.7</b>	<b>0.0</b>	<b>1.5</b>	<b>28.8</b>	<b>56.1</b>	<b>13.6</b>	<b>0.0</b>	<b>0.0</b>	<b>7.5</b>	<b>64.2</b>	<b>28.4</b>
Efficiency of company leadership	1.1	54.4	44.4	0.0	0.0	14.8	59.1	26.1	0.0	1.1	2.3	45.5	51.1
Professionalism of management	2.2	44.9	52.8	0.0	0.0	14.8	52.3	33.0	0.0	0.0	6.8	40.9	52.3
Quality of company infrastructure	6.7	57.8	35.6	0.0	4.5	32.6	50.6	12.4	0.0	4.5	20.5	56.8	18.2
Quality of company planning	3.3	55.6	41.1	0.0	5.6	27.0	40.4	27.0	0.0	0.0	16.9	44.9	38.2
Quality of company management	1.1	55.6	43.3	0.0	1.1	16.9	50.6	31.5	0.0	0.0	6.7	39.3	53.9
Quality of company control	8.9	56.7	34.4	0.0	5.6	23.6	43.8	27.0	0.0	3.4	14.6	39.3	42.7
Orientation on cost reduction (cost of production)	4.4	44.4	51.1	0.0	2.2	22.5	36.0	39.3	0.0	2.2	4.5	28.1	65.2
Orientation on differentiation from the competition	23.9	56.8	19.3	3.4	19.5	42.5	23.0	11.5	2.3	12.6	24.1	35.6	25.3
Corporate relationship with other companies in the sector	66.7	27.6	5.7	38.4	23.3	25.6	9.3	3.5	27.9	20.9	27.9	17.4	5.8
Corporate relationship with suppliers or consumers	69.8	20.9	9.3	37.2	26.7	22.1	7.0	7.0	25.6	24.4	23.3	18.6	8.1
Innovativeness of the company	14.6	59.6	25.8	0.0	11.4	40.9	35.2	12.5	1.1	3.4	17.0	44.3	34.1
R&D investment (% of total investments)	8.6			20.5	32.9	26.0	17.8	2.7	15.1	15.1	27.4	31.5	11.0
Investment in production modernisation (% of total investments)	49.6			6.4	6.4	34.6	42.3	10.3	3.8	3.8	12.8	52.6	26.9
Investment in production expansion (% of total investments)	32.1			10.7	17.3	32.0	26.7	13.3	9.2	11.8	30.3	39.5	9.2
Share of imports in costs (% of total production costs)	35.2			13.3	20.0	36.0	26.7	4.0	10.7	18.7	37.3	30.7	2.7
Technological level of the production process	8.2	49.4	42.4	2.4	2.4	29.8	47.6	17.9	2.4	0.0	10.7	45.2	41.7
Utilisation of foreign technological licences	49.4	36.1	14.5	21.7	19.3	34.9	18.1	6.0	14.5	14.5	36.1	24.1	10.8
Extent of information system utilisation	4.5	44.9	50.6	0.0	5.6	25.8	49.4	19.1	0.0	1.1	13.5	37.1	48.3
Quality of company information systems	6.8	55.7	37.5	0.0	3.4	24.1	52.9	19.5	0.0	1.1	11.5	40.2	47.1
Extent of communication technology utilisation in the company	0.0	28.1	71.9	0.0	5.6	16.9	47.2	30.3	0.0	1.1	15.7	32.6	50.6
Quality of company communication technologies	4.5	55.1	40.4	0.0	5.6	28.1	46.1	20.2	1.1	3.4	19.1	33.7	42.7
Good employee-employer relations	5.6	57.3	37.1	0.0	3.4	39.3	47.2	10.1	0.0	2.2	16.9	49.4	31.5
Level of education of employees	12.4	51.7	36.0	0.0	9.0	31.5	48.3	11.2	0.0	0.0	15.7	47.2	37.1
Willingness to delegate authority	14.8	59.1	26.1	1.1	14.8	46.6	33.0	4.5	2.3	4.6	27.6	52.9	12.6
Extent of utilisation of motivational rewards	19.3	62.5	18.2	1.1	8.0	52.3	34.1	4.5	1.1	2.3	22.7	54.5	19.3
Extent of orientation on customers	8.0	37.9	54.0	1.1	2.3	25.3	36.8	34.5	0.0	2.3	11.5	19.5	66.7
Extent to which marketing is utilised	37.5	43.2	19.3	9.2	11.5	29.9	36.8	12.6	5.7	12.6	11.5	31.0	39.1
Share of exports in sales (in %)	59.0			17.6	17.6	18.9	21.6	24.3	16.2	16.2	16.2	27.0	24.3

## COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

Share of non-EU exports in total exports (in %)	13.2			34.7	23.6	25.0	15.3	1.4	30.6	19.4	22.2	20.8	6.9
Degree of control over international distribution	59.5	29.7	10.8	36.0	21.3	20.0	16.0	6.7	32.0	18.7	18.7	21.3	9.3
Significance of after-sale services	33.7	50.6	15.7	16.7	21.4	35.7	19.0	7.1	15.5	9.5	23.8	34.5	16.7
Quality of production *	-	-	1	-	-	-	-	1	-	-	-	-	1
Fulfilment of customer requirements – deadlines and services *	-	-	1	-	-	-	-	1	-	-	-	-	1
Investment in development of a proprietary sales network *	-	-	1	-	-	-	-	1	-	-	-	-	1
<b>Sectoral factors</b>	<b>4.5</b>	<b>88.1</b>	<b>7.5</b>	<b>0.0</b>	<b>3.0</b>	<b>49.3</b>	<b>43.3</b>	<b>4.5</b>	<b>0.0</b>	<b>1.5</b>	<b>28.4</b>	<b>52.2</b>	<b>17.9</b>
Development of supplier sectors	9.3	78.7	12.0	0.0	6.0	44.0	46.4	3.6	1.2	2.4	23.8	53.6	19.0
Number of domestic suppliers (share in %)	73.7			6.7	23.3	40.0	23.3	6.7	5.0	15.0	35.0	35.0	10.0
Quality of domestic suppliers	13.8	77.0	9.2	1.2	8.1	40.7	41.9	8.1	1.2	7.0	20.9	51.2	19.8
Existence of developed consumer sectors	10.3	59.8	29.9	3.5	3.5	38.8	37.6	16.5	3.5	3.5	12.9	56.5	23.5
Customer demandingness	4.5	38.2	57.3	0.0	5.7	22.7	50.0	21.6	0.0	1.1	6.8	45.5	46.6
Extent of domestic competition	36.4	31.8	31.8	14.9	19.5	20.7	25.3	19.5	11.5	14.9	14.9	28.7	29.9
Probability of entry of new competitors	32.2	42.5	25.3	14.9	16.1	27.6	27.6	13.8	8.0	20.7	17.2	28.7	25.3
Probability of establishment of new competitors	46.5	39.5	14.0	19.5	25.3	31.0	13.8	10.3	12.6	25.3	18.4	24.1	19.5
Nature of competitive advantage (1 - production resources, 2 - efficiency, 3- innovation)	18.1	57.8	24.1	1.3	3.8	29.1	53.2	12.7	1.3	5.1	10.3	52.6	30.8
Uniqueness of production (services)	26.1	48.9	25.0	8.0	13.8	37.9	33.3	6.9	6.9	12.6	25.3	37.9	17.2
Development of related sectors	18.4	58.6	23.0	7.0	12.8	38.4	30.2	11.6	5.8	10.5	32.6	33.7	17.4
Degree of business regulation in the sector	43.7	34.5	21.8	10.5	22.1	34.9	16.3	16.3	7.0	19.8	37.2	17.4	18.6
Level of wage costs in the sector	23.3	64.4	12.2	1.1	6.7	43.8	37.1	11.2	1.1	5.6	28.1	41.6	23.6
Quality and availability of specialised educational and research services	42.2	52.2	5.6	3.4	23.6	41.6	27.0	4.5	1.1	12.4	29.2	42.7	14.6
Availability of qualified and experienced managers	28.9	61.1	10.0	0.0	3.4	30.3	49.4	16.9	0.0	0.0	14.6	40.4	44.9
Supply of an adequately educated workforce	30.0	63.3	6.7	1.1	6.7	33.7	44.9	13.5	1.1	1.1	14.6	44.9	38.2
Availability of a workforce with international experience	60.5	38.3	1.2	8.6	27.2	35.8	24.7	3.7	3.7	12.3	38.3	30.9	14.8
<b>Macro-level factors</b>	<b>1.5</b>	<b>78.8</b>	<b>19.7</b>	<b>1.5</b>	<b>4.6</b>	<b>32.3</b>	<b>53.8</b>	<b>7.7</b>	<b>1.5</b>	<b>4.6</b>	<b>21.5</b>	<b>52.3</b>	<b>20.0</b>
EU membership	14.8	65.9	19.3	4.6	11.5	36.8	36.8	10.3	3.4	11.5	28.7	47.1	9.2
Prospect of euro adoption and actual adoption of euro	58.0	36.4	5.7	31.0	23.0	17.2	23.0	5.7	25.3	19.5	17.2	28.7	9.2
Quality and availability of telecommunication infrastructure	11.1	67.8	21.1	1.1	12.4	37.1	37.1	12.4	0.0	5.6	30.3	44.9	19.1
Energy costs	12.2	61.1	26.7	2.3	11.4	40.9	35.2	10.2	2.3	9.1	38.6	36.4	13.6
Amount of employer contributions to social security	8.9	54.4	36.7	1.1	9.1	39.8	35.2	14.8	0.0	9.1	31.8	39.8	19.3
Easy access to loans	20.0	62.2	17.8	3.4	9.0	23.6	37.1	27.0	9.0	14.6	20.2	33.7	22.5
Flow of foreign investments into the country	12.2	73.3	14.4	0.0	5.6	40.4	40.4	13.5	0.0	5.6	30.3	43.8	20.2
Complexity of the tax system	12.4	52.8	34.8	12.5	17.0	25.0	43.2	2.3	8.0	12.5	28.4	44.3	6.8
Liberalisation of the economy	10.1	77.5	12.4	7.9	9.0	49.4	30.3	3.4	4.5	10.1	42.7	34.8	7.9
Availability of quality office space	4.4	40.0	55.6	2.3	6.8	26.1	30.7	34.1	1.1	10.2	18.2	28.4	42.0
Corporate income tax rate	2.2	47.8	50.0	2.2	9.0	24.7	36.0	28.1	0.0	6.7	19.1	29.2	44.9

## COMPETITIVENESS FACTORS OF SLOVAK COMPANIES

Level of office rents	10.1	64.0	25.8	5.7	11.4	33.0	34.1	15.9	4.5	8.0	30.7	34.1	22.7
Political stability	10.1	68.5	21.3	1.1	9.1	36.4	44.3	9.1	1.1	5.7	27.3	48.9	17.0
Interest rate	38.4	45.3	16.3	25.9	21.2	31.8	14.1	7.1	25.9	21.2	30.6	11.8	10.6
Price stability	21.6	56.8	21.6	3.4	12.6	26.4	35.6	21.8	2.3	6.9	21.8	36.8	32.2
Observance of property rights	32.2	53.3	14.4	2.2	10.1	30.3	38.2	19.1	0.0	4.5	23.6	39.3	32.6
Exchange rate stability	22.7	67.0	10.2	8.0	13.8	35.6	36.8	5.7	6.9	12.6	20.7	41.4	18.4
Protection of economic competition	18.0	68.5	13.5	4.5	10.2	39.8	36.4	9.1	2.3	6.8	34.1	35.2	21.6
Protection of intellectual property	30.3	60.7	9.0	6.8	22.7	42.0	25.0	3.4	3.4	11.4	33.0	38.6	13.6
Functionality of the legal system	3.3	56.7	40.0	1.1	11.2	32.6	34.8	20.2	2.2	9.0	18.0	38.2	32.6
Availability of land	33.3	54.4	12.2	0.0	9.0	31.5	39.3	20.2	0.0	2.2	18.0	36.0	43.8
Quality of transport infrastructure	5.6	53.9	40.4	0.0	9.0	29.2	30.3	31.5	0.0	5.6	23.6	20.2	50.6
Quality and availability of specialised educational and research services	27.0	64.0	9.0	19.5	20.7	41.4	12.6	5.7	20.7	20.7	34.5	16.1	8.0
Company privatisation	17.4	54.7	27.9	24.7	22.4	37.6	11.8	3.5	26.2	21.4	33.3	13.1	6.0
Government subsidies and investment stimuli	14.1	64.7	21.2	23.5	22.4	35.3	15.3	3.5	20.2	27.4	28.6	17.9	6.0
Temporary exemption from income tax *	-	-	1	-	-	-	-	1	-	-	-	-	1
Availability of quality retail space *	1	-	-	-	-	-	1	-	-	-	-	-	1
Price of retail space *	-	-	1	-	-	-	-	1	-	-	-	-	1

\* Factors added by companies (number of companies specified)

ADDITIONAL QUESTIONS					
	No	Mildly	Moderately	Strongly	Very strongly
Does appreciation of the Slovak koruna decrease your competitiveness?	34,4	16,7	15,6	21,1	12,2
Will the introduction of the euro in Slovakia increase your competitiveness?	31,1	23,3	22,2	18,9	4,4
Did the tax reform contribute to your competitiveness?	18,9	28,9	27,8	21,1	3,3
Did the labour market reform contribute to your competitiveness?	35,6	20,0	23,3	15,6	5,6
Did the reform of public finances contribute to your competitiveness?	48,9	30,0	14,4	4,4	2,2

	Yes	No
We agree with the publication of individual results	24,1	75,9