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**Conference Paper**

## Regional specialisation in a transition country - Hungary

41st Congress of the European Regional Science Association: "European Regional Development Issues in the New Millennium and their Impact on Economic Policy", 29 August - 1 September 2001, Zagreb, Croatia

**Provided in Cooperation with:**

European Regional Science Association (ERSA)

*Suggested Citation:* Rédei, Mary (2001) : Regional specialisation in a transition country - Hungary, 41st Congress of the European Regional Science Association: "European Regional Development Issues in the New Millennium and their Impact on Economic Policy", 29 August - 1 September 2001, Zagreb, Croatia, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

<http://hdl.handle.net/10419/115252>

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# **REGIONAL SPECIALISATION IN A TRANSITION COUNTRY - HUNGARY**

*Paper presented on the European Regional Science Association /ERSA/ 41 conference  
held on 29 August -1 September in Zagreb, Croatia*

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PHARE ACE Project P98-1117-R

European Integration, Regional Specialisation and Location of Industrial Activity in Accession Countries

## ***Abstract***

*The nivellation policy was the main target of central planned economy. In spite of this efforts some regions became in a prospective positions, than the others. The growing interest on regional issue initiated from the question, how will the economy choose it's new place? Are they evaluating the geographical places according the new economy variables, who or what regulate the regulators? What are the limitations of the regional suverinity? How effective is the regional promotion?*

*Hungary is a considerable area to study the pattern of "new economic geography".*

*About the adaptation process we will draft some policy orientation for decision makers.*

## ***Integration of transition economies into the global economy***

The main driving forces of globalization seems to be the internationalization of production accompanied by changes in the structure of production, expansion of international trade and services, and widening and deepening of international capital flows.

Economic transition of a country cannot be realised from his own sources. The FDI appearance in a country, considered the consummation of a world evaluation, selected for an expectation. The capital flow is an injection to speed the process of transition. The achieved level of transition have succeeded to largely integrate themselves into global economy. The present of global actors means a permanent international standard for production and for all structural reforms going on. Macroeconomic reforms alone do not lead automatically to supply responses for a comprehensive transformation. These reforms do not deal systematically with structural weaknesses of a country. A clearly defined set of microeconomic policy led to prosperity of transition.

What is the transition? That means a better allocation and timing of resources, a "new knowledge" to map and use in proper time and place the indoor or outdoor-sourcing. Those territorial units, which have well-developed infra-structural network, they are able exploit the sources according the market need. Or dismantling of one system and its replacement by another.

The picture of globalization are ambivalent, there are winners and losers. There appears to be a growing inequality among the regions resulting from the globalization process. For developing and transition countries, their globalization performance can be measured with the level and the speed of their integration into global economy. There are two factors that seems to be crucial importance. The first one is economic growth, in relation of the efficient conditions. The second factor is the quality of policies, which is designed to increase an economy's growth and stability are likely to influence a speeded integration. The appearance of globalization is a region means a challenge, to extend a trial of local policy. Those regions, which are good enough in the local bargain, they are upgrading their territory for future, re-evaluate the land use. Setting up a new orientation. What are the determinants of the location of foreign direct investment? It is a self-reinforcing process or they want to lock the future? The changes are not free of charge. The question is that who is paying the changes? Local representatives, investors or

the central willingness? That is the spirit of the local bargain. If we attracting the value, that makes concentration but whether in how proportions it means a structural changes, a specialisation.

Our research hypothesis was: How high level of regional specialisation and which sectors can be verify in an advanced level transition country, like Hungary, enjoying permanent high FDI, commodity of international trade to European Union is similar. Which variables are able to show this specialisation?

### ***Overview of Hungarian growth***

The attachment of the Hungarian economy to the growth area happened gradually until 1996 and expanded from West to East. The process was market driven. The multinational companies appeared at the end of 80thies and spread in masses in mid of 90thies in the country, which was realised by relocation of the Western European production to the area. The fact that the economy started to grow made it possible to commence the closing up to Europe. Amongst others this tendency is indicated by the fact that in Hungary the GDP/ capita – taken on the base of purchasing power parity – between 1996 and 2000 rose from 47% of the average EU GDP to its 53%.

Right after the political and economic changes, the GDP/capita of the country dropped sharply compared to the average GDP of the Union. Between 1992 and 1996 the indicator touched the bottom and stagnated. Afterwards however, the rate of growth in the Hungarian economy was 2.5-3% bigger than in the economy of the Union every year. It means that in the past four years in the Union the average annual growth of the GDP was only 2.3% while in Hungary it was as high as 5.3%.

The economic growth went on parallel with the increase in productivity. Hungary productivity in industry (1993-98) 61,1 real wage in industry 14,7 (Transition Report 1999.) The driving force behind this upward trend has been fresh capital investment accompanied by an inflow of improved technologies and modern management methods and by positive developments in the area of product innovation. The productivity of the whole economy increased averagely by more than 3% every year in the 1990's. This rate of increase is greater than the average in the European Union, even bigger than in the southern periphery of the Union (in Spain, Portugal and Greece). The economic growth, which started in the second half of the 1990's, was based mainly on the foreign capital inflow and the export of the settling multinational companies. In the past ten years Hungary has been successful in making the most of the possibilities originating from the global growth in the volume of capital investments.

This causes a radical change in the structure of the local export: the formerly typical division of labour among the branches the so-called inter-industry trade, by now has been changed for the division of labour within the branch—the so-called intra-industry trade. As a consequence of this, now the Hungarian foreign trade is less sensitive to the fluctuations of the market trends and is a lot more protected against such asymmetric shock-effects as the ones at the beginning of the decade.

While the share of the foreign-ownership was 11% in 1992, by 1999 it reached 50%. In certain branches – like in manufacturing, financial sector, and trade - it has already exceeded 60 %. Another deterministic part of proprietary structure in Hungary is the private ownership of the individuals and ventures, whose share got over 30% in 1999. By contrast the share of the state decreased to fewer than 10%. A considerable rate of state ownership characterises the postal and telecommunication service, electric energy industry and mining.

The foreign capital inflow and the transformation in the proprietary structure of the economy went along with the dynamic growth of the export in the second half of the 1990's. The integration of the Hungarian economy in the European market is well-demonstrated by the fact that a decisive share of the Hungarian export (76%) goes into the countries of the EU, while the average ratio of the countries of the European Union was 63%. Only the Netherlands and Portugal show a higher value of this indicator than Hungary.

As for the structure of the Hungarian export, 80% of it originates from manufacturing. Within this 80% we can observe a gradual increase in the share of the technologically advanced and moderately advanced products. It is especially notable because the higher degree of processing results in an increase in the added value. The considerably improving competitiveness of the economy is also shown by an increase in the share of those groups of products in the basket of commodities the EU import of which is over 5% (35% in 1989 and 45% in 1998). It stabilises to a great extent the fluctuation of the market, which is rooted in the marginal export costs. The TNCs in Hungary have already bought in crisis period the state owned deficit companies, and by that they avoid the collapse and keep the human resources in the country (internal brain drain).(Rédei 1995.)

It is indicative of an internationally more competitive structure of industry and culture that since 1989 the ratio of energy and material intensive activities and properties is steadily decreasing (46% in 1989, 16% in 1998). By the end of the decade

the share of the products of the labour intensive branches also fell in the structure of the Hungarian export. Their share was increasing in the first half of the 1990's – 19% in 1989, and 23% in 1993 – but by the end of the decade it fell below the level of 17%.

In the course of the 1990's the contribution of agriculture and the metallurgy to the GDP was decreasing while that of the services was spectacularly increasing. These figures forecast the fact that Hungary has just entered the another phase of development. These days the major share of the GDP is provided by the services. In 1999 the contribution of agriculture to the GDP was 5%. It was 33% in the case of industry and building industry and 62% in the case of services. Considering examples of closing up in the Union, similar figures describe the economy of Finland, where before the intensive catching up of the last decade, in 1987 such was the distribution of the GDP among the sectors of economy: agriculture: 6%, industry: 32%, services: 62%.

Owing to the transition into market economy the number of the employed in Hungary fell by 1.5 million between 1988 and 1997. The job of 1.1 million workers and 400 thousand pensions ceased to be. Between 1988 and 1997 the elimination of workplaces was restricted primarily to agriculture and the industry, meanwhile in services the reduction was scarce. It is the consequence of this drastic decrease that the rate of the economically active population in the group people in working age (15-64 years) at the turn of the century is still under 60.5% while its average in the European Union is about 68%. However, since 1997 an opposite tendency can be also felt namely that the number of the employed started to rise. Since this year the number of the employed has increased by 185 000 and in the third quarter of the year of 2000 it reached 3.8 million in the country.

Regarding the changes in the rate of unemployment we can separate two easily distinguishable phases in the decade. In the first half of the 1990's the rate of unemployment was growing rapidly but since the peak of 1993 we have been experiencing a decrease. In the second half of the decade the decrease in the unemployment happened along with a rise in the rate of employment. As the result of this tendency at the end of 2000 the unemployment rate was as low as 6%.

Looking at the regional breakdown, despite rising employment rates in all seven statistical areas, the overall improvement has not caused these areas convergence. As the central and western areas of Hungary also experienced a sharp rise in employment, even though the rates in these areas have been better than national average for a considerable period of time. This poses the treat of bottleneck developing, since while

high employment areas are running out of labour reserves, expansion has not shifted to the areas with lower labour force utilisation. Of the relatively disadvantageous areas, Észak-Alföld joining to the Central region, seems to be the only area catching up with the employment growth of the more advantageous areas.

A special consequence of the transition into market economy in Hungary is that - in spite of the steadily decreasing rate of unemployment – the differences between certain regions have not shrunk considerably. The rate of unemployment is still the smallest in Central (5.4%) and Western Transdanubia (4.5%) and the biggest in Northern Hungary (11.5%).

The importance of the economic growth and the closing up, which started in the second half of the decade, is highlighted by the fact that the growth was accompanied by balance in macro economy and stability in micro economy. The growth of economy since 1997 has been firm, the Hungarian economy has reached a growth rate of 4.5-5% every year. Investments, especially by venture capital grew fast. Parallel with the export-driven economic boom, the cycle of investments is more and more synchronised with the economic cycles of the main - primarily European - markets.

Domestic consumption has also become a major contributor to the economic growth. Since 1997 the real wages have been rising yet, the rate of increase in them still falls behind the rate of growth in productivity. It is important to mention that the rate of increase in productivity has been improving by 3% annually on the average since the beginning of the 1990's. If it goes on like this the economy will be able to sustain even an annual growth rate of 5-6%. From the point of view of domestic market growth, having been utterly strengthening in the past few years, consumers' trust is very important.

The internal organisation of the regions as a new and upgrading resource – gains a special importance in this transitional period of the Hungarian economy. The development of the Hungarian economy at the end of the millennium reached a turning point from many points of view.

- Firstly, Hungary is now entering the post-privatisation phase of capital investments in which instead of the direct investment of employed capital the expansion and deepening in production and co-operation came into the forefront, which requires a higher contribution of services.
- Another important challenge is the dual character of the Hungarian economy: the sector of the strongly export-oriented companies decisively in the foreign-ownership

and the sector of the small and midium companies, which mainly appear in the domestic market and owned by domestic investors. This duality manifests itself in space too, what's more the regional inequalities – first and foremost the west-east disparity - experienced in the country is partly due to this dual structure. Possession, size and efficiency are interdependent.

- Thirdly, nowadays the model of economic development prevailing in the 1990's – relying on the cheap local work force and intensive foreign capital investment – gives way to the new model of development based on highly qualified creative labour force, capital investments and innovation. This change is faster at the top companies because of the wider range of possibilities and the bigger pressure. It also explains the west-east regional disparity.
- Finally, the spreading of the modern information and communication technologies, the formation of the so-called New Economy, appears as the new challenge of the global economy at the end of the millennium. The small ventures realise the importance of the subcontracting supply chain management only as supplier.

These new challenges fundamentally re-evaluate the regional levels of economic development. The development of economy in the 1990's was based on the activity of more than 3000 local authorities as the major elements of the model of development - the cheap labour force, foreign capital investments – typical of the decade could be mostly organised on this level. In contrast with it, the fragmentation of production in the case of the newly appeared companies can't be organised on the level of settlements. This is based on the supplier network. This way, a higher level of regional organisation –possibly the region- is needed. It is related to the birth of the sector clusters.

An old dilemma of the regional policy is if it should help the winners are more successful or the losers to catch up this way make the regions get closer to each other. The regional inequalities slow down the economic closing up. The need for an economic development with a view to regional inequalities is reasoned – besides the general upgrading of the role of the regions. By the fact that in the course of the transformation in the Hungarian economy - similarly to the other Central Eastern European countries - we could see the rebirth of the traditional, mostly macro-regional inequalities. All these factors led to an unfavourable trend in the regional development:

- the centre-periphery relation became strong again, which can be best detected in the prime-city role of the capital city
- the west-east disparities “ the development slope” reappeared.



These two major tendencies in the regional development of Hungary after 1990 can be observed on all the important fields of economy, but decisively in the economic performance, and the inflow of the foreign capital. Among other things it is indicative of the centre-periphery disparities that in 1998 the value of GDP/ capita in the second most developed region, in Western Hungary was only three-fourth of the same indicator in the Central Hungarian region comprising Budapest and Pest county. That refers to the same disparity in Central Hungary the employed foreign capital investment per capita is 1.5 times bigger than in the second most developed region (Western Hungary).

Even more eye-striking differences can be observed between the eastern and the western regions of the country. In the Northern Great Plain region the GDP/ capita is just two-third while the capital investment per capita is one-third of those of the Western Hungarian region.

The macro regional differences can be led back to the tendency that the foreign capital investors preferred mostly those areas where there was cheap, well-skilled, flexible work force available, where the human and technical infrastructure was favourable and which have good transportation links with the Western European markets. As they first found areas meeting these expectations only in Budapest, in the agglomeration of the capital city and in Western and Central Hungary the capital investments were mostly realised here.

### ***Regional specialisation patterns in industrial Employment***

The degree of specialisation, measured by Herfindahl index, was the highest in the three Transdanubian counties: Fejér, Vas and Tolna.

In Fejér county 43% of the labour force were occupied in the machinery and equipment branch, while 25% worked in metallurgy and the manufacturing of metal products. In Vas county the textile, wearing apparel, leather production branch employed 36%, the machinery and equipment branch 32% of the industrial workers. In Tolna textile, wearing apparel and leather production turned out to be one of the most outstanding branches with its share of 38% in the employment structure of the county. The second most important industry was electricity, gas, steam and water supply with 22%.

Dissimilarity index suggests the most advanced specialisation in workforce differed from the national "average surface" (index > 0.5) in specialised south counties. The value of the overall industrial export was given by the machinery and equipment branch, 25% by chemical industry. 38% of the industrial export originated from Budapest. By 1998 the industrial export grew eight times bigger. The machinery and equipment branch provided 61% of the Hungarian industrial export. In the overall industrial production of the country the leader is Fejér county with its contribution of 22%.

Borsod-Abaúj-Zemplén county both in 1992 and in 1998 showed an especially big absolute specialisation on the basis of the Herfindahl index, because of the strong dominance of the chemical industry. The formerly ruling metallurgy and metal industry was overtaken by the machinery and equipment branch.

The regional specialisation rates, the dissimilarity index, and the GINI coefficient demonstrate the relative specialisation of the counties, so the weight of the branches relative to their role on a national scale. It can occur that in an absolute sense strongly specialised county the relative specialisation is low, if its sectoral pattern applies to the national, as its dominant branch is important on the national level too. At the same time it is possible that a county with a balanced sectoral pattern is relatively highly specialised, if a branch of no national importance is essential in the county.

If we compare the relative specialisation with the national distribution, we find that in 1992 the most specialised Hungarian counties were those, in which a nationally unimportant branch had a relatively strong position. Such was the non-metallic mineral products. In 1992 the lowest relative regional specialisation was experienced in Budapest having a decisive role in the industrial export of the country, and in Pest county, which has a balanced export pattern. In 1998 the lowest relative specialisation was shown by Somogy, Komárom-Esztergom, Vas counties, where owing to the development of the machinery and equipment branch in Transdanubia, the export pattern was the same as the one on the country level. Besides these counties also low regional specialisation characterised Baranya and Pest county with still a homogeneous export pattern.

### ***Industrial output***

In 1992 the industrial turnover of the Hungary 23% of this amount was from food, beverages and tobacco production, electricity accounted for 20% of it. 36% of the overall industrial production was realised in Budapest. Nowadays the machinery and equipment branch provides 36% of this. The share of the capital city from the overall industrial production decreased to 24%.

In 1992 the values of the Herfindahl index –showing the absolute specialisation– were the highest in the food, beverages and tobacco. While the weight of food, beverages and tobacco industry fell in the industrial production, machinery and equipment pulled ahead, which plays a crucial a role in the counties of Transdanubia. The current highest degree of absolute specialisation, in most of the cases is caused by the dominance of the machinery and equipment branch

If we relate the regional specialisation of the counties to the sectoral pattern of the country, we talk about the relative specialisation. The regional specialisation rates, the dissimilarity index, and the GINI coefficient show the degrees of regional specialisation. The relative specialisation is especially big in the case of those counties, whose more or less important branch represents a relatively small weight in a national perspective or if their most essential branch is so dominant that it exceeds several times

the national average. In the second case the high absolute specialisation means high relative specialisation too, while in the first case high relative specialisation may also evolve along with low or medium absolute specialisation.

In 1992 counties with high absolute specialisation showed examples of the first case: Békés (food, beverages and tobacco products), Fejér (metallurgy and metal products). In these cases the leading branches were so dominant that they exceeded their yet considerably high weight in the country. The second case of the high relative specialisation can be observed in Vas (textile, wearing apparel, leather products) and Nógrád (non-metallic mineral products) counties, where the high relative specialisation is primarily due to the relatively low weight of these branches in the country. In 1998, Tolna - which became a strongly specialised county in an absolute sense owing to the fall in the weight of electricity on a national scale - showed a high degree of relative specialisation. It is also high in the case of Borsod-Abaúj-Zemplén county, where the value was increased by the fact that the weight of the machinery and equipment branch in the county was far behind its national weight. In Békés, the non-metallic mineral products branch, which is of not special importance in the county, greatly exceeds the also low national average.

In contrast with the above mentioned areas low relative specialisation is shown by the most populous Pest county and Budapest, which, by the means of their size, greatly influence the sectoral pattern of the country, this way they don't differ a lot from it. Besides them Győr and Borsod in 1992 and Komárom in 1998 also showed low relative specialisation.

#### *Changes in regional industrial structures - employment*

During the period between 1992 and 1998 the value of the index reduced in only three counties from the south of the Great Plain, which means a decrease in the degree of specialisation. In all the other counties the same period saw the index stagnating or slowly increasing in its value.

	Value of index has grown (1992–98)	Value of index has decreased (1992–98)
Index > 0,5 (1992)	Fejér, Tolna, Borsod-A.-Z.	Békés, Komárom-E., Baranya, Vas, Nógrád, Veszprém, Csongrád
index = < 0,5 (1992)	Szabolcs-Sz.-B., Zala, Hajdú-B., Jász-N.-Sz.,	Bács-Kiskun, Heves, Somogy, Budapest, Győr-M.-S., Pest

#### *Indicators of regional specialisation of industries export*

Between 1992 and 1998 the absolute specialisation spectacularly increased (the Herfindahl index grew 1.36 times bigger). The average rate of growth in the relative regional specialisation is far behind it (it was only 1.04 times bigger). The more and more dominant machinery and equipment branch supports the biggest rate of increase in absolute specialisation. There was a spectacular decline in the relative specialisation in some counties due to the reduction in the formerly bigger weight of certain branches.

Geographical Concentration	R e l a t i v e		
	decrease	stagnating	increase
Absolute Decrease	Machinery and equipment	Non-metallic mineral products	Wood, paper and printing products, chemical industry
Absolute Stagnating		Textile, wearing apparel, leather products, other manu-facturing, recycling, metallurgy and metal products	Food, beverages and tobacco products

<b>Absolute Increase</b>	<i>Electricity</i>	<i>Mining and quarrying</i>	
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Bold letters: high absolute specialisation or concentration in 1992

*Italic letters: high relative specialisation or concentration in 1992*

### ***Indicators of regional specialisation of industries industrial output***

Between 1992 and 1998 hardly any change could be seen in the degree of both the absolute and the relative regional specialisation. The Herfindahl index grew 1.12 times bigger on average. The average relative specialisation also increased (1.04 times).

The high increase in absolute specialisation in above mentioned Transdanubian counties was caused by the machinery and equipment branch, which became dominant. The greatest drop in the absolute specialisation was due to the reduction of the formerly strong leading role of the food, beverages and tobacco industry. The biggest rate of increase in relative specialisation in case of Győr was due to above national rate of increase in the machinery and equipment branch. In the case of eastern counties it resulted from the fact that the weight of machinery and equipment branch in these counties is bigger than on the national scale.

<b>Reg. specialistaion</b>	<b>Rel. Decrease</b>	<b>Rel. Stagnating</b>	<b>Rel. increase</b>
<b>Abs. decrease</b>	Bács-Kiskun	<i>Békés</i>	<b>Tolna, Zala</b>
<b>Abs. stagnating</b>	<i>Nógrád, Somogy</i>	<b>Baranya, Heves, Jász-Nagykun-Szolnok, Budapest, Veszprém, Csongrád, Szabolcs.</b>	<b>Pest, Hajdú-Bihar, Borsod-Abaúj-Zemplén</b>
<b>Abs. increase</b>	<b>Komárom-Esztergom, Fejér, Vas</b>		<b>Győr-Moson-Sopron</b>

Bold letters: high absolute specialisation or concentration in 1992

*Italic letters: high relative specialisation or concentration in 1992*

### **Patterns of geographic concentration of industries employment**

In 1998 the geographic concentration was the biggest in the case of the chemical industry, the wood, paper and printing industry and in that of mining and quarrying. In 1992 the highest absolute concentration based on the Herfindahl index could be observed in the Budapest-centred chemical and machinery and equipment industries and the Győr-Moson Sopron –centred electricity branch. In 1998 the absolute geographic concentration was still high in the case of the chemical industry and electricity branch.

The most evenly located industries of Hungary in 1992 were the food, beverages and tobacco production, the textile wearing apparel, leather industry and the other manufacturing, recycling. In 1998 the lowest absolute geographic concentrations were still typical of the food, beverages and tobacco branch and the textile wearing apparel, leather industry.

If we consider the relative geographic concentration the highest values will be found for mining and quarrying In 1992 the lowest relative concentration was found in the case of textile, wearing apparel,

leather industry, wood, paper and printing branch and machinery and equipment industry. By 1998 only the last one kept a relative homogeneous spatial distribution.

***Indicators of geographic concentration of industries industrial output***

In 1992 the highest geographical concentrations were shown by those branches in which Budapest had an absolute dominance (wood, paper and printing products, chemical industry, machinery and equipment). Six years later we could find those industries among the geographically most concentrated, where the weight of Budapest was still very high.

In 1992 on the basis of the Herfindahl index, the other manufacturing, recycling and the food, beverages and tobacco products showed the lowest absolute geographical concentrations. In 1998 the least concentrated branches were still the food, beverages and tobacco and recently the textile, wearing apparel, leather industry, the non-metallic branch also belongs here.

In 1992 machinery and equipment had a low relative concentration, which, similarly to the overall industrial production, was concentrated in Budapest. The electricity and the textile, wearing apparel, leather industry and the relatively evenly located food, beverages and tobacco branch shows also low relative concentration. In 1998 the lowest relative concentration could be seen in the case of the other manufacturing and recycling.

**Changes in geographic concentration of industries employment**

Considering the period between 1992 and 1998 we can say that the indexes show an increasing geographic concentration and stability in certain branches of industry. Examining the 1992-98 period it can be stated that from the enlisted branches only the index of non-metallic mineral products experienced an increase. All in all the value of the index increased in five and decreased also in the case of five branches.

(1992–98)	Value of index has grown or not changed	Value of index has decreased
Index > 0,5 (1992)		Mining and quarrying; Chemical industry
Index = < 0,5 (1992)	Textile, wearing apparel, leather products; Wood, paper and printing products; Non-metallic mineral products; Metallurgy and manufacture of metal products; Electricity, gas, steam and water supply	Food, beverages and tobacco products; Machinery and equipment; Other manufacturing, recycling;

***In export***

The value of the absolute geographical concentration of the industrial export did not change, and it hardly showed any increase in a relative sense (1.1 times). During the six-year long period the biggest increase in the Herfindahl index could be experienced in the case of mining and quarrying and of the electricity branch. The greatest fall in the absolute geographic concentration was seen in the formerly strongly Budapest-centred wood, paper and printing production, machinery and equipment and chemical industry and also in the Veszprém-centred non-metallic mineral products.

If we look at the changes happening during the period in question, besides the food beverages and tobacco industry concentrating in Hajdú-Bihar, we can also see a considerable rise in a relative sense

in wood, paper and printing production and chemical industry. The most spectacular rise could be experienced in the formerly Budapest-centred but nowadays nation-widely spreading machinery and equipment.

<b>Geogr. Concentration</b>	<b>Rel. Decrease</b>	<b>Rel. stagnating</b>	<b>Rel. Increase</b>
<b>Abs. Decrease</b>	Machinery and equipment	<b>Non-metallic mineral products</b>	<b>ood, paper and printing products,</b> chemical industry
<b>Abs. Stagnating</b>		<b>Textile, wearing apparel, leather products, other manu-facturing, recycling, metallurgy and metal products</b>	<b>Food, beverages and tobacco products</b>
<b>Abs. increase</b>	<i>Electricity</i>	<i>Mining and quarrying</i>	

Bold letters: high absolute specialisation or concentration in 1992

*Italic letters: high relative specialisation or concentration in 1992*

### Indicators of geographic concentration of industries industrial output

In the case of regional concentration the values of the Herfindahl index dropped a little (0.86 times), the degree of regional concentration slightly increased (1.11 times).

In six years the absolute concentration did not change considerably in any of the branches. In the case of the Budapest centred branches (machinery and equipment, textile, wearing apparel, leather products, chemical industry, non-metallic mineral products, and the wood, paper and printing products, chemical industry), we can experience a decrease.

The relative geographic concentration did not decrease in any counties, right the opposite, it increased steadily owing to the spreading of machinery and equipment in Transdanubia and to the textile, wearing apparel, leather industry.

<b>Geographical Concentration</b>	<b>Relative Decrease</b>	<b>Relative stagnating</b>	<b>Relative increase</b>
<b>Absolute decrease</b>		Wood, paper and printing products, chemical industry, <b>non-metallic mineral products</b>	<b>Textile, wearing apparel, leather products,</b> machinery and equipment
<b>Absolute stagnating</b>		<b>Food, beverages and tobacco products, electricity, other manufacturing, recycling</b>	<b>Metallurgy and metal products, mining and quarrying</b>

Bold letters: high absolute specialisation or concentration in 1992

*Italic letters: high relative specialisation or concentration in 1992*

### **Does greater specialisation imply greater polarisation?**

The globalisation of world economy going on now suggests the upgrading of the role of regions. While the importance and the scope of actions on the level of national economies are shrinking, the global and regional economies gain an ever-bigger ground in the world economy.

Each region has peculiar assets, economic, social and cultural interests that make them unique and different from the others. In the age of globalisation it is not only the countries and the companies who are in competition for acquiring and utilising the resources of development but also the regions of different level. In this competition those regions prosper which are able to organise and expand efficiently a flexible network of the intra-regional economic, social and economic actors. On the one hand the process accelerates the upgrading of the intra organisational scope of the regions which means that the companies mainly focus on the primary activities while other secondary or additional functions are relocated outside the company but still in the regional operational network. Those regions gain favourable position and get more from the foreign investments, which besides the traditional assets can offer attractive innovative economic environment and also the related institutional network of economic development. Those regions, who have high awareness they are able to take the time on their side.

The regional differences fell to the one third of the original in a way that besides a constant minimum Budapest lost 65% of its industrial workers. It was partly because of their move from the second into the third sector and partly because of the relocation of the industries from capital into the agglomeration.

There is a new, dynamically growing zone, because the economies on the periphery of the European Union – Ireland, Portugal, Spain, Finland- are growing faster than the economies in the core area of the Union. The reason of this tendency is that the wave of the global capital flow coming from the countries in the core of the EU has been getting into these peripheral countries since the second half of the 1980's. The process was supported by the comparative advantages, which appeared in the relocation of the localities in the industrial production. The chance of capital recovery is the highest. At the end 90thies became visible the relocation of Western European industrial production. Technological co-operation is advantageous for both Eastern- and Western Europe. The relocation of production into cheaper economic surroundings and many times closer to the actual market are also major points to be considered. A major feature

of the evolution of the exchange of goods is that its ratio directed to the members of the Union is getting bigger, it is similar in structure to the export of the EU members specialising in certain products like machines.

The question of major importance is; what determines the relocation of production in another country and the choice of location within the country's territory?

In order to get to the regional aspects of inter-state capital relocation, we need to know in what ways the competition made the companies innovate. Though Hungary had a relatively highly qualified workforce, the demand for the quality products appeared only after 1996, the economic crisis. The access to newer technologies, the stimulation for investments came only afterwards. Once seeing a stabilised and prospering economic surroundings –exactly in this period - the foreign investors extended the volume of production. The standardised production reduced the necessity of employing the best-qualified workforce. This was the point, when the comparative advantages and the geographical relocation of production came into the picture. The structure of foreign employed capital changes, as the contribution of manufacturing reduced from 54% to 38%; while the share of energy industry, real estate and the financial sector multiplied between 1992-98.

There was a general upward shift. Trade is mainly directed to the EU countries and the pattern of goods is similar to that of the developed countries. In the choice of locality we can see two tendencies one is the take-over and up dating of former localities the other is the preference of the areas near the border, where the economic conditions are more favourable. The relocation of basis industries can be experienced from the EU countries as the human resources and the environmental restrictions are soft economic barriers. The developed technologies, decision-making of strategic importance research and development have just started to infiltrate. In order to keep the competitiveness of the production, the basis industry of the western world appeared, which is supported by the solvency of the market. In regional terms the differences in earnings have slightly changed. Waging does not apply to the rate of growth in the economy. The wages are held back.

The distribution of labour force in manufacturing went through substantial changes between 1992-1999. Budapest lost its position by 10%, which resulted in an increase in the case of certain counties. The tendency indicates the fact that the spatial distribution is becoming more and more even. The workforce involved in



manufacturing in Budapest accounts for 22-32% of the national total. However, important but not outstandingly high percentage (6-7%) can be observed in Pest, Győr.

Summing up the counties in south and east don't follow any forthcoming situation, but lag behind them. One of the explanations is that the economy of neighbouring countries is not attracting the foreign interest as highly as it is here. In the south and east part of Hungary there is no transact, which could roll the global economy.

The main finding to connection between development(GDP) and sectoral analysis was by two-variable regression analysis, and by a quadratic polynomial trend-line in period 0,6 values of deterministic co-efficient. Without Budapest it can be reached a better value. Changes in the regional disparities among the counties (NUTS3 level) and within bigger regions (NUTS2 level) with respect to the values of GDP per capita. It can be raised a question of macro-regions in the relation of smaller regions have polarisation or nivellation. There is no close relationship between the economic development of the base year and the rate of the economic growth. This results in an increase in the degree of inequalities. In the follow up research we can't verify local polarisation.

## Conclusions

The volume and commodity of international trade shows high level of integration for Hungary. The permanent FDI towards in the country and especially the manifested sector interest was in manufacture, verifying the global targets. In the first period of transition the labour intensive textile, food branch was flourishing and in the mid of 90thies shifted towards the technological higher value added structure to the machinery and services.

In the first half of last decades the food industry was climbing up in most of the regions and on the second half of the 90thies the machinery sectors started to spread and reached a meaningful positions, especially in the western part of the country. The regional distribution of the FDI concentrated to the western borderline and to the Central region. Both was due to the extra profit, the low barriers in the competition, the eligible local bargain, comprehensive business trust, living standards, tradition of working style, kvalified labour and better accessibility of the European core market. These regions have some historical background to be part of the Austria –Hungarian monarchy and have more experience on the market economy.

The high FDI flow avoid the country from the deepening crisis, which is also contributed to the current success as well. The FDI means not just a capital injection for regions, but even more, provides several constant expectation of international competitions across the production. Upgrading their awareness.

The regional disparities are rising. In western part the big trans-national companies are affiliated, the size, efficiency, intra-firm arrangement, outsourcing, technological expectation, global management

creating an internationally required efficiency for standard mass production. In East the small local companies are, an early level of supply chain management low living conditions and inferior level of added value activity. The size, ownership and competitiveness are interdependent. From geopolitical point is important, that in the neighbouring countries economy has no pulling effect, there is no transact.

The horizontal regional specialisation can be verify by the export value better, than the employment data or industrial production. Instead of earnings level it is the standards of living allowed them that should be the basis of comparison.

The Great Plain has an early level of specialisation concerning the low level of industrialisation. In 1998 the geographic concentration was the biggest in the case of the chemical industry, the wood, paper and printing industry and in that of mining and quarrying. The highest degree of absolute specialisation, in most of the cases is caused by the dominance of the machinery and equipment branch. The transition nivellation or more disparities came into being in the relation of the counties in the level of economic development.

Concluding: the polarisation is not helping the European integration process. So, the national development policy have challenge to develop the SMEs to be partner in the global economy, which is contribute the regional catching up process in South and East. In long-term the development of lagging area is a basis for gaining advantage for border regions. The main factors of regional disparities are following.

- the structure of economy in north-west Transdanubia is suitable for global actors,
- there are comprehensive business conditions and better market accessibility's to the European core markets,
- In West there are top investors, who represent the business trust for others, having own a sizeable companies, with supply chain management, some cluster can be found,
- In South and east lower level of investment and SMEs, which can not afford the efficient technology, there is no inter-firm reserves to combine by outsourcing,
- At early period of transition there was some impetus of specialisation, which is broaden by integration. The loss of low value added branches highly contributed to competitive changes.
- The types of regional disparities Budapest shifted to kvaterner (administration, financial, communication, decision making, strategic action, and public mode) sector. And nowadays it is playing more rolls, than a country capital.

We can verify rebirth of the traditional development line Northwest Hungary through capital towards north-east. So the South part of Hungary looks slowly integration part of Hungary, due to the not stable and attractive neighbourhood countries, which could have motivated these regions as well.

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