

## **Empirical Analyses of the Contribution of SMEs to the Competitiveness of the North Hungarian Region**

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*Abstract: Empirical survey on the competitiveness of SMEs in the Northern Region of Hungary*

*Our goal is to explore innovative capacity of Small- and Medium Sized Enterprises in the Northern Region of Hungary. Innovation has been identified by different authors as the principal driver of competitiveness. Using and adopting the questionnaire made by Prof. Michael Porter and his team at U.S. Council on Competitiveness, we started our research in 2006. In this article we summarize our first results emphasising that further research have to be done to be able to come to final consequences. We sent out 1.015 questionnaires to firms located in the Northern Hungarian Region and got 103 answers from enterprises having more than 10 employees.*

*Keywords: competitiveness, regions, innovation, clusters, SMEs*

### **Goal of the Research**

Our goal of research is to identify how Small- and Medium Sized Enterprises are able to contribute to the competitiveness of regions. For this general question we expect answer from the empirical research survey carried out in the Northern Hungarian Region. The theoretical background of this research were previously made by different authors either in Hungary or abroad (Buzás-Lengyel-Kállay 2003, Chikán-Czakó-Zoltayné 2002, G. Fekete 2004, Horváth 2001, Kállay 2002, Kocsiszky 2004, Krugman 1994, Lengyel 2000, Lengyel 2003, Losonczi 2003, Mazur, 2006, Porter 1998, 2002), we only refer to them in this paper. The survey is also based on research activities started some fifteen years ago at the Institut of Organization and Management in Budapest Tech (Kadocsa 2004, Tibor 1998). This research was started in 2006, the first results are published now. We have to emphasize that the evaluation of all the data has not finished yet, further overall results and conclusions will be published soon in articles and as a part of the author's PhD dissertation.

The survey is based on the questionnaire made by Professor Michael Porter and his colleagues at Harvard University and the U.S. Council of Competitiveness (Porter 2001). We adopted the above mentioned questionnaire and added some own questions concerning the relations between enterprises and other bodies in the region. The addresses of firms were earned from the comprehensive list of Dun & Bradstreet Hungary. This list was filtered according to Hungarian SME's law and our needs with the exception that micro enterprises are excluded. This means that firms having more than 10 employees were put in our sample. This way we had all the names and addresses of Small- and Medium Sized Enterprises in the Northern Hungarian Region. The total number of them is 2.443, out of which we sent out questionnaire for 1.015 mostly by e-mail and smaller amount by post. We got 103 pieces of valuable questionnaires.

The structure of the questionnaire gives us the opportunity to examine SMEs through their innovation potencial and this way we are coming closer to their contribution to the competitiveness of the region. The survey is structured around the the following areas: the business environment, collaborative business networks in the region, economic beliefs and attitudes, accessibility of services in the region and in smaller regions. We defined innovation, following Porter's approach, in a broad sense. Innovation is the transformation of knowledge into new products, processes, and services. Innovation involves more than just science and technology. Improvements in marketing, distribution, and service can also be considered innovations (Porter 2001).

### **Evaluation of Answers**

#### Business environment

The business environment can be understood in terms of four critical areas which can be affected by government through its policies:

- community infrastructure
- local demand conditions
- rules and incentives governing investment and competition
- related and supporting industries

In the first block of questions we were curious about the availability of infrastructure assets in the region. We asked the people to evaluate our statements on a seven grade scale according to the intinsity of their agreement or disagreement. The cost of doing business (cost of real estate, wages and slaries, utilities etc) in comparison with other regions was estimated lower by only half of the people. To our surprise all the grades appeared, although it is considered to be one of the most backward regions in Hungary. The most frequently given mark for the overall quality of transportation(roads, air transport, railroads and ports) was two. Specialized facilities for research(science laboratories, university research institutions and technical laboratories) were considered as very limited. Almost

one third gave mark one! The same proportion of answers stated that institutions in the region that perform basic research does not transfer knowledge to regional firms. In contrary to the above, but not surprisingly, the communications infrastructure, including internet access, satisfies the business needs of the companies at a high level. Most of the firms complained about the scarcity of qualified scientists and engineers in the region. The available pool of skilled workers in the region was considered heterogeniously. The average grade is a bit over three. The overall quality of the elementary and secondary school education got an average of four, but the advanced educational programs(e.g. vocational schools, colleges and universities) were said to provide regional business with relatively low quality workers. The regional access to risk capital(venture funds and private equity investments) seems to be really difficult. We suspect that for a part of the firms it is simply out of question.

#### Quality of life

The quality of life and cost of living were examined from the point of view of their contribution to easy recruitment and retention of employees. As almost all the seven marks were mentioned in the same proportion, we can not come to Egyértelmű consequences.

#### Local demand conditions

Local demand conditions refer to the presence or emergence of sophisticated and demanding local customers who press firms to improve and provide insights into existing and future needs. One fourth of companies considered their regional customers for their products and services very sophisticated and demanding. On the other hand the same amount of answers evaluated customers as undemanding. We got more or less the same result for the question if regional customers have special need that impact the firm's product offering. Approximately from 40% of regional customers come relatively frequent feedback which reveals the need for new features or enhanced performance.

#### Rules and incentives governing investment and competition

The investment climate and policies towards competition set the context within which firm strategy and rivalry develop. The climate for investment refers to labour market policies affecting the incentives for workforce development, the structure of the tax system, intellectual property rules, and their enforcement. In the opinion of the majority of those who gave answers state and regional regulations affecting business are inappropriate and hinder their firm's ability to succeed. More than the half of companies regard state and regional environmental standards and safety regulations quite strict. Investment in R&D is considered to be neutral from the view point of state and local taxes by most of the firms, but considerable part of companies stated state and local taxes as discouraging for the investment in R&D. The support of state and local government for the investment in R&D(funding business incubators, creating consortia etc.) got 1 and 2 marks in

nearly half of the cases. Perhaps the government's overall responsiveness and ability to work with the needs of business got the hardest critics. The most frequent grade is two, and four is the maximum! The number of regional competitors is estimated to be high by appr. 55%, and a bit less than 45% feels competition to be intense.

#### Related and supporting industries

Related and supporting industries refers to the local access to internationally competitive suppliers of materials, components, machinery, and services. It also involves local access to industries sharing technology, channels and customers. Only very few of the firms said that specialized suppliers of their business's materials, machinery, and services are mostly not available inside the region. Roughly the same group of firms stated that regional special suppliers's quality is rather low and more or less this group consider infrequent regional supplier's assist with new product and process development. Two thirds of companies share the opinion that businesses in the region hide information from other firms even when there is not a competitive reason to do so.

#### Clusters

A cluster is a geographic concentration of related companies and institutions in a particular industry field. A cluster also usually includes specialized suppliers, universities, trade associations, government institutions and other organizations that provide training, education, information, research and or technical support. Questions concerning clusters caused problems for the firms and for us to process data of answers. In most of the cases there are no clusters at all in the industry or service area of the firms, or if there is, it is at the starting point of its life cycle. This is why the most frequent mark for the relationship between firms and organizations in their cluster is one. The situation is almost the same in case of changing information inside the cluster and the willingness to accept new members into cluster activities. What's more only 5% of the firms has geographic preferences for their business partners. Very low number of the companies stated that firms in the cluster perceive new buyer trends more rapidly than their competitors who do not operate within a cluster. For the question, finally, considering all the significant factors, including government, industry and social factors, how good a location is your region as a place to innovate in your business, half of the firms gave mark one or two.

#### Overall evaluation of business environment

As a summary the last question in the first section of the questionnaire was as follows: Taking into account all the elements of the business environment that you have considered so far, which five currently have the greatest positive impact on your business's success? Which factors do you consider to be greatest future threats to your business if not addressed? Out of the five positive and negative factors we asked to give the ones which have the greatest impact.

<u>Positive impact</u>	<u>Future threat</u>		
		Cost of doing business(real estate, wages and utilities)	1
		Quality of transportation	2
		Specialized facilities for research	3
		Qualified scientists and engineers	4
		Transfer of knowledge from research institutions	5
		Communications infrastructure	6
		Available pool of skilled workforce	7
		Quality of K-12 education	8
		Sourcing of employees from advanced educational programs	9
		Access to capital	10
		Demanding regional customers that provide feedback	11
		Specialized needs of regional customers	12
		State/local regulations for production processes and products/services	13
		State and regional environmental/safety regulations	14
		State and regional tax and incentives for investment in R&D	15
		Predictability of government policies	16
		Government's overall responsiveness to the needs of business	17
		Level of competition in your industry	18
		Quality and in-region location of your suppliers	19
		Assistance from regional suppliers for new product and process development	20
		Relationships between firms and organizations in your cluster	21
		Participation with regional institutions in R&D efforts	22

Around 60% of the entrepreneurs afraid of the raising cost if doing business, although only four percent considered it as the major threat. 45% of the firms anxious about the predictability of government policies and for half of them it is the most important threat. Available pool of skilled workforce is a potential problem for almost half of the enterprises, but only 8% puts it on the first place. Access to capital is one of the threats for forty percent, but very few of them considers it as the most serious threat for the future. Beyond the above mentioned factors, state and regional environmental/safety regulations got considerable amount of votes, approximately 30%. As far as the positive impacts are concerned, more then the half of the enterprises did not mention any as the most important one! That is why we did not find any positive factor with more then 10%. Communications infrastructure and demanding regional customers that provide feedback gave positive experience for equally 40% of the entrepreneurs. Appr. thirty percent of the companies appreciate the quality of in-region suppliers and the quality of transportation. It is interesting that level of competition is considered by 20-20% of the firms as positive impact and future threat.

The results we got so far should be analysed from several other aspects, too. After a deep mathematical-statistical analyses of data we expect that new information

earned will reveal on the elements of the possible contribution of SMEs to the competitiveness of North Hungarian Region.

### References

- [1] Borbás, L. (2005): A kis-és középvállalkozások hozzájárulása a flandriai régió versenyképességéhez. PTE Közgazdaságtudományi Kara Regionális politika és gazdaságtan Doktori iskola Évkönyv 2004-2005. II. kötet 311-316. old.
- [2] Borbás, L. (2003): A kis-és középvállalkozások helyzete az EU csatlakozás tükrében. PTE Közgazdaságtudományi Kara Regionális politika és gazdaságtan Doktori iskola Évkönyv 2002. 212-236. old.
- [3] Borbás, L. (2005): EU's Enterprise Policy to Improve Europe's Competitiveness. 4<sup>th</sup> MEB International Conference, Budapest. 341-350. old.
- [4] Buzás, N.-Kállay, L.-Lengyel, I.(2003): Kis-és középvállalkozások a változó gazdaságban. JATEPress, Szeged
- [5] Chikán, A.-Czakó, E.- Zoltayné Paprika, Z. (2002): Vállalati versenyképesség a globalizálódó magyar gazdaságban. Akadémiai Kiadó, Budapest
- [6] G. Fekete, É. (2004): Az Észak-magyarországi régió kistérségeinek abszorpciós képessége és helyzetük Magyarország más kistérségeivel összehasonlítva. Észak-magyarországi Stratégiai Füzetek, Miskolc. 40-97. old.
- [7] Horváth, Gy. (2001): A magyar régiók és települések versenyképessége az európai gazdasági térben. Tér és Társadalom, 203-231. old.
- [8] Kadocsa, Gy. (2004): Research and Development of SMEs at Budapest Tech. Jubilee Conference of Budapest Tech. Budapest
- [9] Kállay, L. (2002): Paradigmaváltás a kisvállalkozás-fejlesztésben. Közgazdasági Szemle, 7-8., 557-573. old.
- [10] Kocziszky, Gy. (2004): Az Észak-magyarországi régió innovációs potenciáljának vizsgálata. Észak-magyarországi Stratégiai Füzetek, Miskolc. 5-39. old.
- [11] Krugman, P. (1994): Competitiveness: A dangerous obsession. Foreign Affairs, 2. 28-44. old.
- [12] Lengyel, I. (2000): A regionális versenyképességről. Közgazdasági Szemle, XLVII.évf. december, 962-987. old.
- [13] Lengyel, I. (2003): Verseny és területi fejlődés: Térségek versenyképessége Magyarországon. JATEPress, Szeged

- [14] Losoncz, M. (2003): Nemzetközi versenyképesség. A magyar gazdaság veszített előnyéből. Cégvezetés, 2003. július. 90-94. old.
- [15] Losoncz, M. (2007): A magyar EU tagság gazdaságpolitikai kihívásai. Tri-Mester, Tatabánya
- [16] Mazur, B. (2006): Introduction to International Business. University of Finance and Management in Bialystok
- [17] Porter, M. E.(1998) On Competition. The Free Press, New York
- [18] Porter, M. E. (2001): Clusters of Innovation: Regional Foundation of U.S. Competitiveness. Council of Competitiveness, Washington
- [19] Porter, M. E (2002): Competitiveness and the role of Regions. Institute for Strategy and Competitiveness, Harvard Business School
- [20] Tibor, Á. (1998): Miért buknak meg a vállalkozók Magyarországon? In: Renaissance of SMEs in the globalized economy. Verlag KMU HSG