SMEs IN THE GLOBAL TRANSITION

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Abstract

In Hungary the SMEs got to the centre of economic disquisition after the change in the political system since this sector plays an important role in creation of workplaces, the mobilization of resources and also during the structural changes. The sector of SMEs does not mean remedy for the process of transition and cannot generate economic growth itself however it plays an important role in the transition countries because of its contribution to the creation of social stability. The purpose of the paper is to focus on the peculiarities of the Hungarian SME sector in the nineties. The paper examines cooperation as one of the forms of successful company operation and deals with a very special but very essential segment namely biotechnology.

Keywords: SME, cooperation, transition, biotechnology.

1 The Macroeconomic Role of SMEs

Getting of small and medium-sized enterprises into the centre of economic disquisitions can be explained by several of their characteristics like flexibility and innovation potential. Several studies prove that small enterprises have a significant effect on the employment and economic growth. There is a positive relation between unemployment and rate of entrepreneurship, unemployment raises the activity of enterprises in the following period (refugee effect); there is a bigger possibility for an unemployed person to decide to be self-employed than for someone who is employed. Empirical researches prove that the degree of social safety has a direct, negative effect on the decision between being unemployed or self-employed (Stel et al. 2003). Besides, there is also a negative relationship between unemployment and self-employment (Audretsch et al. 2001; Blanchflower 2000; Stel et al. 2003), the high rate of enterprises reduces the rate of unemployment in the following period (Schumpeter effect).

Regarding Eastern-Europe there are two empirical studies dealing with relation between self-employment and unemployment. Based on Romanian and Hungarian regional aggregated data, Köllő and Vincze (1999) examined whether the growth of self-employment is in relation with the decline of rate of employment. They had the conclusion that in Hungary the extension of business opportunities played a bigger role in growth of
self-employment than the growth of unemployment and the decline of labour demand, Earle and Sakova (1998) had the same conclusion in their disquisition for 6 countries. There is also a relationship between the level of entrepreneurship and economic growth according to an OECD study (OECD 2004) although examining the data of 23 OECD countries in the period between 1966 and 1996, Blanchflower (2000) did not find any connection between the economic growth and the level of self-employment.

2 The Characteristics of Hungarian SMEs

After the change in the political system and cascading of large state-owned companies and co-operative, visibly without any premises, many SMEs were formed in Hungary. In fact, the sudden change made the hidden processes visible. We can understand the sudden expansion of private sphere if we consider that it was prepared by cultural and social changes.

Table 1: The change of number of registered enterprises by company forms

<table>
<thead>
<tr>
<th>Period</th>
<th>Private partnership</th>
<th>General partnership</th>
<th>Limited partnership</th>
<th>Limited company</th>
<th>Incorporated company</th>
<th>Co-operative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>387340</td>
<td>n.a.</td>
<td>n.a.</td>
<td>12159</td>
<td>519</td>
<td>7134</td>
<td>407152</td>
</tr>
<tr>
<td>1991</td>
<td>510459</td>
<td>n.a.</td>
<td>n.a.</td>
<td>41206</td>
<td>1072</td>
<td>7232</td>
<td>559969</td>
</tr>
<tr>
<td>1992</td>
<td>606207</td>
<td>n.a.</td>
<td>n.a.</td>
<td>57262</td>
<td>1712</td>
<td>7694</td>
<td>672875</td>
</tr>
<tr>
<td>1993</td>
<td>688843</td>
<td>2492</td>
<td>67301</td>
<td>72897</td>
<td>2375</td>
<td>8175</td>
<td>842083</td>
</tr>
<tr>
<td>1994</td>
<td>778036</td>
<td>3287</td>
<td>89001</td>
<td>87957</td>
<td>2896</td>
<td>8252</td>
<td>969429</td>
</tr>
<tr>
<td>1995</td>
<td>791496</td>
<td>3685</td>
<td>102560</td>
<td>102697</td>
<td>3186</td>
<td>8321</td>
<td>1011945</td>
</tr>
<tr>
<td>1996</td>
<td>745247</td>
<td>4394</td>
<td>127725</td>
<td>122044</td>
<td>3536</td>
<td>8362</td>
<td>1049590</td>
</tr>
<tr>
<td>1997</td>
<td>659690</td>
<td>4509</td>
<td>140043</td>
<td>143109</td>
<td>3929</td>
<td>8330</td>
<td>998264</td>
</tr>
<tr>
<td>1998</td>
<td>648701</td>
<td>5006</td>
<td>161857</td>
<td>157990</td>
<td>4251</td>
<td>8230</td>
<td>1026642</td>
</tr>
<tr>
<td>1999</td>
<td>660139</td>
<td>5217</td>
<td>170762</td>
<td>160647</td>
<td>4350</td>
<td>8191</td>
<td>1049410</td>
</tr>
<tr>
<td>2000</td>
<td>682925</td>
<td>7873</td>
<td>188136</td>
<td>167033</td>
<td>4372</td>
<td>7516</td>
<td>1175480</td>
</tr>
</tbody>
</table>

Source: Kállay et al. 2001

We can see that the range of enterprises gradually increased from the 90’s, aside from the drop in 1997. The total number of enterprises mostly depends on the number of private enterprises considering that their power within the enterprises is extremely high.

The number of registered enterprises exceeded the one million in 1995. But most of these enterprises did not really work. The biggest deflection can be seen in case of private entrepreneurs, the deflection between the registered and really working enterprises and the fluctuation are the biggest here. According to the statistics there are almost eight hundred thousand, mostly Hungarian-owned small and medium size joint and private enterprises in Hungary.

The rate of operating enterprises correlated to the number of population in Hungary is the same as the average of the European Union. But most of the Hungarian SMEs were formed because of taxation reasons or constraint that queries the existence of entrepreneurs’ approach (Czakó 1995). The study of Global Entrepreneurship Monitor (Acs et al. 2004) makes a contradiction stating that 60% of Hungarian enterprises were motivated by
opportunity, namely these were formed on behalf of profiting on some kind of good business opportunities.

By size, the majority of enterprises are micro-enterprises and their rate together with small enterprises exceeds the 97 percent. The following table shows the main characteristics of the Hungarian SMEs in 2000.

Table 2: The rate of operating organizations by size, employment and contribution to GDP in 2000 (%)

<table>
<thead>
<tr>
<th>Operating enterprises by size</th>
<th>Employment by size</th>
<th>Contribution to GDP by size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without employees</td>
<td>30,0</td>
<td>11,4</td>
</tr>
<tr>
<td>Micro</td>
<td>59,4</td>
<td>26,3</td>
</tr>
<tr>
<td>Small</td>
<td>6,9</td>
<td>14,3</td>
</tr>
<tr>
<td>Medium</td>
<td>2,9</td>
<td>16,5</td>
</tr>
<tr>
<td>Large</td>
<td>0,8</td>
<td>31,9</td>
</tr>
<tr>
<td>Total</td>
<td>100,0</td>
<td>100,0</td>
</tr>
</tbody>
</table>

Source: On the basis of Kállay et al. 2001

Surveys were made about the social composition of small enterprises in 1988, 1993 and 1996. These surveys examined the demographic and social characteristics of SMEs and their purpose was also to standardize the economic behaviour of enterprises. It was made based on the grouping by legal status and type of enterprises on behalf of circumscription of “real” owners who could be economically considered as entrepreneurs and had this approach and those who were motivated by self-employment and the fact that they had to support their family (namely the opportunity-motivated and constraint entrepreneurs).

Almost the 90 percent of enterprises operated as enterprises without legal entity or private enterprises in 1993. According to the survey, 60 percent of these entrepreneurs worked in full time; we consider them self-employers. The rate of self-employers was lower in the survey made in 1996, their number decreased in a larger measure compared to the entrepreneurs. All the mentioned can confirm that the joint form is more viable and stable.

The sphere of small enterprises was and still is characterized by large rate of fluctuation. According to the surveys those small enterprises have the biggest chance for survival of which the owners work in full time and those who are interested in more enterprises in the same time (Czakó 1997).

The participation in the second economy before 1989 has raised the possibility that someone could become an entrepreneur after 1989 (Róbert 1999). According to that, such knowledge and market experiences became obtainable during the work done in the second economy that made profit to their owner after he/she became separate. There were two big groups of small entrepreneurs. The skilled entrepreneurs belonged to one group; they escaped to the entrepreneurs’ entity after the change in the political system to avoid unemployment because of closure of large companies. They were skilled and they used their knowledge. Those entrepreneurs who had higher qualification belonged to the other group. Before the time of change in the political system administrators and managers with diplomas tried to make the most of their marketable acquirements. Today they usually
enterprise part-time, often using the infrastructure of their work places. Most often the favourable taxation is attractive for them. (This possibility for combination is very similar to the former part-time job accumulation of groups with good interest claim ability; and to that how they increased their income through the payments in kind and connections deriving from their position (Czakó 1995).

After the political change a selection mechanism well known in other fields of society took place: those become entrepreneurs, who had a social, cultural and connection capital above the average. As a consequence, those being in a disadvantageous position on the labour market fell out automatically: women, people with lower education, people being in unfavourable employment, the older, and the young people with low salaries. On the other hand in the last couple of years, people with very different social backgrounds have become entrepreneurs, since the law made entrepreneurship easier, the social threshold of entrance become lower, and the political risk of independence disappeared. The quantitative increase does not mean only the multiplication of the formerly known entrepreneur positions, but also the formation of new, independent groups with lower prestige: for example agents and street-vendors could be mentioned. According to Kuczi (1998) the transit is the biggest in this case, where it is easy to get in without money, connection and experience.

Even today the capital of connection has a significant importance in companies’ lives (not only in Hungary) because of the features of social development, on the other hand though those companies are considered to be competitive, for which this is secondary, and which are able to acquire market shares according to the conditions of competition.

3 Cooperation - a Condition of further Development or Survive?

The small and medium sized enterprises may answer to the changed conditions by cooperation. Of course cooperation always got an important role in their lives earlier, cooperation with other owners and with the workers of institutions helping the operation of the companies. The change can be traced in the quality of the connection and in the personality of the people involved in the connection. Smaller companies get a more and more important role in the value chain of the products produced by the large companies as a subassembly or the providers of other services.

For small and medium-sized companies low transitional costs make cooperation possible, which derives from a high(er) mutual trust, and it eliminates many, otherwise high cost processes (signing a contract).

Networking can be witnessed in each field of life, in personal relationships as well as between companies. Usually these networks interlock, behind the economy a dense contact and power network can be found (Barabási 2003). Concerning networking an accepted definition does not exist; usually it is interpreted as a connection system of companies, where a lasting cooperation concerning more companies is formed, which manifests through complicated interactions in order to reach a common goal (Kocsis 2000).

The connection between the members of the network can be formal or informal. In practice not one of the two types appears, rather they complement each other (Dyker et al 2002).
The extensive family, social, i.e. informal networks are useful for SMEs, but are less appropriate to reach large companies.

SMEs alone are not enough to dynamize the economy, the sector of large companies is also needed (McIntyre 2002). According to Hoványi (2000), the driving force of a worldwide technological and economic development is based on the cooperation of companies located on the two poles, i.e. the cooperation of large companies and SMEs. One form of this cooperation is the vertical network, which consists of SMEs organized around one or more large companies, and bears some characteristics of corporate hierarchy. The most typical form of this is the supplier network. Each activity can be considered as supply, which deals with the production of elements or components needed for the production of a final product, or it provides a service for another company.

In Hungary the biggest part of SMEs, more than 99 per cent are micro enterprises. They possess limited resources and capacities, and because of this and many other reasons they do not seek after cooperation. Besides getting resources, their risk taking is lower, since the owners very often depend on their enterprises existentially; therefore they are motivated by a balanced operation, rather than extension. It also has to be taken into consideration that supply is typical only in certain branches, less in the service sector, where SMEs usually operate. Beyond this, supply has many technical, financial and quality requirements. Therefore supply concerns only a small percentage of SMEs.

The driving force of supply is the fact, that in certain activities large companies, while in others small firms are good. Small and large companies do not compete directly with each other. Dynamic complementarity (Nooteboom 1994) takes place, smaller companies target market gaps, which can be exploited less economically by the large ones. The complementarity between the different company sizes makes the basis for the formation of vertical connection. On the areas, where large and small companies may compete with each other, the importance of cooperation between small enterprises comes to the fore. In case of horizontal corporate cooperation a partnership between companies with the same position takes place. In this case the main objective is to obtain common comparative advantages, for example the advantages deriving from the economies of scale or the bigger purchasing power.

4 The Importance of Geographical Proximity

A special contradiction is reflected, that while the processes of globalization seem to reduce the importance of distances, at the same time a reverse tendency can be observed, regionalism. We can say that globalization rather concentrates than disperses the economic activities (OECD 2000). The success and competitiveness of companies depends on their local environment.

In general, cluster means the extensional concentration of companies and business partners belonging to a given industry/business branch, and the connecting institutions. (Lengyel and Déak 2002). According to Porter regional cluster is the geographical concentration based on the innovative connection-system of competing and cooperating companies of a
given industry, connecting and supporting industries, financial institutions, service and cooperating infrastructural institutions (education, training, research), entrepreneurial associations (chambers, clubs).

According to Rosenfeld (2001) the cluster is a collecting conception; one efficient cause of the geographical concentration of economic activities is technology, which is an important criterion of the company’s productivity. The improvement of the technology is an innovation process, which contributes to the increasing role of extensity, the ‘clusterizing’. Clustering can even be seen in some apparently ‘placeless’ activities that might not be considered subject to clustering at all (Enright 2000).

In addition to economic reasons (proximity of markets, local suppliers) there are sociological reasons for geographic concentration. Cultural similarities, interdependence among local firms and familiarity allow develop trust and may limit opportunistic behaviour. As a result, clusters can be able to adapt to changing economic environment. For this reason local economic activity has a stressed importance for small enterprises, which have a strong individual motive in the case of cooperation.

5 Internationalization

Small and medium-sized enterprises possess few resources and typically they show reluctance against international business activities. Even if they decide to do so, it usually materializes through export. The importance of networks grows, if a company lets in itself in for international attendance, since in case of SMEs several critical elements may be missing, for example information regarding the new market.

While at medium-sized enterprises industry, at small companies commerce dominates, the majority of micro enterprises operate in the service sector. Concerning the whole SMEs sector the rate of those operating in the service sector is about 50 per cent (the reason of the high ratio is the fact, that about 90 per cent of the SME sector is micro enterprise). As it is known, the service sector is less mobile; therefore for the most of them the strategy of internationalization is not a passable way.

6 Biotechnology – a Possible Innovation Break-trough for Hungary

The present Hungarian National Innovation system (NIS) at institutional level consists of three main components such as the governmental organisations, the Hungarian Academy of Sciences and the research and technology institutions. It is being more and more integrated in the global economy, what is shown by statistical data of patent application (Borsi 2001).

Since 2003 there has been important reforms in the field of science and technology in Hungary. These changes are in line with the increasing recognition that a proactive competitiveness policy is necessary. The key questions of research and innovation are the following: to increase the technology transfer, to exploit PPP to promote innovation, to great cooperation between state, universities, research institutions, and business communities (Sullivan 2004).
The Hungarian innovation performance relative to EU 25 is better than other new EU member countries. It is true especially in the field of innovation cooperation of SMEs, ICT expenditure and value added hi-tech manufacturing. The Hungarian rank among EU 25 of employment hi-tech manufacturing is 4\textsuperscript{th} and rank of hi-tech services is 12\textsuperscript{th}. We are 7\textsuperscript{th} of R&D public expenditure and 6\textsuperscript{th} SMEs innovation cooperation but SMEs business researches are recently on a low level (EIS 2004).

Table 3: Principle data of research and development

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of R&amp;D Units</th>
<th>Calculated R&amp;D Staff number Unit (person)</th>
<th>R&amp;D staff num. as % of active Employees</th>
<th>R&amp;D expenditure as % of GDP</th>
<th>R&amp;D expenditure, Total (billion HUF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1257</td>
<td>29397</td>
<td>0.63</td>
<td>1.09</td>
<td>27.1</td>
</tr>
<tr>
<td>1996</td>
<td>1461</td>
<td>19776</td>
<td>0.55</td>
<td>0.75</td>
<td>46.0</td>
</tr>
<tr>
<td>2000</td>
<td>2020</td>
<td>23534</td>
<td>0.61</td>
<td>0.82</td>
<td>105.4</td>
</tr>
<tr>
<td>2001</td>
<td>2337</td>
<td>22942</td>
<td>0.59</td>
<td>0.94</td>
<td>140.6</td>
</tr>
<tr>
<td>2002</td>
<td>2426</td>
<td>23703</td>
<td>0.61</td>
<td>1.01</td>
<td>171.5</td>
</tr>
</tbody>
</table>

Source: OM 2002

While the R&D financial source had been increased, sharing of sources did not change in percent. The state financial sources mean the most rates in the innovation. Source of enterprises is low. Private R&D spending of 0.3 percent is almost 5 times less than the 1.4 percent of GDP spent by the OECD in 2000 (Sullivan 2004). Number of researchers (4337 persons) (full time equivalent) in the business sector had been near two times in the last ten years (OM 2002).

The business sector has an important role in innovation, which is reflected in the increasing, number of R&D units at enterprises. A number of well-known transnational companies have set up research laboratories in the country. The main R&D facilities in Hungary were established or maintained by multinational companies: lighting technique (GE-TUNGSRAM), medical equipment (GE-Medicor), pharmaceuticals (Sanofi-Chinoin, Astra, Teva-Biogal, Akzo Nobel/Organon), information and telecommunication (Ericsson, IBM, Compaq, Nokia, Siemens, Motorola, Tata Consultancy, T-Systems/Matáv), machinery (Audi, Volkswagen, TEMIC, Michelin, Knorr-Bremse, Mannesmann-Rexroth, Flextronic, Agrifood (Novartis/Sandoz Seeds), household chemicals (Unilever, Furukawa) (OM 2002).

More state and European projects supply the SMEs in Hungary. Hungarian R&D organisations have an increasing opportunity to participate in multilateral and bilateral scientific programmes. Over the past decades a large number of international science and technology cooperation links has been developed. Hungary has become full member in most European and Euro-Atlantic research organisations and programmes (e.g. EU R&D Framework Programme, COST, EUREKA, CERN, EMBL, ESA/PRODEX and the NATO Science Programme) (OM 2002).

Role of Hi-tech sector (biotechnology, informatics and nanotechnology) is increasing in the innovation. Biotechnology has been as one of the top five priority sectors of the country's mid-term development plan. Hungarian government is strongly committed to support the
development of a healthy biotech sector. By 2010 Hungary would like to aim the place among the top 10 EU states in Biotechnology (Kóka 2005). The biotechnology magnetizes the venture capital mainly (earlier the capital flow to the ITC sector). According to the experts’ opinion biotechnology going to be the most exciting field of research in the next decade (Lukács 2004).

Uniquely in the Central and Eastern European region, Hungary has over 50 enterprises of various sizes focusing their activity wholly or partially on biotechnology-related research and development or manufacturing. The vast majority of these companies commercialise their products and services on world-wide markets. Biotechnology clusters connected to Budapest, Szeged, Debrecen and Pécs. The main area of biotech companies are: medicinal chemistry, plant genomics, bioinformatics and info bionics, clinical trials and diagnostics. Often there are mutual relationship between biotech, informatics and nanotechnology especially in field of life science (ITDH 2005).

The Hungarian Biotechnology Association (HBA) was established in 2003 by Hungary's leading human biotechnology companies with the aim of promoting the development and representation of the Hungarian biotechnology sector (Duda 2005). The foundation of Szeged-BIOPOLISZ Life Science Consortium may be regarded as the successful realization of the BIOPOLISZ- concept, and Szeged had been the capital of bio-tech in Hungary.

The environmental solutions have also important role in the innovation. It is often connected to grey biotech research. Recently the sustainability production systems and ecodesign are missing at SMEs, but Hungarian Certificated EMSs of SMEs have a good position in the world. We were among the top 30 countries in 2003.

Summary

The small and medium sized enterprises have played an important role in Hungary after the transition took place. The SME statistics are already harmonised with the EU statistics, however the Hungarian SMEs are still lagging behind in productivity.

Because of the features of social development in the last decade connection capital has been playing an important role in the life of the Hungarian entrepreneurs, that contributes to horizontal cooperation, on the other hand this capital has still not been able to act as a link to large companies. As a result of this a dual economy has developed.

Local economic activity has a stressed importance for small enterprises, which have a strong individual motive in the case of cooperation. Clusters have an outstanding importance from this point of view, since it is bulged in regionally, and it provides a higher level of stability for the SMEs connecting to the central company as a partner.

There are some special niches like IT and biotechnology, where Hungarian companies can excel. Nowadays these segments are considered to be break-through points of Hungarian companies and maybe of Hungarian SMEs as well.
Notes

1. This paper was supplied by OTKA T 043149 Project
2. According to the European Union legislation a company is regarded as a SME if the number of employees is less than 250 and which have either an annual turnover not exceeding 50 million euro, or an annual balance sheet total not exceeding 43 million euro (EC 2002).

References


