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## **Analysis of factors influencing Czech SMEs after EU accession**

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**Key words:** globalization, SME, education, development strategies

### **Anotace**

Cílem tohoto příspěvku je prezentovat výsledky výzkumu v rámci řešení doktorské dizertační práce ve třech oblastech – podnikatelského prostředí z hlediska inovačního potenciálu, vzdělávání a dynamika a flexibilita subjektů MSP. Závěrem jsou provedeny návrhy a doporučení včetně možných strategií rozvoje. Výzkum byl finančně podpořen Interními granty Slezské Univerzity IGS SU 18/2005 a 41/2006.

### **Abstract**

The main goal of this paper is to present current research findings in three fields - business environment as a source of innovations, education needs and dynamics of SMEs units. The conclusion is made as some recommendations and useful strategies to support this very important part of national economy. The research was financially supported by Internal Grants IGS SU Nr. 18/2005 and Nr. 41/2006.

### **Introduction**

Factors influencing business on the market especially in SME's field have their roots in economical thinking of Joseph Alois Schumpeter and his followers. SCHUMPETER wrote in 1912 in his book "Theory of economic development" many useful things about innovations as a source of competitiveness and economic growth of national economy. In spite of nearly one hundred years that passed since it's publication it can be more useful for the understanding of economic problems we face today than many economic publications that appeared here just five years ago.

Schumpeter is not interested as much in the process of quantitative growth, as in the qualitative changes that he calls 'innovations'. Innovations bring sudden and discontinuous and unpredictable changes into the economy. This example is not to be interpreted as meaning that Schumpeter regarded for innovations only the inventions of new products. He included much wider spectrum of processes.

It is worth to note that Schumpeter does not completely reject the leading role of consumer; he rejects only the idea that causes of the economic development are created by consumers.

According to Schumpeter there are 5 cases of new combinations:

1. Production of new types of goods, or change of properties of the existing goods;
2. Introduction of the new method of production, which may be based on the new scientific discovery;
3. Opening of a new market;
4. Use of the new sources of raw materials and intermediate goods;
5. New organization of production<sup>1</sup>.

These all are innovation according to Schumpeter. According to KÝN (1966)<sup>2</sup> technical progress is certainly also an innovation, but the concept of innovation is broader than technical progress. We will not violate Schumpeter's theory if under the 5 we include also socio-economic changes in the economic system.

It seems that our recent experiences confirmed the validity of Schumpeter's analysis of the role of entrepreneurship, profit motive, banks and credit.

The paper was inspired by this approach and examines SMEs units by these points of view: Innovative potential, Educational needs and dynamics and flexibility on changes in their environment which could be included into these Schumpeter's combinations:

- Innovative potential – could cover point 1 and 4,
- Educational needs – could cover point 2,
- Dynamics - could cover 3 and point 5.

## 1 Current business environment evaluation

Firstly we have to mention that Czech economy is developed yet. Sometimes business organizations points on instability of business legislation, many changes without cooperation with practice life. In direction to find some factors which have main influence on SME units development I have been influenced by one method which could after some small

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<sup>1</sup> SCHUMPETER, J.A. Teória hospodárskeho vývoja : analýza podnikateľského zisku, kapitálu, úveru, úroku a kapitalistického cyklu. 1.vyd, Bratislava: Pravda 1987

<sup>2</sup> KÝN, O.: *INOVACE - PODNIKÁNÍ - ÚVĚR v teorii J.A. Schumpetera*  
[http://econ10.bu.edu/okyn/OKpers/HET/okyn\\_pub\\_fr\\_het.htm](http://econ10.bu.edu/okyn/OKpers/HET/okyn_pub_fr_het.htm) [Accesed 28.04.2006]

modification could be used as a measurement of quality of SME and their possibility to develop according to previous Schumpeter's analysis.

We talk about method VRIO, presented and discovered by BARNEY (1995) as an internal tool of analysis in the context of businesses. The VRIO is based on the four question framework you ask about a resource or capability to determine its competitive potential: the question of Value, the question of Rarity, the question of Imitability (Ease/Difficulty to Imitate), and the question of Organization (ability to exploit the resource or capability).

We could analyse these sections and make some sources of answering them – by the deduction method we could discover more practical using by SMEs units.

Table 1 VRIO method – practice using

<b>Section</b>	<b>Examination</b>	<b>Field of own research</b>
<i>Value</i>	Is the firm able to exploit an opportunity or neutralize an external threat with the resource/capability?"	Dynamics and flexibility
<i>Rarity</i>	"Is control of the resource/capability in the hands of a relative few?"	Innovative potential
<i>Immitability</i>	Is it difficult to imitate, and will there be significant cost disadvantage to a firm trying to obtain, develop, or duplicate the resource /capability?"	Innovative potential
<i>Organization</i>	"Is the firm organized, ready, and able to exploit the resource/capability"?	Educational needs

To be able to describe current situation we made some small research, it covers sample of 101 SMEs units from Czech Republic. They filled in prepared questionnaire and it was summarized and evaluated by basic statistical methods, using spreadsheet program.

Table 2 Entrepreneurial structure by the number of employees

SME type	Number	Percentage share
Micro size	34	33.7%
Small size	30	29.7%
Medium size	29	28.7%
Large size	8	7.9%
<i>Total</i>	<i>101</i>	<i>100%</i>

Source: own research

We asked them about their planning for the future development and after that we divide them into four groups. We have to mention that the biggest innovative potential in field of the new product supply is in Micro and medium size, specialization in services. There is a

possibility for outsourcing development. It means that micro units could be supplier of non-core activities in larger companies. On the other hand, medium sized companies prefer competitive strategy against large companies.

Table 3 Innovative SME's potential

	<i>Direction of innovation</i>			
	<i>Without = status quo</i>	<i>Technology development</i>	<i>Enlargement of the unit</i>	<i>New product development</i>
Micro size	29.4%	8.8%	8.8%	52.9%
Small size	17.2%	20.7%	24.1%	38%
Medium size	17.2%	13.8%	0%	69%
Large size	0%	0%	45%	55%

Source: own research

Innovative source could be determined by *competition level* around SME unit. It could be an engine to be more flexible, dynamics, so this factor we could identify as an *important influencing factor*, sometimes we could say, from negative point of view.

Table 4 Competition level around SME unit

	<i>Competition concentration</i>			
	<i>Without</i>	<i>Small</i>	<i>Medium</i>	<i>large</i>
Micro size	0%	29.5%	35.2%	35.3%
Small size	0%	13.8%	55.2%	31%
Medium size	0%	31%	27.6%	41.4%
Large size	12.5%	25%	25%	37.5%

Source: own research

Another factor which could play role in competitiveness of SME unit is quality of information. It was tested on 297 SME units from whole republic during January-April 2006. But survey doesn't confirm that something was changed after the EU accession. The situation of information sources and reliability in whole perspective haven't changed their quality yet. So, EU accession isn't factor influencing SME development.

The *governmental policy* plays important role and information about changes in business environment and stability of business law. We should compare it in table 5. We could find a difference in perception of change according to male and female point of view. We could see the factor of EU accession doesn't play role in entrepreneurship yet.

Table 5 Quality of information

<i>Unit type</i>	<i>Micro</i>		<i>small</i>		<i>medium</i>		<i>large</i>	
<i>Avg.value</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>
Number of information								
Before EU accession	1.62	2.24	2.25	2.5	2.5	2.4	2.5	2.52
After 2004	1.1	2.19	1.9	1.96	1.83	2.16	2	1.75
<i>change</i>	-0.52	-0.05	-0.35	-0.54	-0.67	-0.34	-0.5	-0.77
Data reliability								
Before EU accession	2.17	2.28	2.63	2.25	2.51	2.25	2.17	2.55
After 2004	2.1	2.13	2.08	1.9	1.83	1.66	2	1.97
<i>change</i>	-0.07	-0.15	-0.55	-0.35	-0.68	-0.59	-0.17	-0.58

Scale: 1- fully informed, fully reliable, 2- partly, 3- incomplete 4- none

As a conclusion of this part we tested a few hypothesis to identify main factors which have an influence on Innovation Potential.

Table 6 Innovation impact factors (correlation analysis)

<i>Hypothesis</i>	<i>Correlation coef.</i>	<i> T -test value</i>	<i>Sign. value, df=98, α=0.05</i>	<i>Conclusion True/false</i>
<b>Innovation is independent on current stage</b>	<b>-0.2856</b>	<b>2.951</b>	<b>2.01</b>	<b>False</b>
Innovation is independent on competition environment	0.0998	0.9929	2.01	True
Innovation is independent on strategy	-0.148	1.48	2.01	True
Innovation is independent on size	0.146	1.47	2.01	True
Innovation is independent on legal form	0.037	0.367	2.01	True

Source: own research

Innovative approach in global environment is depends only on your current stage, because without innovation you lose you market position and is only time factor, which could cut-off your business. Another factor mentioned above only support SME's creativity approach. An innovation is a new idea, but you need a place for realization, capital source and some cooperation level to be competitive.

## 2 Educational needs

Global entrepreneurship offers more opportunities but on the other hand growing request on information, knowledge and education. Using modern methods, self-improvement

makes entrepreneurship more effective and flexible. Could help to change our weakness to strength and make benefit from continuous education.

Educational needs came from harmonization of legal and accounting standards according to EU (nearly 60%). It could be the reason of highest percentage share in these fields. Legislative barrier could be now one of factors influenced stagnation of SMEs units. Other weaknesses are languages (46%) and marketing (29%) useful in day-by-day business.

Table 7 Educational needs – hypothesis testing

<i>Hypothesis</i>	<i>Correl. coef.</i>	<i> T -test value</i>	<i>Sign. value, df=1197, α=0,05</i>	<i>Conclusion True/false</i>
Educational needs not depend on company size	0.04	1.32	1.96	True
Integration or Innovation tendencies not depend on company size	-0.032	1.12	1.96	True
Development of managerial skills not depend on company size	0.033	1.15	1.96	True
<b>Integration tendencies not depend on managerial skills development</b>	<b>0.132</b>	<b>4.63</b>	<b>1.96</b>	<b>False</b>

Source: own research

We should summarize some piece of knowledge from hypothesis above:

- *Educational needs not depend on company size*

Leadership improvement is based on self-management approach. It means impulses coming from the personality, skills and experience of SME unit owner. Own initiative is an engine for improving skills.

- *Integration or Innovation tendencies not depend on company size*

The hypothesis was based on argument that integration or innovation not depends on time or place to come true. It is another factor which is coming out from entrepreneur.

- *Development of managerial skills not depend on company size*

This hypothesis confirmed our research when we compared company size and the choice of managerial skills development.

- *Integration tendencies not depend on managerial skills development*

This is section which isn't confirmed by the research. It could be explained by this way. If I want to improve something, I need new information, new methods searching. I could prefer another education to change them into knowledge. New knowledge creates resources of innovative approach and changes in SMEs units.

So, when we put together all four sections, we get a definition of a good SME unit owner – knowledge, intrapreneurship and experience could be developed in each unit. It is identified as a factor which could make many barriers from entrepreneur’s point of view.

### 3 Dynamics and flexibility

According to SLÁVIK<sup>3</sup> (2005) who examined possibility of SMEs units to change their behaviour influenced by some factors which came from primary and secondary activities, we made similar research. These activities take share in value chain of our units. From presented data we could account with a brake delay in business behaviour. The most flexible factor identified by research evaluation was prices of resources for manufacturing. It could be connected with maintenance scheme.

SMEs units are more dynamical in these sections (around 4-5 months):

- Price of production resources = changes in prices in suppliers chain,
- Price of production = changes in competitive environment, SMEs could be followers in pricing policy,
- Customers preference = SMEs are customer oriented; they have to be flexible on customer requirements – demand chain.

Table 8 Flexibility and adaptability on impulses

Change in:	Micro		Small		Medium		Large		place	Avg. days
	man	woman	man	woman	man	woman	man	woman		
Price of prod. resources	1.8	1.14	1.32	1.03	1.17	1.09	1.83	1.55	1.	123.3
Minimum wage	1.5	1.34	1.5	2.02	1.53	1.1	1.5	2.9	4.	150.3
Production price	1.3	1.63	1.4	1.73	1.3	1.25	2.08	2.1	2.	144
New quality standards	1.9	1.45	2.11	2.29	1.83	1.5	2	1.5	5.	163.8
Technology expiration	2.5	1.64	2.5	2.17	2.17	1.72	2.5	2.17	8.	195.3
New technology	1.94	1.88	2.3	2.42	2.2	1.6	2.4	2.3	6.	191.7

<sup>3</sup> SLÁVIK, Š., ROMANOVÁ, A.: *Predvídavosť a pružnosť podnikov. Výsledky prieskumu*, In: *Nové trendy v podnikovom managemente*, Košice: PHF EU Bratislava, 2005. ISBN 80-969181-3-3



Entrance to new markets	1.9	1.7	2.83	2.7	1.66	2.25	2.5	2.6	9.	204.3
Current markets conditions	2.2	1.6	2.41	2.06	2.07	2.18	2.2	2.45	7.	193.5
Customer's preferences	1.3	2.3	1.35	1.57	1.5	1.34	2.25	1.37	3.	145.8

Scale: 1-3 months, 2- 6 months, 3-9 months, 4-12 months, 5- more than 1 year, source: own research

We identify these factors which could cut-off the business, they need nearly 7 months to accommodate change, and they fully correlate with Slávik conclusions:

- Entrance to new markets,
- Technology expiration,
- Current markets conditions.

## Conclusion

Small and medium sized enterprises create a big power and potential in the Czech Republic development. They could have a huge innovative potential but without training and using supporting programmes, they do not develop their own identity. They have to discover a specialization field, which could make them more different than others one. SME's analysis by using historical approach supported by statistical methods discovered many trends, which we could change by appropriate education and training all the time.

Development of managerial skills and information source for creative climate making could depend on chosen organizational structure. It could be a good chance for educational activities from universities and could help to establish a better connectivity from research field to practice life.

As a result of methods using we compared an innovation source and traditionally used methods. Mainly is developed CRM method because of unit's specialization on additional services and customers care.

Table 9 Main innovation type and used implementing strategy

	<i>Commonly used innovation type</i>	<i>Commonly used innovation strategy</i>
Micro size	Assortment enlargement, e-shop	Competition observing (followers), CRM

Small size	Retail manufacturing, services pack, unique style	Orientation on public project competition, CRM, TQM, network development
Medium size	Product certification , ISO, KlasA (food products), technology franchising, cooperation	Strategic alliance building, CRM, MBO
Large size	Assortment enlargement according to customer's	CRM,CSR,TQEM

Legend: CRM=custom relationship management, TQM=total quality management,

MBO= management by objectives, TQEM=total quality environmental management, CSR=corporate social responsibility

Source: own research

Their main problems would be definitely lack of capital, big competition and lack of state motivation for make another job places and new membership in EU is in nowadays not the main influencing factor, which cuts-off the business.

If we want summarize factors which have influenced SMEs units in current business environment we have to count with:

- Governmental policy,
- Competitive environment,
- Quality of information, knowledge support,
- Flexibility on the new trends in technology.

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