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Dedication

Round anniversaries usually encourage us to take stock, even if the age of the institution celebrated can hardly be interpreted on a historic scale.

In our case the reason for introspection, for taking stock of our achievements as well as the opportunities missed is that the Department of Regional Economics of the University of Miskolc was established exactly ten years ago, in 1996. This jubilee also provides an opportunity for the members of the Department to give account of their research work on their homeland, the region of Northern Hungary, expressing the thanks due to their Alma Mater and the profession for the support and assistance extended over the past ten years.

The choice of topic (also owing to the genius loci) is obvious. The geopolitical and social events of the 20th century shaping our region have offered an almost inexhaustible abundance of research topics for scholars of regional economics. The concerns arising from the geopolitical changes taking place after World War I (the loss of the economic potential of the regions that came to lie beyond the borders), then the series of decisions in economic policy following World War II (forced industrialisation, the myth of the 'Ruhr-region' along the river Sajó, etc.) have rearranged the spatial structure of the region and forced its economy to take a peculiar path.

Changes on a scale comparable to the previous ones were again generated in the region with the turn in economic policy in the last decade of the 20th century. A series of governmental and sectorial programs and measures were meant to cushion the shocks of the transition into a market economy, and did so with varying degrees of success.

In addition to analysing the still perceivable consequences of the past, a range of new research topics can be formulated. To what extent, by what means and methods can the future of the region be influenced? What chance does the convergence of the region stand? What is to be done, in addition to the projects aimed at improving the competitiveness of the region and at its convergence, in order to create social cohesion and solidarity, and in order to promote the activity and mobility of the increasing number of the population that is deprived?

What effect does European integration exert on the beyond-border relations of the region? (As indicated by this enumeration, there are plenty of topics left for the next ten years.)

The studies published in this volume present the research work of the Department regarding the past, present and future of the region of Northern Hungary.

Lectori salutem!

Prof. Dr. György Kocziszky

THE ECONOMIC AND SOCIAL SITUATION OF THE REGION OF NORTHERN HUNGARY IN THE CONTEXT OF EUROPEAN INTEGRATION

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Abstract: A comparison of the characteristics of the economic and social processes in Hungary with those in the other member states of the European Union is essential for making an objective judgement of our situation and for setting the tasks of our development activities. The region of Northern Hungary is ranked last among the regions of Hungary. This means that the region faces a long and difficult process in the convergence process.

As a conclusion of the investigation some selected indicators were used to determine the development level of some regions of the EU-25. Based on the cluster analysis, 174 regions were classified in the cluster of the developed regions according to the average values of the indicators, while 82 regions had to be ranked among the underdeveloped regions. Due to the unfavourable values of its indicators, the region of Northern Hungary was put among the underdeveloped regions, sharing the fate of other regions in Hungary and most regions in Central Europe.

Hungary's accession to the European Union in 2004 encourages the representatives of regional sciences among other things to continuously bring their knowledge up-to-date on our social-economic life also in the context of European integration. A comparison of the characteristics of the economic and social processes in Hungary with those in the other member states of the European Union is essential for making an objective judgement of our situation and for setting the tasks of our development activities. Previously it was rather difficult to compare the situation in Hungary with the European tendencies, for the approach and methodology of our national statistics were not in every case identical with the statistical practice of the European countries. The uniform statistical data collection system of the European Union, however, creates favourable conditions for this activity, for EUROSTAT, the Statistics Office of the European Union has provided an increasingly comprehensive statistical data background with a uniform approach for the various analyses. In the course of data collection and data processing, it has become possible to compare the individual indicators in an international context on the basis of the uniform methodology applied in the EUROSTAT, thus there arises an opportunity to analyse the actual situation of the region of Northern Hungary in a context of the European integration. In addition to exploring the current situation in detail and determining the position among the European regions it will be possible to form an opinion on the possible directions of future development.

The analysis of the situation of the region of Northern Hungary was done on the basis of major indicators of the yearbook containing the regional statistical data of the EU for the year 2005. Regarding some of the indicators, it was possible to judge the tendencies of evolution in time as well, however, it was not possible to do so for the complete scope due to lack of data.

Demographic processes

The demographic situation provides one of the most fundamental conditions for the economic-social performance of the regions. It is obvious that demographic processes exert an influence on the development of the levels of employment and unemployment, on creating and maintaining the balance of social security systems. Among demographic indicators the changes in the total fertility indicator shows a synthesis of the willingness of the society to have children. This indicator shows how many live births are there on average in the fertility period of women. From the long-term time series of the EU-25 countries it can be established that the indicator dropped from a value of 2.72 in 1964 to a value of 1.4 in 1999, then has become stabilised around a value of 1.46 in recent years. The value of the indicator is 1.2, in the Czech Republic, 3.9 in Ireland and 1.3 in Hungary. This indicator is not broken down for NUTS2 regions, but the regional breakdown of the general fertility indicator is available for the average of the years 2000-2002. This indicator relates the number of live births to the number of women in childbearing age (between 20-44 years). For the individual regions, the value of the indicator varies between 4.3 and 10.6. For the region of Northern Hungary the value of the indicator is 5.94, thus it reaches only 56 % of the maximum value.

The fertility required for the reproduction of the population, which is connected to value 2.1 of the total fertility indicator, is not ensured in the European average either, and Hungary does not even reach the European average. Within this, the situation in the region of Northern Hungary is not unfavourable, for according to the general fertility indicator it has the second best value. To sum it up, it can also be established that the differences between the countries are greater than the differences between the regions within the individual countries. Considering the total fertility indicator, the differences between the data for Western and Eastern Europe are the most conspicuous. While the data for Western Europe have been continuously decreasing to the present value for the past half century, the dramatic deterioration of the situation in the Eastern European countries is connected to the period following the change of regime, and today their data fall even short of the low values of Western Europe. The determination of the current demographic processes by the social-economic transformation seems self-evident in the case of the Eastern European countries. Since the willingness to have children is determined in the long run by cultural, religious and other factors as well, they may result in some improvement of the current unfavourable value after the economic-social conditions have become stabilised later on.

Development of the state of health of the population

The development of the state of health of the population is important additional information for judging the demographic processes. High per capita income has its limitations in expressing the standard of life of the population in a given area, although several of its elements exert a fundamental influence on the level of the per capita income.

The development of the number of hospital beds provides information regarding the development of health care services as well as regarding the average state of health of the population. In the past years an approximate 20 % decrease in the number of hospital beds was characteristic of the EU-25 countries. This results from a decrease in the length of stay

in hospital, as well as from a reform of the health care system. The indicator of the provision of hospital beds in Hungary can be considered favourable in its absolute value in a European comparison, which, however, can presumably be related to the failure of launching the health care reform. For the regions in Hungary the value of the indicator for 100,000 persons scatters from 701 to 945. The value of 727 shown for the region of Northern Hungary is the fifth in the ranking of the regions. In view of the fact, however, that there are no teaching hospital capacities in the region, and partly Debrecen and partly Budapest can be regarded as the teaching hospital centres for the population, the value of the indicator can be considered satisfactory only as a first approach.

The situation in the regions in Hungary can by far not be considered to be satisfactory in a European comparison of the state of health of the population. Among the incidence frequency of the major illnesses the indicator of the share of cardiovascular disorders is available in the system of regional statistics. This is the most frequent among the causes of death, amounting to 42 % of total deaths. The indicator available in the system of regional statistics shows the relation between the rate of death of men due to a given illness and that of women. The values of the indicator varied between 2.62 and 3.14 in 2002. The value for the region of Northern Hungary is 2.82, which is the highest in a comparison in Eastern Hungary, the value of the indicator essentially being identical with the value of 2.84 for Central Hungary.
The value of the indicator is above 2.0 in all European regions, and the regions with the highest values exceed even the value of 4.

Agriculture

The importance of agricultural production for the member states of the European Union derives from the fact that the common agricultural policy together with the common trade policy belongs to the scope of community cooperation specifically named in the Rome Treaty of 1957, and agriculture is even today the highest financed area of the cooperation between the member states as it amounts to approximately 40 % of the community budget. Within agriculture the most important branch is cereal farming, for through the grain market regulations a decisive influence is exerted on the competitiveness and profitability positions of livestock farming and the food industry, and even the catering industry, and through that on tourism.

The rate of land utilised for cereal farming out of agricultural land is an important indicator of the level of the share of the community subsidies obtained. In 2002 42.5 % of the agricultural land of the EU-25 was used for cereal farming. Among the regions in Hungary, the rate of cereal farming land is lower than 50 % in the regions of Central Hungary, Northern Hungary and the Northern Alföld, with the lowest value of 35.12 % found in the region of Northern Hungary. This means that the community support of the agriculture sector may be of an accordingly low level, which is not indifferent in terms of the income producing and population retaining capacity of the region.

Income situation

The value of the indicator of the per capita GDP measured at purchasing power parity is generally accepted for the purpose of comparing the income situation of the regions. The indicator is suitable for evaluating the per capita value of incomes irrespective of the different purchasing power of the currencies of the various countries. According to figures for 2002, the value of the indicator varied between 4337 and 66761 PPS[1] in the regions of the EU-25 member states. The income in no region of Hungary reaches the average of the EU-25, 21192 PPS. Among the regions in Hungary the region of Northern Hungary is in the most unfavourable situation with a value of 7902 PPS GDP/head, which hardly exceeds one third of the value (20329 PPS) of the most developed region of Hungary, Central Hungary. The value for Northern Hungary means 36.1 % of the regional average of the EU-25.

Evaluating the data on the changes in the income situation also represents important information, for a stronger growth rate connected to a possibly more unfavourable income situation may create in the long term a chance of the differences in income currently experienced ceasing in the long run. The indicator reflecting the change in income is the indicator of the difference in rate measured against the average growth rate of the EU-25 in the period 2000-2002. As for Hungary, all the 7 regions have positive values of the indicator, with a distribution between 0.39 % and 16.62 %. In line with the European tendencies, the difference in the growth rate of the region of Central Hungary including the capital is the highest. For the region of Northern Hungary the value of the indicator is 2.47. This can be regarded as a middle value, for 3 regions have more favourable, and 3 have less favourable values. At the same time this means that no considerable modification can be expected in the income situation of the region of Northern Hungary, for the growth rate does not show an outstanding value even in domestic comparison, thus the elimination of the level of backwardness cannot be expected either.

The regional GDP/head indicator is suitable for indicating the level of income produced in a given region, although the level of income available in a given region depends on other factors as well. Commuters who are employed in the given region but using the income in different regions have to be taken into account as well as other income, and income of interest, holding and leasing type, which increase the income of the population of other regions. Accordingly, for comparing the actual welfare situation of the regions surveys of household statistics have come into the foreground recently. Although they do not substitute information on the regional GDP, they provide other information of a supplementary nature on the actual income situation of the population. The primary income of households in 2002 showed a distribution between 2693 and 24082 PPS in the regions of the EU-25 member countries. This means that the outstanding regional incomes of the large agglomerations calculated on the basis of the GDP/head indicator became moderated, which results from the impacts due to commuting. The value of the indicator of the region of Northern Hungary was 5480 PPS, which was the second worst value following that of the region of the Northern Alföld. The vicinity of the capital and the elimination of the impact of commuting decreased the backlog against the region of Central Hungary, where

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[1] Purchasing Power Standard

the value of the indicator was 11385 PPS. The relative deterioration of the situation of the region of the Northern Alföld means that the distance from the job opportunities in the capital plays a decisive role in the income situation of the regions in Hungary.

The impact of the levelling of incomes is also increased by the role of income rearrangement of the state budget, the indicator of which appears in the indicator of the available income. Its distribution was between 2826 PPS and 18332 PPS. On the basis of the value of this indicator the relative domestic position of the region of Northern Hungary has not changed, it continues to precede only the region of the Northern Alföld with its value of 5222 PPS, but the relative position of the region of Central Hungary has further deteriorated under consideration of this indicator, for it achieved only a value of 9041 PPS.

In terms of the income differences an interesting indicator is the development of the rates of the incomes available to households and the incomes produced by the various regions. Since the incomes available to households also show the impacts of commuting, rental charges, dividends, and interest-type incomes and of the income rearrangement by the state, significant differences can be found between the GDP produced and the available incomes. The negative impact of the above regional rearrangement of incomes was evident to the greatest extent in the region of Central Hungary. There the available income amounted to 79.4 % of the GDP produced, while in the region of Southern Dunántúl 124.0 % of the income produced was available to the households. The region of Northern Hungary occupies a middle position in the ranking of the regions. With its value of 95.3 % it is ranked 4th among the regions, thus with the state transfers the average incomes available to the households equalise its unfavourable income-producing capacity. In all this means a favourable position in spite of the basically unfavourable income and growth of income positions of the county.

An illustrative indicator of the income positions of households is the rate of income tax and social security contributions depending on the available incomes. Regarding this indicator the change from the situation in 1995 to that in 2002 is at our disposal for the regions of the EU-25 countries. All the regions of Hungary have positive values, thus the taxation level in proportion with the available incomes, i.e. the proportion of taxable employment and entrepreneurial income, may have also increased within the income available to the households, the two extreme values being 0.2793 % and 1.4679 %. For the region of Northern Hungary the value of the indicator is 0.7768 %, which means rank 5 in the ranking of the regions.

Labour market situation

Employment

Improving the labour market situation to a considerable extent is the most important field of the efforts aimed at stabilising the competitiveness of the European Union. In line with the Lisbon employment objectives decided upon in 2000, the employment rate should be raised to 70 % for men between 15 and 64 years of age, and to 60 % for women by 2010. The European Council of Stockholm has set the supplementary objective of achieving an

employment level of 67 % for men and of 57 % for women by 2005. From the data for 2003 it can be established that achievement of the objectives for 2005 cannot be expected, and this fact will make it more difficult to achieve the objectives set for 2010. As regards Hungary, the employment rate is distributed between 51.16 % and 62.27 %, with the region of Northern Hungary having unfortunately the least favourable value. In the period 2002-2003 the changes in employment level show a highly diverse picture. In some regions the rate of the annual change was between –2.39 % and + 4.24 %. Within that, the indicator for the region of Northern Hungary is 1.6 %, i.e. it is ranked 4th among the regions, which is suitable for its relative position to improve among the regions if the positive tendencies become permanent. There is all the more chance of that since in Hungary the line of the Danube represents a strong dividing line. In the three regions east of the Danube the level of employment is between 51-52 %, while in the area west of the Danube and in the central region an employment level of 60-62 % was measured.

The value for the employment of women is extremely low, with a distribution between 45.4 % and 55.7 %. Regarding this indicator, the region of the Northern Alföld is in the least favourable situation, but with its value of 46.4 % the region of Northern Hungary is in the last but one place among the regions.

The indicator of the level of self-employment within employment shows the ratio of self-employed and entrepreneurs, and through that the prevalence of initiative, qualification and entrepreneurial ability in society. The values for the regions of Hungary are between 10.43 % and 15.48 %. The most favourable situation can be found in the region of the Southern Alföld, where the high value of the indicator is probably due to the high number of agricultural enterprises. Based on the expositions discussing the situation of the agricultural sector it is no surprise that it is the region of Northern Hungary that has the lowest value of 10.43 %.

Unemployment

The average level of the unemployment rate for 2003 in the EU-25 member states was 9.1 %, which means a deterioration of 0.2 % compared to the previous year. For the European regions the value of the indicator varies between 2 % and 19.6 %. The indicator of the average unemployment rate of the regions in Hungary can be regarded as favourable in a European comparison, for its value varies between 4.0 % and 9.7 %. Unfortunately, the region of Northern Hungary has the least favourable value, which exceeds the average of the regions in the EU-25.

The change from the values of 2002 is also unfavourable. For the various regions in Hungary the extreme values are a growth of 0.8 % and a decrease of 1.1 %. The region of Northern Hungary produced the highest increase of nearly 1 %.

Research and development activity, and the utilisation of its results in the industrial and services sectors

In line with the Lisbon objectives mentioned in connection with the employment processes, the major priorities of the European integration area until 2010 include creating a

knowledge-based economic area, for which purpose a research and development expenditure of 3 % of the GDP is required, which has been reached or approached by the USA and Japan. According to data for 2002 the regions of the EU-25 member states have achieved an average of 1.9 %, which falls rather short of the objectives. Values below the average value can be found in the regions of Spain, Portugal and Greece among the old members and in those of the new member states. The distribution of the values for the regions of Hungary is between the values of 0.3 % and 1.5 %, with the region of Northern Hungary having an even less favourable value sharing it with the region of Western Dunántúl. This means that the situation of the region is deplorable even among the regions of Hungary below the Union average, for it has only 20 % of the value of the region of Central Hungary, which has achieved the most favourable value. This development has occurred in spite of the fact that in the region Miskolc can be regarded as a considerable university centre, and the cities of Eger, Gyöngyös and Salgótarján also have higher education capacities. Life in the country in itself does not present an insurmountable disadvantage in obtaining R&D resources, for the values of the indicator in the regions of the Northern Alföld and the Southern Alföld with their respective university centres in Debrecen and Szeged are 0.7 and 0.8 %, respectively.

The HRST indicator is one that measures the human resource side of the scientific-technological capacities, which shows the rate of those with higher education qualifications and those employed in jobs requiring higher education qualifications in the number of employed. The average value of the EU-25 member states is 39.8 %. The values for the regions of Hungary are between 27.4 % and 45.4 %. Although the region of Northern Hungary does not have the least favourable value, its value of 27.61 % is just above that of the region of Southern Hungary.

In the processing industry the number of employed in the high-tech branches reached 6.6 % by 2003. The values for the regions of Hungary are distributed between 4.69 % and 13.07 %, within that the region of Northern Hungary has a value of 8.65 %, which exceeds the value of 6.94 % measured in the region of Central Hungary, and is preceded only by two regions in the Dunántúl in the ranking based on this indicator.

Employment in the services sector employing high technology, in telecommunications, in electronic data processing, in the air and water transportation sectors is also high in the European average, approximately 10.4 %. The regions showing above average employment in these branches at European level are not necessarily connected to capitals or central regions, thus their powerful development may entail a moderation of the regional development differences within a given country. Regarding the regions in Hungary, the competitive advantage of the provincial regions unfortunately cannot be experienced, for the value of the indicator of no provincial region reaches 50 % of the value of the indicator of the region of Central Hungary, 15.1 %. For the region of Northern Hungary the value is 5.86 %, which is the second lowest in the country.

The branch employing high technology in the processing industry provides information on the extent to which the results of the scientific-technical development have become factors having an impact on the actual economic practice. This rate for the regions of Hungary

varies between 21.6 % and 43.4 %. Contrary to expectations, the situation of the region of Northern Hungary is not unfavourable, it is the foremost among the regions east of the Danube with its value of 32.8 %, and it is more favourable that that of the region of Southern Dunántúl with its value of 25.8 %.

The share of services with a high technology level in the services sector is an indicator with similar information content. Its value for the regions in Hungary varies between 10.7 % and 18.0 %. The value of the indicator for the region of Northern Hungary is the second best value following the region of Central Hungary, thus the region of Northern Hungary shows an overall favourable picture regarding the employment of the achievements of science and technology both in industry and in the services sector. Since companies employing high technology usually do not contribute greatly to the widening of employment, a favourable impact on employment can only be expected to a small extent, while at the same time the settlement of high technology in a given region may generate other, positive processes, therefore it can be regarded as a favourable tendency in every respect and as the starting point of a process creating an opportunity for future growth.

The development of the qualification level of the population provides information on the extent to which they can meet the challenges of the age. The rate of participation of the 17-year-olds in school education shows what proportion of the population can potentially achieve a completed secondary education that achieves the minimum level of competitiveness in social and economic life today. The average of the EU-25 member states was 86.3 % in 2003. The region of Northern Hungary occupies an unfavourable position in this respect as well, its value of 81.5 % is the second worst, and is considerably lower than the value of 92.49 % of the region of Central Hungary.

The proportion of the population in higher education in the average of the EU-25 member states is 16.2 %. The values of the indicator for the regions in Hungary vary between 8.9 % and 27.4 %, with the region of Northern Hungary occupying the last place in the ranking of the regions. Since the indicator shows the regional distribution of the education programs and not of those participating in them, certain regional disproportionalities may appear due to the draining effects of the capital and some other university centres. However, since universities play a role not only in creating the conditions of the economic and social life, but through their supply functions they represent significant centres of employment and economic performance as well, the low value of the indicator gives an explanation for the current economic performance of the region as well.

The rate of people with higher education qualifications in the population in the age bracket fit to work gives a good illustration of the quality components of the labour force. The values for the regions in Hungary vary between 10.58 % and 21.3 %; the situation of the region of Northern Hungary is not strikingly bad with its value of 11.4 % preceding two regions, but even this value is hardly above 50 % of that of the region of Central Hungary.

Tourism

The potential of the tourism sector can be regarded as decisive in the European economic region, for it has outstanding significance due to its employment and income producing capacity and also for standards of life reasons.

The number of accommodations per 1000 persons shows extreme distribution in Hungary, from 13.3 in Northern Hungary to 49.5 in Central Dunántúl. Although the region does not have the tourism attractions of the Balaton region, the level of backwardness is astounding even when compared with the regions in Eastern Hungary, for the value of the indicator is 27.7 even for the region of Southern Hungary, which is second worst supplied in the country.

The availability of quality accommodation, which is shown by the number of hotel accommodation as projected to the total number of accommodation, is also unfavourable, for this rate in the region of Northern Hungary is 42.3 %, while in the region of Central Hungary it is 74.7 %. Thus the low level supply of accommodation is accompanied by an unfavourable composition of accommodation, resulting in an unsatisfactory competitiveness of the region in the quality tourism market.

Determining the cumulative development level of the region of Northern Hungary by means of a cluster analysis of the regions of the EU-25 member states

As a conclusion of the investigation some selected indicators were used to determine the development level of some regions of the EU-25. The analysis was performed by means of a cluster analysis, the indicators used for the analysis were as follows: per capita GDP, per capita income of households, per capita available income of households, as well as the rate of employment of the regions. The standardised values of the variables were used to put the regions into two clusters. Based on the cluster analysis, 174 regions were classified in the cluster of the developed regions due to the above average values of the indicators, while 82 regions had to be ranked among the underdeveloped regions. Due to the unfavourable values of its indicators, the region of Northern Hungary was put among the underdeveloped regions, sharing the fate of other regions in Hungary and most regions in Central Europe. Among the regions in Central Europe, only the central regions of Slovakia and the Czech Republic are among the developed regions. (Slovenia was not ranked due to lack of data.) Naturally, regarding some of the indicators the regions in Central Europe show considerable variance, therefore the analysis starting from the assumption of two clusters can only demonstrate a narrow segment of reality.

Regarding the region of Northern Hungary, the ranking in the cluster of the underdeveloped regions, however, does correspond to reality with all certainty. Although some of the indicators have values exceeding or matching the European average in the positive sense, the indicators of economic capacity do not in general reach the European values. In the ranking of the regions of Hungary, the region of Northern Hungary is without doubt among the last. This means that the region faces a long and difficult process in the convergence process. Regarding primarily the regions of Eastern Hungary, the task is to improve the situation, then to prevent the three regions east of the Danube falling behind the regions of Central Hungary and the Dunántúl. In this long-term task it may be decisive to mobilise the reserves in the low level of employment, which, through increasing the qualification level of the population, may facilitate the settlement of high technology processing industry and services sector capacities and their establishment in the region of Northern Hungary.

Literature

[1] Barta Imre-Zsugyel János: Gondolatok BAZ megye gazdaságfejlesztésének esélyeiről. In: Tér és Társadalom 1988.3.sz. pp. 43-56

[2] Eurostat: Statistic Yearbook 2005. Data 1999-2003

[3] Zsugyel János: Területi fejlettségi különbségek kialakulására ható tényezők vizsgálata az Európai Unió 27 tag- és tagjelölt államának régióiban. Észak-magyarországi Stratégiai füzetek: 2004/1 sz. pp. 98-111

[4] Zsugyel János: The Economic and Social Consequences of the Reconstruction of the Economy of BAZ County in Hungary

[5] Transactions of the Institution of Mining and Metallurgy. Vol. 111. 2002, Eastbourne England, 2002. pp.A197-200

[6] Zsugyel János: Szőttes vagy patchwork: Milyen területfejlesztési stratégiát válasszunk. Észak-magyarországi stratégiai füzetek 2005/2. (megjelenés alatt)

CAUSES AND REGIONAL IMPACTS OF THE CRISIS OF METALLURGY IN THE BORSOD INDUSTRIAL REGION

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Abstract: The Borsod Industrial Region became a crisis area during the political changes (1998-1992) in Hungary. The paper examines the effects of the bankruptcy of two major metallurgical companies on the emergence of the regional crisis.

The study analyses the causes and consequences of the crisis in sectoral and regional approaches, explores the determinant inductors of the crisis and those affecting demography and employment.

In Hungary a change in social and economic structure begun in the last decade of the 20th century was successful in the regions where well-developed internal resources (human and technical capital), valuable assets, and high-standard infrastructure were available, and the investment conditions for working capital were favourable.

The Borsod industrial region, which previously used to have considerable capacities, did not belong to that category. The Borsod industrial region was characterised for many years by production capacities kept alive artificially by the state, a distorted economic structure, underdeveloped and out-of-date infrastructure, adventurous privatisation ending in failure, several thousands of unemployed people, and large-scale emigration in the 1990s. The problems were given mostly symptomatic treatment.

There developed an economic crisis, the consequences of which can still be shown to exist today.

The paper analyses the causes of the crisis in the valley of the river Sajó, with special regard to the metallurgical industry of the region, and examines the consequences of the crisis and the efficiency of the interventions.

The causes of the regional crisis in the Borsod industrial region

The Borsod industrial region is an economic area covering a territory of approximately 4300 km^2 with a specific production profile, which is constituted by the complete areas of the small regions of Tiszaújváros, Mezőcsát, Mezőkövesd, Miskolc, Kazincbarcika, Edelény, Ózd, and by the northern part of the small region of Eger.

"The Borsod industrial region – after Budapest – is the industrially most developed region in Hungary. The main branches of specialisation of the region are mining, metallurgy of iron and machine industry. The other branches of the industry (construction industry, electrical energy industry, chemical industry, food industry and light industry) are basically connected to the previous ones, supplement them and play a subordinated role to them." This is how József Kóródi described the economy of the region in a paper analysing the Borsod industrial region (Kóródi [1959]). His expressions have remained correct for many years.

The region was also rightly called "the small Ruhr district" due to the dominance of heavy industry – mining and metallurgy –, for the mining companies established on the brown

coal resources of the basin as well as the metallurgical companies using mainly Russian iron ores, and to a smaller extent iron ores from Rudabánya represented the determinant production and employment capacities in the region for decades.

By the end of the 1980s the apparent employment balance of the region had been upset, the income producing and income generating capacities of the economic actors had decreased, and tensions and imbalances had arisen in the costs of living owing to the combined impact of external and internal factors which often strengthened each other.[2]

In analysing the causes of the depression phenomena in the Sajó valley, the impacts made by coal mining have to be separated from those made by metallurgy. On the basis of the production and employment data of the two heavy industries it can be established that metallurgy as an inducer of the crisis was the cause of the depression in the region to a greater extent, for while its efficiency decreased dramatically, its weight within the total industry of the county hardly decreased. In 1965 it represented 28 %, and in 1987 it still represented 25 %.

In contrast, the weight of mining, which also operated with a low efficiency, within the total industry changed from 24 % in 1965 to 17 % in 1987 due to the continuous decrease in production. (Bakos [2003])

Although the continuous decrease in the mining capacities entailed painful consequences, it did not have the same dramatic impact as the bankruptcies of the metallurgical companies in Ózd and Diósgyőr, which, following the unsuccessful attempts at privatisation, were kept artificially (by means of state support) alive and when the state supports were terminated, triggered the regional depression.

At the end of the 1980s, then at the beginning of the 1990s (in consequence of the well-known changes in Eastern Europe) the metallurgy of iron in Hungary faced market problems.

The demand for steel by the Hungarian industry decreased, the capacities of the steel works and rolling mills were left unused, and their production costs increased steeply. Their exports – in lack of sufficient state subsidies – produced losses and production had to be decreased.

While the output of the factory in Dunaújváros manufacturing plates remained relatively stable, the decrease in the demand for bar products (Table 1) meant a 'tragedy' for the steel industry in Ózd and Diósgyőr. The failed privatisation played a major role among the causes of their desperate situation.[3]

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[2] The two crisis industries of the region (mining and metallurgy) were still employing 40 % of the industrial workforce of the region in the mid 80s. (Bakos [2003]).

[3] First an agreement was concluded in Ózd in 1990 with two companies well-provided with capital from the Federal Republic of Germany of international standing, but the German owner, who in the meantime was left alone, claiming loss-producing management opted out claiming damages. In Diósgyőr the DIMAG Rt. was sold by the state in 1991 (as it later turned out) to a private entrepreneur lacking in funds under the condition that that it would guarantee at least 70 % employment. However, the new owner did not even have the means to operate the factory. Therefore the state was forced to spend 5 billion HUF on operating the factory and on completing the developments that had been left unfinished (Sziklavári [1994]).

Table 1. **Development of the production of the steel industry in Hungary (thousand tons)**

	1988	**1989**	**1990**	**1991**	**1992**
Raw steel output	3,546	3,303	2,823	1,855	1,520
Rolled bar stock	1,422	1,231	914	422	367
Rolled steel plates	1,367	1,302	1,251	1,072	1,070
Rolled steel pipes	169	167	113	75	53
Secondary-tertiary products	810	729	449	325	291
Number of people employed in iron metallurgy (thousand persons)					
	53	44	34	27	21

Source: Sziklavári J.: Az acélipar válsága. Kohászat. 1994. 9. szám pp. 355.

The failure – which could have been avoided – resulted in making both factories bankrupt. They made debts, their losses increased, their technical state deteriorated, the government drafted a resolution to have them reorganised[4], and still in the same year two further resolutions were made.[5]

The three resolutions appropriated a total of 34.8 billion HUF subsidy, 20% of which was spent on developments, and 80% on maintaining the operationability, on buying out the assets, financing the inventory, redundancy payments, financing the losses and on credit guarantees for working capital (Steel Industry Restructuring Hungary Project. Final Report 1999. pp 32-36).
A substantially larger capital would have been needed to make the technologies in the two factories competitive and for their products to reach the requirements set by the ISO 9002 standard.

The metallurgical companies in Borsod purchased the majority of the raw and auxiliary materials for their products from imports at world market prices, which continuously decreased their competitiveness, which was not very high in the first place (Figure 1).

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[4] 2014/1994.(II.16.). Government resolution on the reorganisation of the steel industry in Borsod.

[5] On guaranteeing the continuous operation of the steel industry in Borsod. (2110/1994. (X.27.). On continuing the reorganisation of the steel industry in Borsod (2156/1994. (XII.24.).

Comparing steel production per 1 person employed with the figures in Germany, it can be easily seen what a dramatically increasing difference is shown by one of the major components of competitiveness, efficiency, particularly since the mid-80s in the steel industries of the two countries. By 1990 the difference had become nearly fourfold.
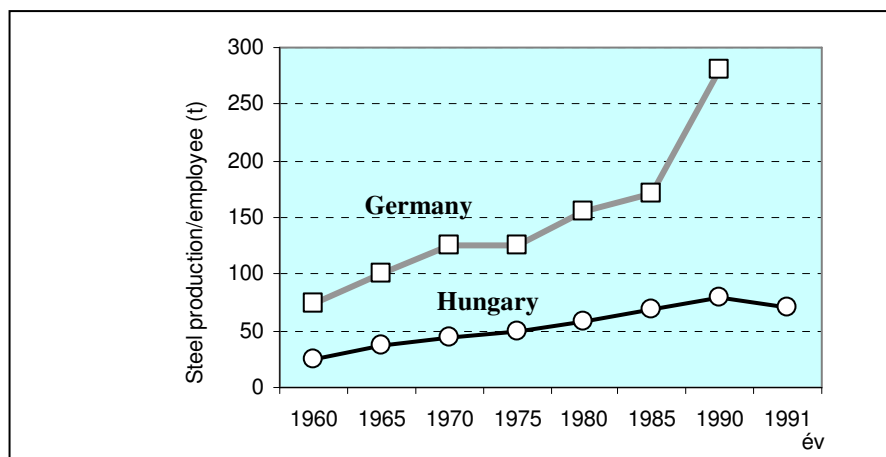

Figure 1. **Development of steel production per one person employed in iron metallurgy in Germany and in Hungary**
Source: Tardy P.: A magyar vaskohászat helyzete és kilátásai.
Kohászat 125.évf.5.szám pp.186.

The number of those employed in iron metallurgy in Hungary decreased to 40 % of the previous figure in four years (Figure 2). [6]

In iron metallurgy in Hungary the decrease in the number of workplaces took place at more than threefold speed and coincided with the general global economic depression and the Eastern European crisis of tragic extents. (Sziklavári [1994]).

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[6] In the industrial countries (e.g. in the member states of the EEC and the USA) a decrease in employment of such extent took place in 13 years, from 1974 to 1987. In that time the economy was restructured and new jobs were continuously created.
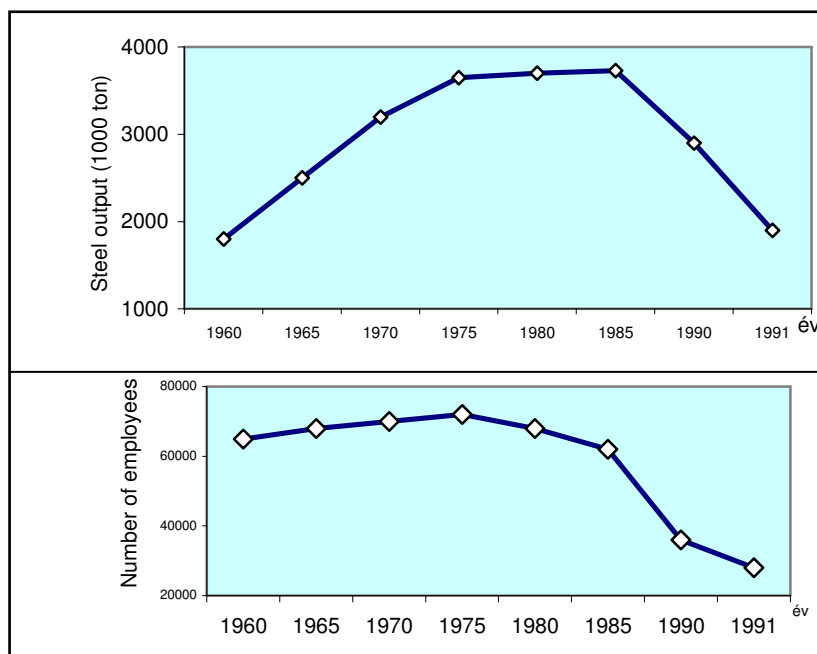
Figure 2. **Steel production and changes in the number of those
employed in iron metallurgy in Hungary**
Source: Tardy P.: A magyar vaskohászat helyzete és kilátásai.
In: Kohászat, 125. évf. 5. szám pp. 187.

In the period of the change of the political regime (1989-1993) the heavy industrial
companies in the Borsod industrial region were affected particularly unfavourably by four
factors: inflation, obsolete resources, company management and the termination of
government subsidies.

The sectorial crisis exerted a rapidly spreading effect in the region, for these industrial
centres were the main employment, commercial, services, training and administration
centres of their peripheries as well. As a result of their crisis, the ability of the region to
provide a living decreased dramatically.
The deteriorating situation of the industry is shown by the indicators derived from the profit
and loss balance sheets of the four major heavy industrial companies of the county (LKM,
then DIMAG Rt., then DAM Rt.; Ózdi Kohászati Üzemek, then ÓKÜ+OAM Rt.;
December 4. Drótművek, then D&D Rt.; and Borsodnádasdi Lemezgyár) (Table 2).

The accumulation of debts by the companies is shown by the dramatic decrease in the ratio
of equity capital and the rapid increase in the short-term loan portfolio. At the same time
their investment credits kept decreasing monotonically.

The companies used up their working capital, the ratio of funds within the working assets decreased to a large extent. Their equity capital-related results became critical, the turnover speed of the inventory slowed down, and the rate of return on the assets was minimum at the beginning of the period and then turned into a loss.

Table 2. **Balance figures hinting at a crisis in the four largest[7/] heavy industrial companies in the county of B-A-Z**

Indicator	1988	1989	1990	1991	1992
Ratio of equity capital in total capital	53.0	50.0	46.6	17.6	- 20.0
Short-term liabilities/total liabilities	43.2	45.5	48.8	79.1	85.9
Long-term liabilities/total liabilities	9.8	8.4	4.6	3.2	3.7
Ratio of working assets in total assets	66.1	65.3	59.5	55.1	57.4
Ratio of (funds + equities/working assets	4.2	3.8	2.8	2.1	2.8
Retained profit/equity capital	0.25	0.18	- 21.4	- 70.0	2.6*
Turnover speed of inventory (day)	181	186	194	197	191
Rate of return on the assets	0.09	0.08	- 12.6	- 41.3	- 14.1

* Both the numerator and the denominator are negative.
Source: Compiled by the author on the basis of balance figures submitted to the registry court

The situation of the two metallurgical companies was worsened by the economic trends of the industry as well. Between 1989 and 1993 the strong recession process resulted in a lasting, large-scale decrease in prices in the market of the products produced by the two companies (Figure 3). This circumstance generated a further deepening and protraction of the crisis.

[7/] The company size is determined on the basis of annual sales revenues and average number of workforce.
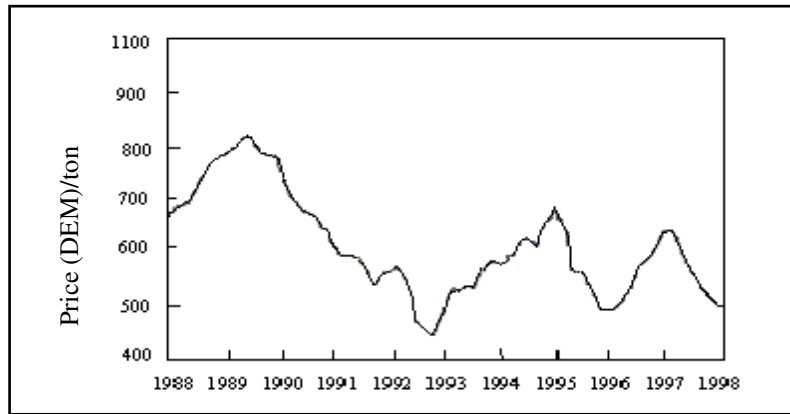
Figure 3. **Price cycles in the business of rolled rod production**
Source: Metal Bulletin (1988-98)

The steel industry responds to recession in general by streamlining the organisation, decreasing the capacity utilisation level (even partial and temporary lay-offs), and by decreasing the operation costs, and the companies better provided with funds respond by intensive technical development.

Failing to carry out a conscious intervention may result in recession turning into a crisis. If this crisis develops in a company (or companies) of decisive importance in a region, then it will come to extend to the sector, and to the region. That was the process that took place in the Borsod industrial region.

Product structure and technology causes underlying the crisis of in the metallurgical industry of Borsod

The strategic objectives and financial resources of the long-term development of iron metallurgy in Hungary were determined in resolution No. 5059/75 of the State Plan Committee (ÁTB) made in August 1975 ("The long-term development concept of iron metallurgy in Hungary until 1990"). This plan document targeted a steelmaking capacity of 5 million ton/year for 1990.

Nearly half the capacity was meant to have been created in Dunaújváros, while a substantially smaller increase in production was planned in Ózd and Diósgyőr. The planned costs of the investment with a running time of 15 years were 135 billion HUF (9 billion HUF annually).

"The ambitious development plan soon turned out to be over-dimensioned: as early as in 1977 the planned capacity of Dunaújváros was reduced (to 1.8 Mt/year). The conceptions regarding a change in technology were unfortunately less significant than the increase in

capacity: in 1990 the ratio of the open-hearth steelmaking process was still planned to be 40%." [8] (Tardy P. – Bíró Gy. – Zimonyi Z. 1995)

Between 1988 and 1991 Hungary was characterised, in addition to a dramatic decrease in quantity, by the out-of-date structure of the steelmaking technologies applied (Figure 4). After 1991 the open-hearth process was only applied in Ózd.
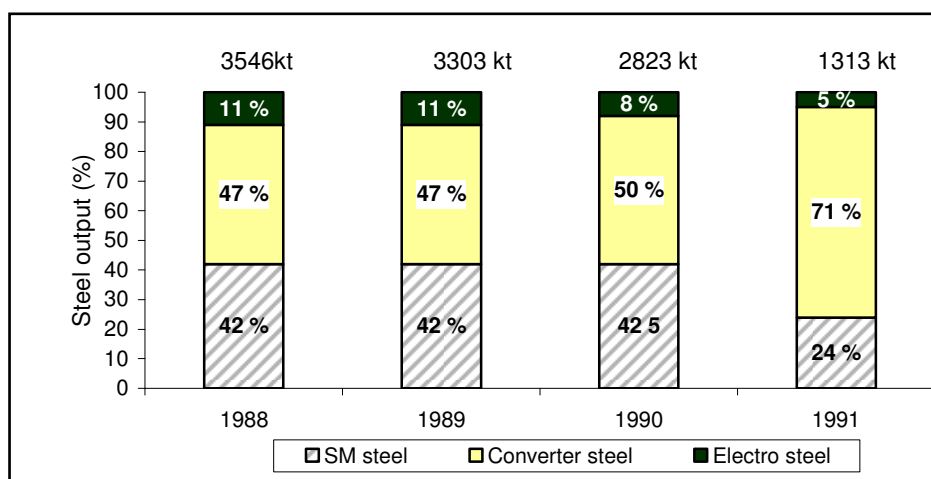

Figure 4. **Changes in the technological ratios of steelmaking in Hungary (1988-91)**
Source: A publication by the Hungarian Iron and Steel Industry Association: A magyar vaskohászat helyzete az 1991. évi adatok és az érvényesülő technikák tükrében. Kohászat, 1992. 9. szám pp.323)

It is characteristic of the dramatic reduction of the planned developments that instead of the original 135 billion HUF only 61.9 billion HUF was spent in the three plan periods. [9]

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[8] Western Europe was at this level at the end of the 1970s.

[9] "The discrepancy in technology as compared to the industrial countries increased. Product structure did not change in merits either: while internationally the share of flat products (plates, strips) increased more and more, and in the mid-80s it exceeded considerably that of long products (rods-wire and profile products), in Hungary the majority of iron metallurgy products was invariably given by the long products produced at a loss in Diósgyőr and Ózd. The flat products produced in Dunaújváros also had a better market position abroad than the long products from Borsod…

Due to the structural backwardness of the Hungarian industry (the extremely weak capacity to export of the machine industry and the other sectors using steel) and to the ever increasing demand for hard currency revenue, the iron metallurgy in Hungary was forced to effect intensive exports to the capitalist countries even under the worsening conditions (it sold its products at a loss, which the government rewarded by financing its losses)…

As an evaluation of the steel policy of the Hungarian government in the period 1975-1990 it can be established that the developments intended also brought significant results, at the same time they contributed to the development of considerable tensions. (In Ózd out-of-date steel production was maintained, and the change in product structure did not take place in the desirable extent.) The

The omission of the developments led directly to a further decrease in the role of metallurgy in Northern Hungary (Table 3).

Table 3. **Changes in steel production in the Borsod region (thousand tons)**

	1985	**1990**	**2000**	**2003**
Diósgyőr	1.070	690	190	110
Ózd	1.100	650	40	240

Source: MVAE, 2004

By 2003 production in Diósgyőr decreased to one tenth of the level in 1985, and in Ózd it decreased to close to one quarter. Naturally, dramatic changes could also be observed in terms of workforce: in 1985 the number of workers employed in Diósgyőr was 20 thousand and in Ózd it was 11 thousand. By 2003 it decreased to 6 and 5 %, respectively. (MVAE [2004])

Sector-level management of the crisis in metallurgy (1992-2004)

Giving the metallurgical companies of Diósgyőr and Ózd into foreign ownership did not solve the problems of the companies in financial and profitability or employment terms. Almost the entire amounts of subsidies provided by the state in this period were used for compensation for the losses, settling the debts, current financing and re-nationalisation. The situation was further worsened by the fact that the newer and newer owners did not have enough capital either (or did not intend to invest more in their new companies). It seems that they did not really intend to refurbish the companies. They had bought the market, or rather the possibility of getting directly to the market and considered the momentary possibility of making profits to be of primary importance.

Crisis management measures in Diósgyőr

In order to avoid a deepening of the crisis that had developed in the region by 1992, the state provided financial subsidies to maintain the production conditions, the use of which was made conditional on the implementation of a crisis management project.[10] However, the partial implementation of the reorganisation program did not result in a satisfying solution.
General re-structuring (rationalisation of the production, productivity and product structure) was not considered in its merits. For two years following the change in technology further billions were spent by the government on the company, with the only purpose of avoiding bankruptcy.

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specific dimensions of the development fell behind the standard Western European levels, and the financing system made the companies insolvent from time to time." (Tardy P. – Bíró Gy. – Zimonyi Z. [1995] p 50)

[10] Government resolution 3187/1992. (V.7.) On settling the economic situation of the DIMAG holding.

As a transitional solution, in 1995 the company was re-nationalised in order that it would be again privatised after the financial and social settlement.[11]

The company was sold again in 1998. The new owner, VSZ a.s. Kosice (Kosice Metallurgical Works) operated the company only for two years, then declared bankruptcy. The problems of the Diósgyőri Acélművek (Diósgyőr Steel Works) exceeded the enduring capacity of the Kosice owner, who was struggling with problems at home as well.

The same happened to the Italian Cogne holding as well, which operated the company under the name DAM Steel Rt. for 21 months from May 2001 on, and subsequently the company was again put into liquidation from March 2003 on. Production had to be stopped in spring 2004, for production could not be financed due to a lack of credits. (The company had been continuously producing losses since 1990, except for the year 2000, when the factory, operating under liquidation, was able to break even for about a year.)

After several unsuccessful attempts at selling the company, finally DAM 2004 Kft. started its operation by buying out the assets of the steel works being liquidated at the end of 2004. It is considered to belong into the interest sphere of the Donbass holding, although there is no reference to this in the registration of the company.

Privatisation so far always took place when the company was being liquidated or was close to liquidation, which made it difficult to find a serious investor. In spite of the fact of the emergence of the new owner, there is a strong likelihood that steelmaking will be finally terminated in Diósgyőr

Crisis management measures in Ózd

After the failure of privatisation, crisis management was affected in a similar way to that in Diósgyőr. The state re-purchased the company, then after it became operational again, subsidised it financially, but the operation continued to produce losses, so in a few months' time liquidation was started anew.

Among the production units only the Rod and Wire Rolling Mill was judged to be suitable for economic operation in the course of liquidation. In the framework of the regional crisis management program in Borsod, the owner, ÁPV Rt., bought out the assets required for the reorganisation and transferred them to the Ózdi Acélművek Kft for operation. After several unsuccessful tenders, the company was again privatised in 1997.

Ninety per cent of the capital subscribed became the property of Max Aicher GmbH. Fulfilling part of the stipulations of the privatisation contract, the owner effected the mini-steelworks investment without government subsidy by 2001 in order to supply the initial material for the rolling mill.

The economic performance of the company showed a fluctuating character following the steel market cycles also after the change in ownership. The price rises in the steel industry that started in the autumn of 2003 – the price of reinforcing steel increased nearly by 100 % in six months – resulted in considerable profits.

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[11] Government resolution 21568/1994. (XII.24.) On continuing the reorganisation of the steel industry in Borsod.

Evaluation of managing the crisis at sector level

In spite of the reorganisation of the metallurgical industry in Borsod (close to 75 billion HUF), no competitive, efficient, profitable steel industry has been created in the region. The crisis management in the metallurgical industry was not successful. The capital injections by the government made it, however, possible for the two companies to continue operation in spite of the losses, which was significant in terms of the employment situation of the region, but the economic situation of the companies continued to be critical.

The intervention was only symptomatic treatment. The subsidies were primarily intended to preserve jobs. The government did not dare and was not able to take on the steps involving mass lay-offs. Due to shortage of capital the economic restructuring of the region did not take place. The measures demanding large working capitals were realised within the plants of the two metallurgical companies with low efficiency.

The crisis management program of the sector also suffered serious delays, thus it required much larger government expenditure as compared with the lower capital demand of early intervention. The companies received new funds from time to time in order to maintain their operation at a loss.

In the period of 1992-1997, 80 % of the state subsidies were used for creating clear ownership conditions, compensation for losses and financing working assets, and only 20 % was available for real restructuring within the company (e.g. technical developments, streamlining of the product range, increasing the degree of further processing of the products, development of products and services representing higher added value, retraining projects) and for technological modernisation providing the foundations for competitiveness.

After 1996, under the Partnership Agreement established between the EU and Hungary, the subsidies provided by the Hungarian government for the steel industry had to be terminated (European Agreement 62. § (EC subsidy regulations), which meant the end of "pouring water into buckets with holes in them" in the metallurgical companies in Borsod as well.

Tables 4 and 5 present some priority indicators of the two companies in the period following 1996, which show that the situation did not improve much even after the dramatic reduction of capacities and the latest privatisation steps.

Table 4. **Development of priority indicators of DAM Steel Rt.**

Indicator	1997	1998	1999	2000	2001	2002
Changes in the net per capita sales revenues (%)	28.7	25.6	- 1.2	- 5.1	31.6	43.6
Profitability of earnings before taxes (%)	-34.1	-15.5	-34.1	-25.5	-19.6	-17.0
Liquid assets ratio (HUF/HUF)	1.1	0.9	0.5	..*	0.9	
* liquidation, no balance was made						

Source: Stefán M.: A hazai acélipari társaságok tulajdonosi szerkezete és kiemelt mutatóinak alakulása. Kohászat 2003. 1. szám pp.2.

Table 5. **Development of some prioroty indicators of ÓAM Kft.**

Indicator	1997	1998	1999	2000	2001	2002
Changes in the net per capita sales revenues (%)	- 7,0	100,0	36,9	- 7,7	9,9	0,9
Profitability of earnings before taxes (%)	-22,0	0,4	3,7	- 5,2	-0,3	-18,9
Liquid assets ratio (Ft/Ft)	0,7	0,6	1,0	0,7	0,7	

Source: Stefán M.: A hazai acélipari társaságok tulajdonosi szerkezete és kiemelt mutatóinak alakulása. Kohászat 2003. 1. szám pp. 4.

Evaluation of the crisis management at regional level

By 1993 it had become clear that the government interventions that started to emerge in the second half of the 1980s and that were basically of a 'fire-fighting' character remained ineffectual in the management of the economic structural and regional crisis in the county of Borsod-Abaúj-Zemplén. In the framework of Component II of the PHARE Regional Development Pilot Project (Development of decentralised decision making and organisational system) the county of Borsod-Abaúj-Zemplén became an area of piloting (together with the county of Szabolcs-Szatmár-Bereg).

The government intention embodied in government resolution 1123/1994 (XII.25.) for the formulation of a county development program and for its subsequent implementation was born on the basis of the findings of the paper 'Integrated Reform Process of Steel Industry Regions', elaborated in the course of the PHARE program in 1994, and on the experiences of the PHARE Pilot Program of the European Union implemented between July 1993 and July 1996 and resulting in the establishment of the County Development Public Foundation (including the county development council, board of directors and the development agency).

By 1995 the government resolution mentioned appropriated 2 billion HUF in the state budget for the priority development of the county; however, the decisions were not taken in the county. The Board of Trustees of the County Development Public Foundation had the right of opinion, but the decisions were made by the ministers involved.

By the end of January 1995 the working program had been completed, which was adopted by the Regional Development Council of the county of Borsod-Abaúj-Zemplén in June after consultation with the ministries, then legitimated by government resolution No 1113/1995. (XI.22.). That is how the Integrated Restructuring and Crisis Management Program of the county of Borsod-Abaúj-Zemplén was born. We can only talk of a development program within the competence of the decision makers in the county from this time on. The government resolution set a framework of 2.55 billion HUF for 1996 for the implementation of the program (thus decentralisation was implemented, but resources integration was not. The decisions were made by the County Development Council, however, they were not allowed to diverge from the central proposal principles and priorities: separate proposals had to be invited for the individual funds, therefore the promised PHARE funding was not yet available.

The activities of the year 1997 were founded by government resolution 2345/1996 (XII.11.). It set a government contribution of 4.0 billion HUF to the funds for the county program and for the first time in the history of the program it was possible to actually integrate some of the funds.

Since the PHARE funds to be used that year and certain Hungarian funds also required further negotiations, it became possible only in August to invite proposals for the priority tourism, small region, enterprise infrastructure development and the environment protection tenders.

With every intention to learn from the experiences by 1998, and to speed up the processes, the Regional Development Council adopted the action plan for the year 1998 in December 1997 without having detailed information on the funds. The government adopted the action plan by government resolution 2069/1998 (III.25.) and set a framework of 6.2 billion HUF for the purposes of the program. This proved to be smaller than expected, therefore a substantial part of the already adopted action plan had to be omitted.

The tasks were determined in 8 subprojects:
I.   Business consultancy, business services.
II.   Capital supply for companies.
III.   Development of enterprise infrastructure.
IV.   Developing the integrated small region system of the development of the economy.
V.   Influencing the macro-economic system of conditions.
VI.   Training.
VII.   Measures for special groups.
VIII.   The system of physical conditions of the development of the economy.

Under the contract between the government and the PHARE, the program planned to involve 23 million ECU in international funds.

The implementation of the program was divided into annual action plans. The realisation of the annual action plans and of the whole program was basically hindered by two factors:
- lack of the integration of the government funds allowed the involvement of PHARE funds only with delays.
- compared with the PHARE funds of 23 million ECU, only a total of 5 million ECU financed the program, out of which only 2 million ECU (451 million HUF) was under the direct decision making competence of the Regional Development Council.

By 1998 the progress of the integration and the unfortunate tightening of the funds led to the narrowing of the objectives set in the action plan.

The financial plan, in harmony with the government resolution (government resolution 1123/1994 (XII.25.)) contained the funding for the year 1995 and for the years 1996-98 separately. The program planned a total of 30,364 million HUF investments, which calculated with 56.9 % state, 11.7 % PHARE and 31.4 % own funds.

The government funds were determined annually in separate government resolutions.

The significant decrease of the PHARE funds from 23 million ECU to 5 million ECU made the crisis management program very strongly under-funded.

Due to the tightness of the funds in 1997 and with an awareness of the large number of proposals and the great demand for funding, an attempt was made in the decision making period at addition of funds, at the involvement of external funds (MBFB loan), but this could not make up for the lost EU funds.

All that was possible was to meet a quarter of the demand for approximately 40 billion HUF formulated in the 3200 proposals submitted in the three years for the funds available.

The funds planned for the three year period of the program and actually spent in that time are quantified in Table 6. As shown by the figures, the crisis management program received only 54.6 % of the planned external funds.

Table 6. **Planned and actual funds and developments in the Integrated Restructuring and Crisis Management Program (1996-1998)**

(million HUF)

Subprojects	Planned external funds of support		Actual external funds of support	
	Government	**PHARE**	**Government**	**PHARE**
Business consultancy, business services development	50	262	240	0
Capital supply for companies	5.250	1.635	6.236	451
Development of enterprise infrastructure	45	459	645	-
Integrated small region system of the development of the economy	25	95	87	-
Macro-economic system of conditions (lobby program)	0	0	0	0
Training	60	180	4	-
Measures for special groups	520	204	558	-
System of physical conditions of the development of the economy	8.218	635	1.410	-
Total	*14.168*	*2.470*	*9.180*	*451*
Grand total	**17.638**		**9.631**	

Source: Regional Development Council of the county of B-A-Z, 1999.

At the end of the evaluation, here is a comparative series of figures to illustrate the impact of the program on improving the unemployment situation.

In the course of the implementation of the program approximately 30 thousand jobs were lost, while at the same time the Regional Development Council supported the creation of 7,200 new jobs in the framework of the program, which amounts to 24 % of the jobs lost.

References

[1] *Magyar Vas- és Acélipari Egyesülés Közleménye*: A magyar vaskohászat helyzete az 1991. évi adatok és az érvényesülő tendenciák tükrében. Kohászat, 1992. 9. szám. pp. 321-324.

[2] *Kóródi József*: A borsodi iparvidék. Közgazdasági és Jogi Könyvkiadó, Budapest, 1959.

[3] *Aal és Kollega Kft.:* Steel Industry Restructuring Hungary Project Final Report. Budapest, 1999.

[4] *Tardy Pál – Bíró Győző – Zimonyi Zoltánné:* Állami Acélprogramok 1970-90 között: Korlátozott lehetőségek és eredmények. 1995. 2-3. szám pp. 49-51.

[5] *Bakos István:* Területfejlesztési stratégiák és programok tervezésének módszertana. Bíbor Kiadó, Miskolc, 2002.

[6] *Stefán Mária:* A hazai acélipari társaságok tulajdonosi szerkezete és kiemelt mutatóinak alakulása. Kohászat, 2003. 1. szám. pp. 1-6.

[7] *Sziklavári János:* Az acélipar válsága. Kohászat. 1994. 9. szám. pp. 349-355.

[8] *Tardy P.*: A magyar vaskohászat helyzete és kilátásai. Kohászat 1992. 5. szám. pp. 181-189.

[9] *Bakos István:* Európai válságkezelési esettanulmányok. Oktatási segédlet. Miskolci Egyetem, 2003.

[10] *B-A-Z Megyei Területfejlesztési Tanács*: Az integrált szerkezetátalakítási és válságkezelési program végrehajtásának folyamata és eredményei Borsod-Abaúj-Zemplén megyében. Miskolc, 1999.

THE COUNTY OF BORSOD-ABAÚJ-ZEMPLÉN: ON THE WAY TO SUSTAINABILITY?

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Abstract: The paper evaluates the progress of the County of Borsod-Abaúj-Zemplén towards sustainable development using indicators determined on the basis of the three pillars of sustainability (economic development, environmental balance and social progress). The county of Borsod-Abaúj-Zemplén is one of the most controversial regions in Hungary: despite its excellent natural and environmental potentials, its role in preserving traditional culture and its role as a umbilical cord, it is in a very difficult situation regarding the economy and social progress: its performance indicators or the indices related to sustainability and measuring human development cannot be claimed to be good. However, the positive changes in the recent period – e.g. in terms of the environmental compliance of the companies, waste emission, use of chemicals in agriculture, institutional development, programmed awareness raising and shaping attitudes in general and higher education – hold out hope. Taking advantage of the absorption capacity of the region, consciously planned development and investment creating jobs, promoting cross-border cooperation, further changes in attitude and training can be used to take successful steps towards sustainable development.

Introduction

Today sustainable development and its implementation are organic parts of the community policies of the European Union including regional policy (particularly after Johannesburg and Lisbon). Achieving the objective of environmental sustainability in practice, however, poses an all the more serious problem in terms of being harmonised with the objective of social and economic development and integrated into the policies horizontally. *In Hungary its achievement may present huge challenges mostly for regions like the region of Northern Hungary; for here currently real struggle is fought for economic competitiveness and for a better quality of life*. In this region the environmental motivation of integrated development cannot be called traditional.

In 2000, in the course of the accession negotiations Hungary was seriously reprimanded by the European Union regarding the state of the environment and the related efforts. The annual report – in addition to the arrears in legal harmonisation, and the problems of air, water and waste management – highlighted the following: further regional environment protection organisations have to be established or strengthened in order to be able to keep up with the sustainability policy of the Union. The chapter on environmental protection of the accession negotiations was successfully closed in 2001, but the development of regional authorities and the regional environmental conflicts have continued to be on the agenda.

It is the outcome of the accession process that for the period 2003-2008, the National Environment Protection Program has dedicated particular attention to strengthening the environmental policy in the sectors and regions, to monitoring progress and supervision of the National Environment Protection Program II as well as to regional organisation and organising issues of the implementation. In 2005 a new task was presented by preparing the

national strategy of sustainable development, which determines the objectives to be achieved in the long term. Since the concept of sustainability can look back on a past of nearly 20 years, we have attempted to evaluate the changes towards sustainable development in the county.

However, it is not a simple task to measure the progress towards sustainable development. In some OECD countries indicators (the majority of which are based on the 10 principles by Bellgio[12]) were determined on the basis of the three pillars of sustainability (economic development, environmental balance and social progress) to measure the individual national strategies, but no uniform system of indicators has been developed. And no indicators were developed for Hungary at all. The list of indicators measuring[13] the implementation of the Sustainable Development Strategy of the EU (*SEC (2005) 161 final)* was only published in 2005. In our research both lists were taken into account, but we worked with different indicators and index numbers, because the analysis was limited by the availability of data and in many cases by their form that was unsuitable for comparison.

Capacity and development of the economy

In this respect the county of Borsod-Abaúj-Zemplén (BAZ) is in a peculiar position. As one of the determinant industrial centres of the country, the county saw experiments as early as the late 1980s in elaborating the domestic model[14] of environmental management, which was justified by intense air pollution and large amounts of hazardous waste. The economic capacity of the region decreased, however, from 1985 on, and after the change of regime production fell dramatically, reaching its lowest in 1992. According to the regional statistical data of the National Statistics Office (KSH) the national ranking of the region has not actually changed since 1994.

After the economic decline, a revival has been taking place only since 1996, but the region still has not been able to achieve its previous level of performance. In 1994 the per capita GDP was 70 % of the national average. However, in 2003 it was only around 60 % in the region of Northern Hungary, while it was 161%[15] in the region of Central Hungary. In spite of the more intense development after 2000, this region is among the 10 regions with the poorest economic performance within the EU with its GDP of 7902 EUR/per capita, which is only 37.3 % of the EU average.

The development of the unemployment rate (16%! in 1993) was closely related to this, which was the worst in the country, and it is still the worst: 9.7% in 2004, currently it is

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[12] The principles include the following: objectives and visions, holistic approach, essential elements, appropriate conditions, practice-orientation, openness, efficient communications, regional involvement, self-standing analysis, institutional capacity (Bellgio, 1995) in: Hass, J.L., Brunvoll F., Hoie H.(2003) Overview of Sustainable Development Indicators Used by National and International Agencies, OECD Statistics Working Paper 2002/2 OECD STD/DOC(2002)2, following Hardi and Zdan 1997, http:iisd1.iisd.ca/measure/1.htm

[13] Measuring Progress towards a More Sustainable Europe - Sustainable Development Indicators for the European Union - Data 1990-2005

[14] G10 research projects, OMFB

[15] Source: Regional differences in economic development in Hungary in 2004, KSH

around 10%[16]. It should be noted, however, that the increase in the industrial production of Northern Hungary, including the county of Borsod-Abaúj-Zemplén was the largest in the country with an average increase of 15-16% from 2003 to 2004, which is a promising sign of the improvement of economic capacity. It is probably due to that as well that the county, in spite of the very high rate of unemployment, is leading in working off its backlog (with a decrease of 6.3 %).

In the first half of 2005 the tendency of increase in performance continued, with the most dynamic increase in the sector of machine manufacturing (at present 33 % of the production value of approximately the whole manufacturing industry originates in the machine manufacturing).[17] It may be called favourable that the industrial investments, transportation, storage, postal services, and telecommunications investments have exceeded the national average.

The development of investments from 1990 on lagged behind the national average, and the rate of foreign capital investments was also low. The per capita operating capital stock is below the national average, on the other hand, in terms of increase in relative operating capital (11.5 %) it is ranked second among the counties.

There has been some positive change in R&D activities, which appears in a more concentrated form around some institutions (University of Miskolc, Bay Zoltán Applied Resource Foundation, ITDH, NORDA).
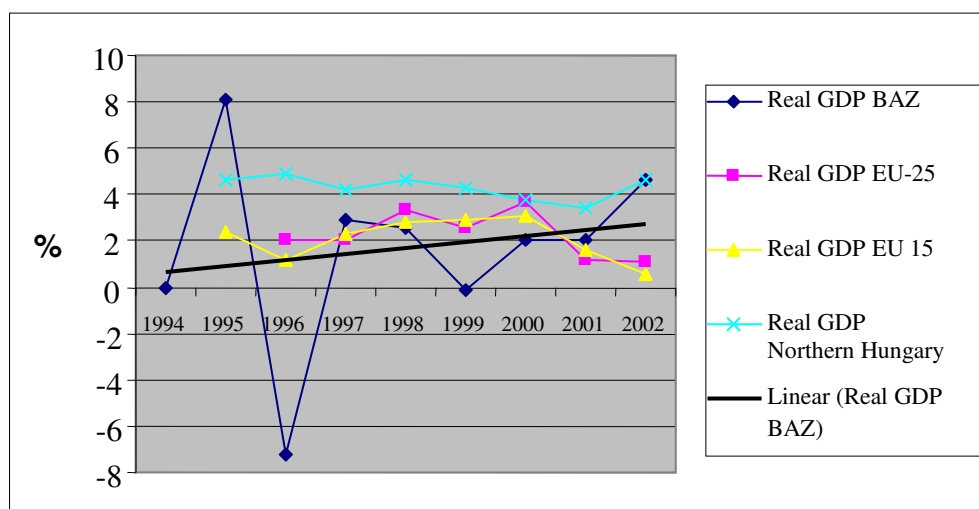

Figure 1. **Comparative analysis of real GDP of the county of Borsod-Abaúj-Zemplén**
Source: EUROSTAT and KSH

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[16] Source: KSH, MEF
[17] (Source: Statistics information, county of BAZ, 2005/2, KSH)

The investments in environmental protection showed a relatively favourable picture. The amounts invested increased at going prices, although the increase is more modest if the deflation index is taken into account. The majority of investments are connected to sewage management. Comparison is limited by the fact that since 1999 the contents of investment statistics have changed, thus investments in environmental protection cannot be followed.
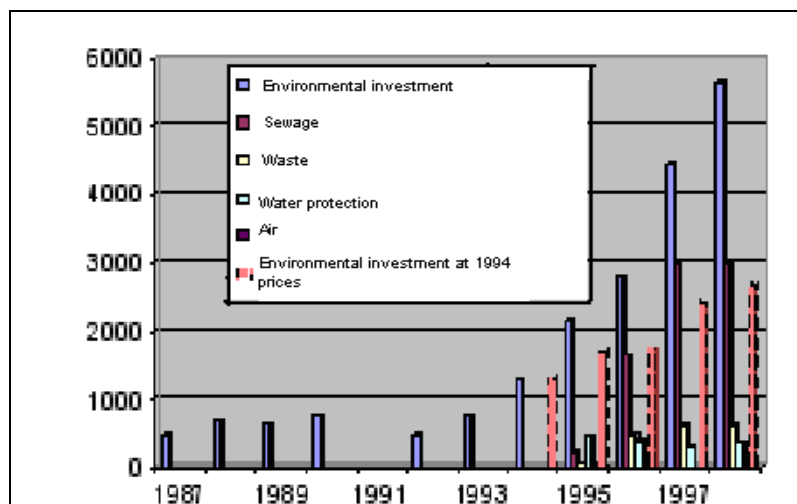

Figure 2. **Environmental investments (million HUF)**
Source: KSH)

We attempted to measure the positive changes towards sustainable development taking into consideration a period of 10 years by the following indicators and by examining the changes in the individual indicator elements. For the indicator of economic development the achievements of 2003 were related to those of 1994, and the indicators obtained were then averaged.

Table 1. **Some economic indicators selected to measure sustainable development**

Indicator	1994	1995	2000	2001	2002	2003	2003 in the average of 1994 %
Per capita GDP of county BAZ (thousand HUF)	329	430	827	936	1025	1157	
Per capita GDP of county BAZ (thousand HUF) at 1994 prices	329	336	319	331	344	371	112
BAZ GDP (million HUF)	177474	232186	623722	694657	765754	854140	
In % of national average	70	76	64	63	62	63	90
National per capita GDP (thousand HUF)	425	544	1290	1458	1648	1835	
Total national GDP (million HUF)	1364811	5561865	13172293	14849809	16740421	18568272	
Industrial output (billion HUF)	180,8	308,3	649,2	710,8	715,1	671,371	
Industrial output (at 1994 prices)	180.814	240.860	250,8	251.5	240.31	215.87	119
Construction industry (million HUF)	10602	11571	44939	56725	62335	93922	
Construction industry (at 1994 prices)	10602	9025	17365	20073	20948	30146	284
Number of retail outlets	10784	11762	9678	9856	10027	10072	210
Number of passenger cars	117927	118495	121125	126267	136035	146959	124
Investment (million HUF)	37228	60206	127905	126152	180805	222673	
Investment at 1994 prices	37228	46963	49095	44641	60877	71484	192
Number of companies with foreign interests*	265	281	385	343	372	345	313
Ratio of the 2003/1994 data, average							**180.5**

Source: KSH, Statistical Yearbooks of county BAZ

Some economic indicators show an almost threefold increase, but the annual increase in the decisive per capita GDP hardly exceeds 1 %. The income indicators show a minimum change over a ten year period, and compared with the national average the position of the county deteriorated, which indicates among other things that it is still very far away from the Lisbon objectives of the EU. There was a mere 20 % change in industrial production. Employment shows only a slight improvement. In the field of investments, development was particularly strong in the construction industry.
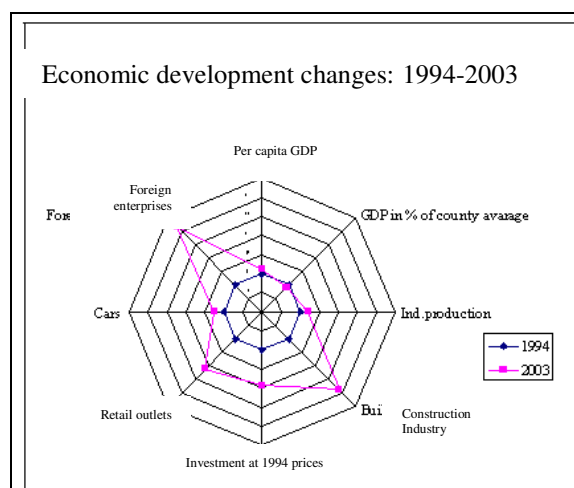
Figure 3. **Economic development according to some indicators**
*Source:* compiled by the author

Development of social progress

The performance of the region is even poorer in terms of social progress. It is unfavourable that for 100 active wage earners in the region there are 92 dependants (24 unemployed), while the national average is 67 dependants, including 10 unemployed. According to KSH data, in 2004 the per capita annual average personal expenditure of households was 518,861 HUF, 24 % of which was spent on food, 20 % on the maintenance of flats, 18% on transport and telecommunications (Figures 4-5). Similarly to the other regions, within food the consumption of meats amounted to the largest rate, 31%, on which the population of the region of Northern Hungary spent 38 thousand HUF per head.[18]

At the same time one of the highest fertility rate indicators can be found here and it is noteworthy that among women giving birth the rate of those under 25 years is higher than the national average while the rate of those above 25 years is lower. The difference is particularly conspicuous in very young mothers: the rate of those under 14 years is three times (0.3 %), and the rate of those between 15-19 years is twice (13.7 %) as high as the national average[19]. This also means that they drop out of the education system and will also face problems in their later reintegration (Figure 6).

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[18] Szabó, Zsuzsánna: A háztartások kiadásainak jellemzői Észak-Magyarországon, 2004 KSH

[19] According to data for 2003, the fertility of women in child-bearing age (15-49 years) is the highest in the county of Borsod-Abaúj-Zemplén. Fejes, László and Restyánt, Jaczkó Valéria: Élveszületèsek, termékenysèg ès magzati vesztesègek Borsod-Abaúj_Zemplèn megyèben az 1960-as èvektől napjainkig KSH Miskolci Igazgatosaga Miskolc, 2005. július 22.
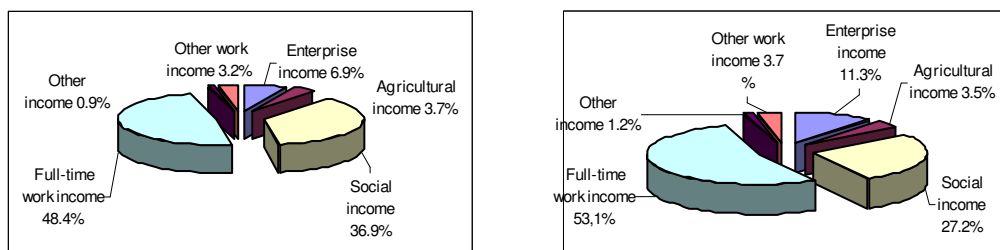
Figures 4-5. **Distribution of per capita gross income in the region and in the country**
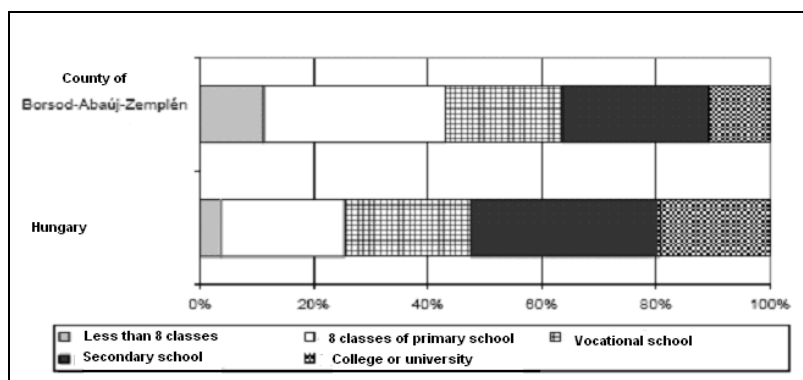*Source:* Szabó, 2004

Figure 6. **Distribution of women giving birth according to schooling 2003**
Source: KSH, 2005.

The dismissals following the worst in 1991 and the stagnation of the long-term unemployed also undermined the health condition of the population. It is at least probable that being made redundant played a significant role in the deaths originating from cardiovascular disorders, which continue to appear as the leading cause of death, followed by malignant tumours.

Human development index

The above can provide an explanation also for the facts that the HDI index developed to measure welfare in the region lags well behind the national values, which have deteriorated in national terms as well in the past years. In 1992 the HDI was 0.863 for Hungary, and in 1995 it was 0.836 (Source: *UNDP Human Development Reports, 1992 and 1995),* and according to data from other sources in 1999 and 2002 it was 0.81 and 0.79, respectively.

Table 2. **Development of human development index (HDI) in Northern Hungary in 1999**

County/region	Population (thousands)	HDI* (99)	Life expectancy	Qualification index	GDP/inhabi-tant (PPP/USD)
County of BAZ	730	0.788	69.6	75.2	7200
County of Heves	323	0.800	70.8	75.4	7700
County of Nógrád	217	0.776	70.2	71.2	5900
Northern Hungary	1269	0.790			

**The HDI value of the region is the average of county values weighted by population numbers
Source: Kocziszky, 2004

Table 3. **Development of human development index (HDI) in Hungary in 2002**

Region	Per capita GDP	Index[1]	Life expectancy(year)[2]	Index [2]	School-ing (%)[3]	Index[3]	HDI
Central Hungary	1,997	0.88	72.09	0.78	51.7	0.52	0.709
Western Dunántúl	1,494	0.84	73.32	0.79	37.4	0.37	0.666
Central Dunántúl	1,318	0.81	71.76	0.78	35.9	0.36	0.651
Southern Dunántúl	982	0.77	71.03	0.77	33.7	0.34	0.623
Southern Alföld	943	0.76	71.37	0.77	33.5	0.34	0.622
Northern Hungary	847	0.74	70.90	0.77	35.0	0.35	0.618
Southern Alföld	832	0.74	70.86	0.76	32.6	0.33	0.609

[1] Per capita GDP (thousand HUF), Source: A bruttó hazai termék (GDP) területi megoszlása 2002-ben. KSH Budapest, 2003.
[2] Average life expectancy at birth (years), Source: Demography Yearbook 2002.
[3] Number of those aged 18 years and over who completed year 12 of secondary school (as percentage of those of the relevant age), *Source: Népszámlálás 2001.2. Részletes adatok.*
Source: Regional statistics yearbooks of KSH, Kocziszky, 2004[20].

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[20] Kocziszky, György: Az Észak-magyarországi régió szakképzés-fejlesztési stratégiája. Kutatási jelentés. Miskolc, 2004.

Table 4. **Development of social indicators in 1993-2004**

Social indicators	1991	1994	1995	2000	2001	2002	2003	Development index 2004/1994 (%)
Unemployment (%)	13,1	16	18,5	11,7	9,4	10,5	11,5	71
Deaths from malignant tumours	2353	2356	2317	2414	2281	2323	2379	100.9
Cardiovascular disorders	5388	5346	5258	4997	5177	5122	5081	95
Registered unemployed	50757	55036	56351	56359	49964	53758	53550	97
Housing		277531	278460	278966**	279776	280432	281373	101.3
Number of physicians		2144	2179		1745		1770	82.5
Hospital beds	6747	6563	6047	5505	5370	5415	5400	82.2
Full-time in education		159071	159599	156500	153600	152179		95
Aggregate index								**90.5**

According to the above indicators, there has been no social progress or development, even if some of the indicators stagnated.

Situation of and changes in the environmental conditions

Table 4. **Air pollution index for Northern Hungary in 2003**

Settlement	Air pollution index			Evaluation by polluting component with the highest index
	SO₂	NO₂	Sedimentary dust	
Environmental Agency for Northern Hungary				
Bükkszentkereszt	excellent (1)	excellent (1)	good (2)	good (2)
Eger	excellent (1)	good (2)	good (2)	good (2)
Farkaslyuk	excellent (1)	excellent (1)	excellent (1)	excellent (1)
Gyöngyös	excellent (1)	good (2)	good (2)	good (2)
Kazincbarcika	excellent (1)	good (2)	good (2)	good (2)
Mátravidéki Power plant	excellent (1)	excellent (1)	good (2)	good (2)
Miskolc	excellent (1)	good (2)	good (2)	good (2)

			excellent (1)	excellent (1)
Oszlár	*	*		
Ózd	excellent (1)	good (2)	good (2)	good (2)
Sajószentpéter	*	*	good (2)	good (2)
Szirmabesenyő	*	*	good (2)	good (2)
Tiszaújváros	excellent (1)	excellent (1)	good (2)	good (2)

Source: Értékelés a 17/2001. (VIII. 3.) KÖM Rendeletben előírt 75%-os adatrendelkezésre állás figyelembevételével, települések szerint

The changes in air pollution can be traced back to two causes. On the one hand, to the decline in industrial production starting in 1985, which reached its lowest in 1993-ban, on the other, it is also related to technological developments. The general state of the quality of air can be attributed to a decrease in the emissions of industrial plants, but emissions are still considerable.

A similar improvement took place in waste and sewage emission as well. It is difficult to judge to what extent these positive changes result from a change in technology, environmental development or increase in environmental consciousness, for the data contents of statistics are not coherent. It is, however, a fact that there has been an increase in the number of companies having a certificate of an environment-conscious management system.

The above changes may provide room for sustainability efforts as well. The level of economic development, potential, absorption capacity for operating capital of the region represent namely one of the most important factors in the implementation of the sustainability objectives.

It should, however, be noted that the few years preceding the structural changes completed by the late 1990s gave a deceptive image of the county: its environmental indicators – due to the termination of the previous heavy industry activities – showed a clear improvement. This is reflected also in the statistics on the development of the production of hazardous waste and the pollutant emission of industrial plants (See Tables 5 and 6).

Table 5. **Production of hazardous waste in the county of BAZ (1996-2003)**

Year	Hazardous waste (kg)
1996	293 869 388
1997	694 406 993
1998	810 259 728
1999	470 105 306
2000	151 224 593
2001	185 721 343
2002	51 442 338
2003	49 577 346

Source: HIR – Hulladék Információs Rendszer, KvVM

Table 6. **Pollutant emission of industrial plants**

Company	Amount of pollutant kg/year					
	Sulphur dioxide	**Carbon monoxide**	**Nitrogen-oxides**	*Solid*	**Organic**	
Borsodi Energetikai Kft	25,015,185	119,524	1,479,081	1,950,147		
AES Tisza Erőmű Rt	27,893,567	306,035	2,063,034	1,018,787		
AES Tisza Erőmű Rt	13,960,455	336,822	3,528,013	1,139,777		
BorsodChem Rt		1,136,377	15,578	28,997	714,637	670
Tiszai Vegyi Kombinát Rt	115087	45,476	556,517	10,842	3,618	
Diósgyőri Acélművek Ipari és Kereskedelmi Rt	113	715,615	24,570	46,909		160
PANNONCEM Cementipari Rt	29980	190,281	76,6038	29,527		
Zeotrade Bányászati és Feldolgozó Kft	4274	23,522	1,829	81,730		
MOL Rt. Tiszai Finomító	927,170	59,343	68,030	8,219		
Szerencsi Cukorgyár Rt	238,840	104,803	81,256	22,510		
Északmagyar Tégla-ipari Rt	6404	44,082	18,458	2,306		
Source:	68,191,075	3,081,880	8,602,404	4,339,751	718,256	830

Source: BAZ megye környezetvédelmi helyzete, 2003

The more moderate environmental pollution diverted attention from the fact that restructuring and the decline in industrial output are responsible for it, and that on completion of the restructuring process, the real environmental risks and conflicts will reappear (See Borsod-Abaúj-Zemplén megye legnagyobb hulladéktermelői, 1996/1998.).

Table 7. **Largest waste producers in the county of Borsod-Abaúj-Zemplén**

Data supplier	Hazardous waste (kg)	Data supplier	Hazardous waste (kg)
1996		*1998*	
Aes Borsodi Energetikai Termelő És Szolgáltató Kft.	110,477,557	Aes-Tisza Erőmű Rt.	440,571,564
Aes-Tisza Erőmű Rt	104,347,306	Aes Borsodi Energetikai Termelő és Szolgáltató Kft.	281,511,309
Borsodchem Rt.	31,061,210	Borsodchem Rt.	31,946,858
Csavar- és Húzottáru Rt.	9,521,732	Tiszai Vegyi Kombinát Rt /Tvk Rt/	15,967,627
MOL Magyar Olaj- és Gázipari Rt.	7,789,382	Sajó Hulladék- és Szennyvízkezelő Kft.	11,780,767
Framochem Francia-Magyar Finomkémiai Kft.	6,852,580	MOL Magyar Olaj- és Gázipari Rt.	7,663,702
Magyar Államvasutak Részvénytársaság	4,719,710	Framochem Francia-Magyar Finomkémiai Kft.	4,156,640
Sajó Hulladék- és Szennyvízkezelő Kft.	3,286,000	Transmet Vegyipari Kft.	2,270,850
OAM Ózdi Acélművek Kft.	2,106,523	Dam Diósgyőr Diósgyőri Acélművek Ipari És Kereskedelmi Rt.	1,653,931

Source: HIR, Hulladék Információs Rendszer, KvVM

Investigation of public utilities

It can be interpreted as an achievement that by 2000 all the settlements of the county had been connected to utility water supply and by now ***more than 85 % of households have good quality mains drinking water.*** On the other hand, in spite of the developments, 30 % of the settlements do not have a sewerage system even at present, and the rate of households connected to the sewerage utilities is only 50 %. The length of sewer pipes for 1 km of drinking water main pipes is 400 m. In spite of this, it is an interesting data that the amount of water supplied and the amount of sewage water disposed of have been nearly identical since 2002, which can be explained by the fact that the meter in the sewage facility measures the amounts of rainwater and driver wells as well.
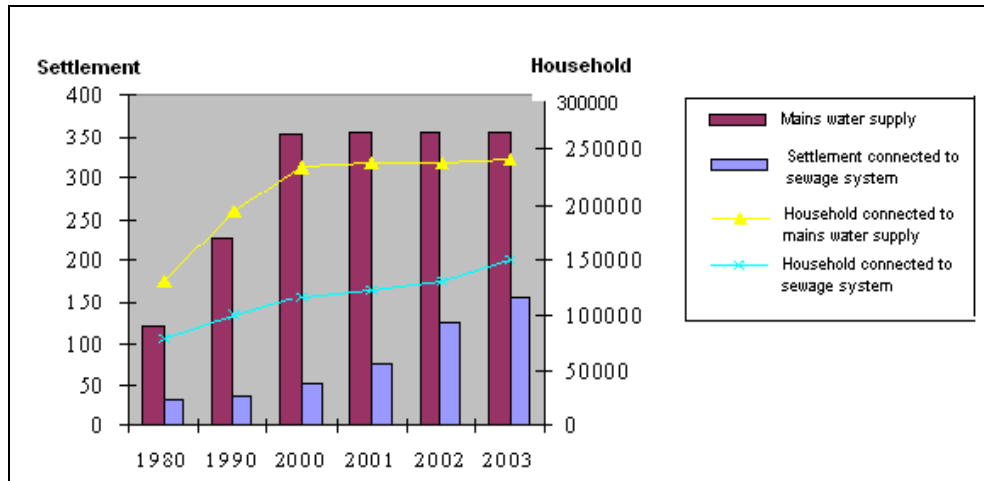
Figure 7. **Water supply and sewage**
Source: KSH Statistics Yearbooks for the county of BAZ
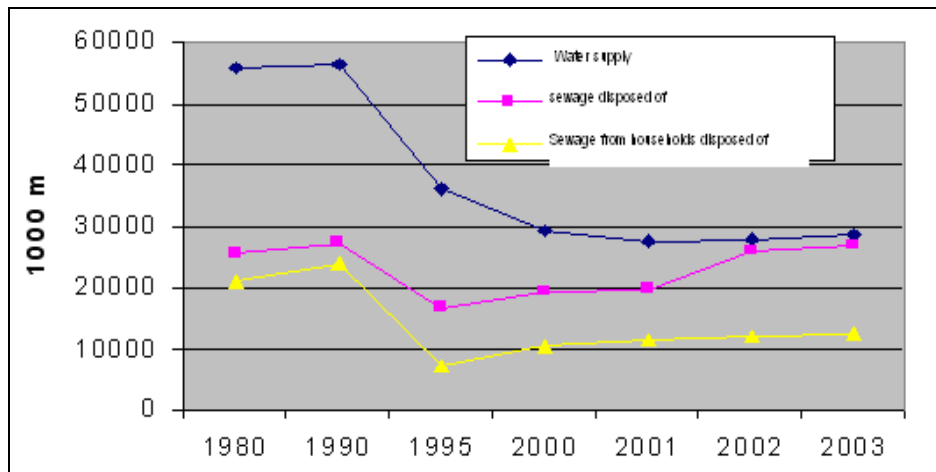
Figure 8. **Water supply and sewage disposal**
Source: KSH Statistics Yearbooks for the county of BAZ

The electricity supply reaches every household in the county. Electricity consumption had dramatically decreased by 1995 as compared to the 1980s, which is closely related to the decline in industrial production. In the following years there is also some decrease, but it is due to the improvement in energy efficiency. At the same time the dynamic increase in gas consumption is also characteristic, which results from the more environmentally friendly energy supply of households and industrial facilities.

Figure 9. **Changes in electricity and gas supply in the county**
Source: KSH Statistics Yearbooks for the county of BAZ

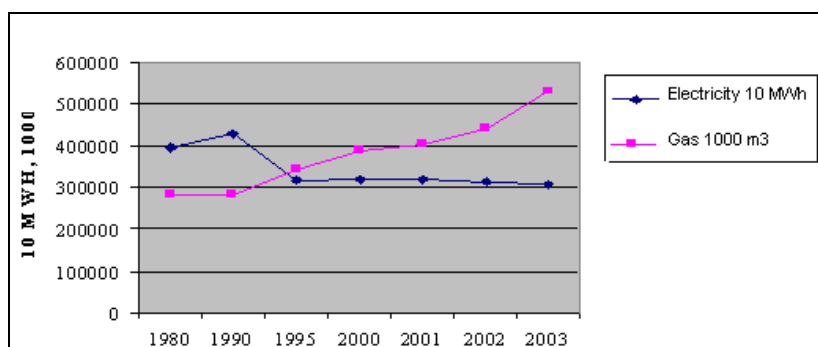The number of settlements and households connected to waste collection has also dynamically increased in recent years. The amount of waste disposed of increases, however, the rate of the increase of the amounts of waste has slightly decreased. It is a step forward that after the illegal waste deposits have been mapped, the county waste management project has been launched and selective waste collection has been introduced.

Use of chemicals in agriculture

Due to the ecological features of the county the rate of forests and nature conservation areas is high, and the amount of chemicals used in agriculture is low[21].

The amount of artificial fertilisers used in 1980, measured in active agent, was 217 kg, 10 years later it was 176 kg, and in 2000 was only 126 kg. From an environmental aspect it is favourable, for the artificial fertilisers will not endanger the quality of water, however, this amount will endanger the replacement of the producing capacity of the soil – the quality of soil as natural resource -, particularly when the use of organic fertilisers has also declined. But at the same time it creates a favourable condition for eco-farming. This is shown by the fact that an organic market was also opened in the county seat, Miskolc, in 2005.

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[21] Nagy, Dezső: Környezeti konfliktusok és a környezet állapota Borsod-Abaúj-Zemplén megyében.
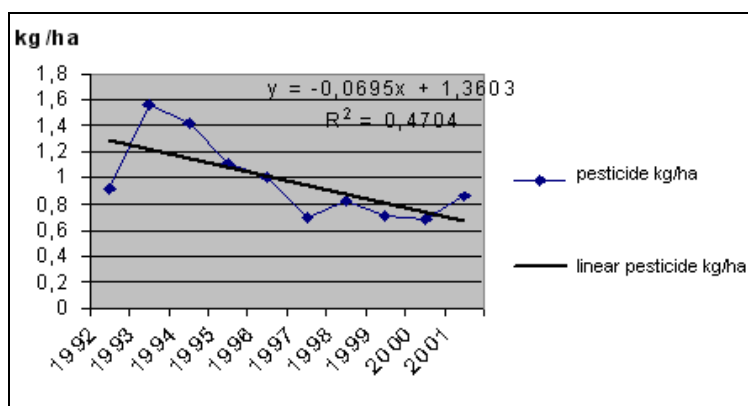
Figure 10. **Use of pesticides (kg/ha)**
Source: FAOSTAT, compiled by the author
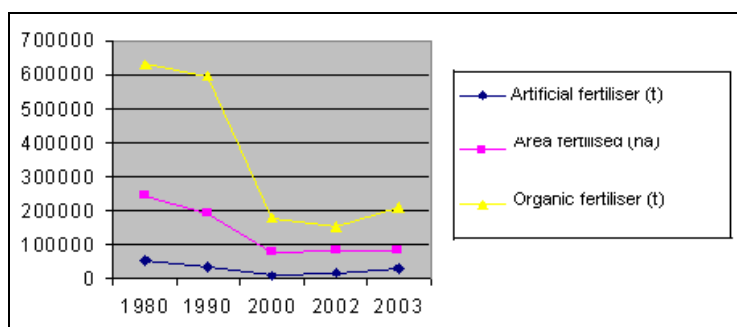
Figure 11. **Use of organic and artificial fertilisers in the county of BAZ in 1980-2003**
Source: Statistics Yearbook of the county of BAZ, 2003

The decreasing trend of the use of pesticides appears to be favourable from an environmental aspect: as compared to the early 1990s, there is a decrease of 40 % in fungicides and bactericides, and a decrease of 45 % in herbicides. In insecticides the decrease is close to 70 %. Although it is impossible to establish a clear significance between the decrease in the use of pesticides and average yields due to a lack of accurate data, the relation can be supposed to exist. In addition we have to count with the fact that the decrease in the use of fungicides implies the risk of an increase in mycotic contaminations.

According to a FAO database, the largest amounts of triazine (621 Mt), a phenoxy hormone (511 Mt), and other pesticides (1200 Mt), dithiocarbamates (346 Mt), and benzimidazole (122 Mt) were used in 2001. The largest decline was experienced in root germicides, for the 700 million tons used in 1994 decreased to 20 million tons in 2001. (These pesticides are thallium sulphate, arsenic, warfarin and strychnine in terms of their chemical composition).

Improving environmental compliance

The completion of the restructuring of the economy and of primary privatisation, including the privatisation of the chemical industry that was the first to take place, and then the subsequent modernisation all exerted their influence in the direction of the companies operating in the county to improve their environmental compliance. Naturally, there were several underlying causes of the improvement in efficiency entailed by the moderation of the environmental effects, such as the more stringent environmental regulations related to the EU accession, the increasing standardisation through the mediation of the Hungarian Standards Agency, the increasing competition, changes in consumer attitudes, as well as the increasing presence of environmental consultancy companies in the region. The environmental consciousness of the companies in the county (under compulsion by legislation, market or communications) is proved by the fact that two local companies were the first in Hungary to obtain a certificate of their management systems according to ISO Standard 14001 in 1996, and that currently the county of BAZ is ranked 2 according to the number of companies with ISO certificates among the counties of the country.
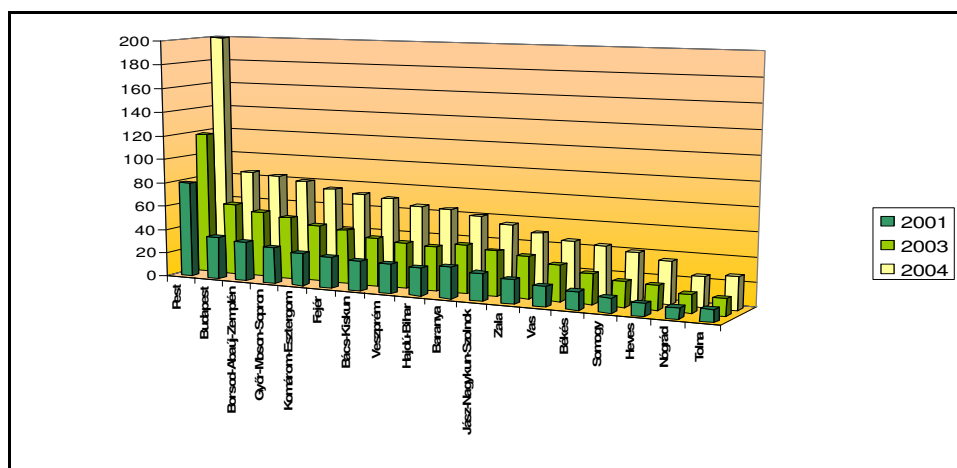
Figure 12. **Number of companies with ISO 14001 certificates in the counties**
Source: KÖVET-Inem Hungária: Zölden és nyereségesen, 2005

Regarding the EMAS (Environmental Management and Attestation System) related to location and financially supported by the European Union, although it is not widely spread in Hungary yet, the situation is similar. Among the institutions of public administration, the Municipality of Miskolc was the first to introduce the voluntary system in Hungary.

The justification of the environmental approach considered to have increasing importance in the county is also proved by the fact that six out of the 36 (voluntary) environmental and sustainability reports registered by KÖVET-Inem Hungária since 1998

(nearly one fifth of all the reports) originate in the county, while the region of Borsod has only 4.8 % of the 1.3 million economic organisations registered nationally[22].

Table 9. **Investigation of environmental indicators**

	1991	1994	1995	2000	2001	2002	2003	2003/1994 (%)
Electricity consumption /household, kWh	2108	1993	2018	1855	1771	1732	1828	86.7
Consumption of mains gas /household, m^3	981	1179	1269	1244	1248	1366	1475	150
Number of households connected to mains water supply	178217	188709	194688	234784	237059	238234	241326	127
Number of households connected to sewage system	102404	104420	106060	115755	123236	131066	149793	143
Water supplied, 1000 m^3	47938	39331	36132	29144	27617	27926	28422	72
Sewage disposed of, 1000 m^3	37592	43000	26100	19297	19836	25802	26826	62
Number of settlements in waste collection	95	171	176	270	282	302	357	208
Waste transported 1000 m^3	1186	1420	1449	257	346	94***	74***	
Index							80	**121**

- Data for 1996, Source: KSH Statistics Yearbook for the county of BAZ, 1996. 2003.
- **average for the year 1996-2000
- ***in tons

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[22] Source: Statisztikai tájékoztató, Borsod-Abaúj-Zemplén megye, 2005/2, Miskolc, 2005. szeptember 13.
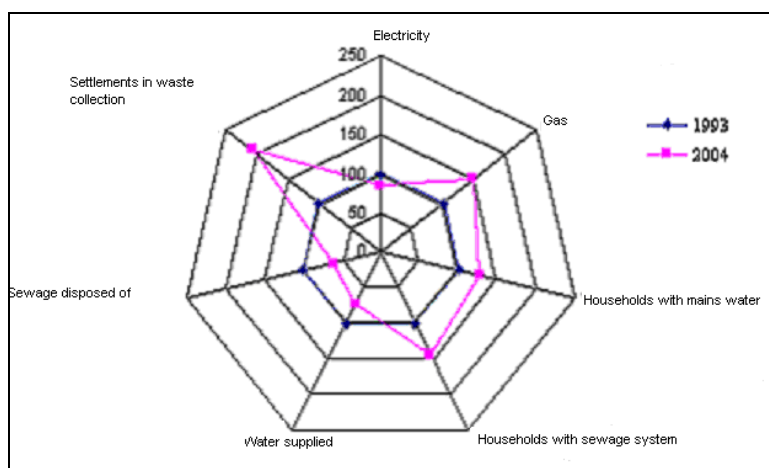
Figure 13. **Environmental indicators**

The changes shown by environmental indicators are favourable. The decrease in the use of energy and water/sewage shows, on the one hand, a more efficient use, on the other, it can be accounted for by the decline in industrial production. The increase in the number of households connected to the sewage system serves as a protection of water quality, while the extension of waste collection protects the natural environment.

Regional potentials and sustainability

Examining the regional potentials of the county of B.A.Z., two conspicuous features can be highlighted:
- this area connects the Hungarian Plain (Alföld) with the highland areas that used to belong to Hungary
- it also has a connecting role (umbilical cord) between North-Eastern Hungary, the Tokaj region and the capital.

We know several research works that point out the duality, which is known both as the major conflict in Borsod and as a consequence of the above potentials: it is the unique treasures of the natural environment preserved due to the vicinity of the border areas, the Bükk mountains and Zemplén area, and the heritage of the pre-change-of-regime industrial areas standing in enormous conflict with them.

Regional environmental SWOT analysis – opportunities as shown by the potentials[23]

Regarding the potentials of the region, it is possible to determine what opportunities the region has on its way to sustainable development.

Strengths:
- varied environmental potentials, a high-degree of bio-diversity,
- well-preserved natural environment (Bükk mountains, Tokaj region, border areas)
- a well-operating ecological network connected to areas in Slovakia,
- unexploited natural resources,
- renewable and partially renewable local resources available (e.g. bio-mass, wood, solar energy),
- above-average rate of forests in the region,
- excellent grape-growing areas (Tokaj region),
- preference for traditional, more sustainable consumer attitude to modern behaviour models due to below-average living standards and unemployment (e.g. frequent composting in households, re-use, recycling at the end of the life of products),
- existing regional developments in communal waste management (e.g. Sajó-Bódva Völgyi Projekt with the involvement of 116 villages)[24]
- organic culture built on local potentials in rural communities,
- traditional knowledge in farming and some handicrafts,
- relatively low use of chemicals in agriculture,
- free agricultural land capacity,
- traditional species in livestock farming and cultivation.

Weaknesses:
- low level of environmental awareness,
- low level of general and environmental information (including global and local environmental problems),
- problem of appreciating natural assets,
- generally low level of efficiency (in households, agriculture, industry, transportations, etc.)
- low utilisation of renewable energy, weak utilisation of the natural environment (typical on a national level),

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[23] Based on: Környezeti konfliktusok és a környezet állapota Borsod-Abaúj-Zemplén megyében, ed.: Nagy, Dezső, BAZ megyei Önkormányzat hivatala, Miskolc, 2003. ill. Gyulai, Iván: ROP előzetes véleményezés – A régió környezeti sajátosságai (kézirat), 2002.

[24] The objective of the project is to introduce selective waste collection, create the instrument system, perform the related information activities, establish regional waste processing, selecting, reloading, and deposit facilities in the form of an association of local governments in the 116 villages that have joined with the involvement of 230,000 residents, with consideration of environmental aspects. In addition, the project includes the re-cultivation of the deposits endangering the Aggtelek National Park and decreasing the amount and rate of organic waste. The information page of the project is: www.sajobodva.hu

- inappropriate treatment of sewage,
- there has been no thorough stock taking of environmental hazards (e.g.. survey of soil and water pollution),
- waste management problem: lack of harmonised county concept of waste management, the technical conditions of deposits, rudimentary background industry.

Opportunities:
- obtaining regional and environmental development funding from the Union,
- the Habitat principle of the Union may strengthen nature conservation in the region in terms of preserving habitats,
- increased weight in the changing preferences of agricultural subsidies on investments with environmental development objectives, with special regard to periphery regions,
- opportunities for establishing organic farms, and a changeover,
- development of tourism, development of eco-tourism destinations,
- obtaining targeted funding arising from the use of renewable energy,
- implementing integrated landscape management,
- combining agricultural and nature conservation objectives (NATURA 2000),
- changing attitudes through efficient, high-standard education and training and human resource development (adapting to new economic-social-ecological objectives).

Threats:
- a persisting low level of willingness to submit proposals,
- difficulty in creating the own resources required for investments,
- missing out on funding and subsidies due to the limitation of access to information, under-information, rigidity,
- giving up on tender and other development opportunities due to the complicatedness of procedure and bureaucracy,
- disappearance of regional features and traditions as a result of the inflow of international working capital,
- low degree of utilisation of the opportunities due to the low level of adaptation and learning capability.

Institutional development for sustainability

Following the restructuring already mentioned, when the frightening environmental figures of 1998 were known, the Environmental and Regional Development Kht. of the county of BAZ made its first survey on the environmental conditions and conflicts of the region, for it was impossible to manage the problems without having a realistic picture. Then, joining the National Environment Protection Program, they launched the first environmental project in the county in 1999.

The analyses of the report published in 1999 and providing the foundations of the project were further deepened in 2002-03 regarding air, surface and underground waters, soil, bio-diversity, the countryside, environmental safety, waste, sewage waters, noise, human health, settlements and man-made environment. It can be attributed to the results of the

investigation taking account of states and trends among other things that organic organisational changes were started in the county:

In addition to the environmental protection authority, in the local government of the county a counsellor for environmental protection was appointed as responsible for environmental affairs, 2000 the local government of the county assembly established the County Council for Environmental Protection, with the main responsibilities for supporting and decision making in environmental and development issues concerning the region.

In 2001 work was started on elaborating the System of Environmental Performance Qualification of the County in order to evaluate and encourage the environmental performance of the local governments of the settlements.

In the local governments of all the larger towns a position was created responsible for environmental affairs in spite of the fact that the local governments in most of the settlements do not have enough personnel, infrastructure or funds. (This raises the problem of how practical project implementation can be effected under such conditions, of whether integrated implementation of the developments can be achieved, and what emphasis the harmonic management of the issue of the environment and development can have in small villages and peripheries.)

The availability and accessibility of information on the environment is guaranteed by legislation, in spite of that, it is often difficult to gain access to environmental data at present, and in many cases only partial access can be achieved. It is a further problem that in lack of resources and funding, neither the local governments, nor the other regional agencies prepare regional statistics; the main source of information is the county agency – but naturally only in its capacity as an authority: regarding data and statistics on environmental planning in the settlement, and those available on a national level. In addition, the Institute of Ecology, belonging to the network of environmental consulting offices, can provide environmental data, but not always without difficulties.

Raising awareness of the environment
Environmental protection organisations have been active in the county since 1992. The *Institute of Ecology for Sustainable Development Foundation* plays a decisive role in this activity. This Institute prepared the environmental program of the county in 1997 – 1999, and in the course of the work they performed wide-ranging data collection and processing. Based on the information obtained from the data collected and their processing, a long-term strategy was elaborated to explore the problems existing in the county and to solve them in the spirit of sustainable development.

The activities performed in the framework of CEEWEB are internationally acknowledged. The project provided an opportunity for creating the foundations for the nature and environmental parts of a county spatial information system. CEEWEB (Central and East European Working Group for the Enhancement of Biodiversity) is today the only network operating in Central and Eastern Europe involved in the conservation of biodiversity that has been created and is maintained by the intention of non-governmental organisations in Central and Eastern Europe.

The social factor of the implementation of sustainability – education as an instrument of raising awareness and social integration

The importance of education is to be stressed not only because the United Nations declared the period 2005-2014 to be 'The decade of education in the service of sustainable development' or simply because UNECE, with the involvement of the member states, prepared the Strategy of Education for Sustainability as early as 2004, which determines the schedule and guidelines of implementation for the member states.

In 2004 the Hungarian Ministry of Education published its **'Medium-term Education Development Strategy',** in which it prescribes as priorities the protection of the natural environment and the improvement of the quality of human life concentrating on the backward regions.

The expert opinions on the National Development Policy Concept prepared in July 2005[25] show a clear direction: instead of development with a forced schedule, a holistic approach is needed, which determines the directions with consideration of the regional economic, human geographic, and social(!) potentials and development opportunities. E.g.: it does not neglect the high rate of the Roma population in a region, and thus the weight of the quality of life they represent, or the conditions for creating jobs, or the openness of the local population towards further education. Social polarisation does, in many cases, hinder the achievement of development objectives more than the economic environment does.

Education plays a **key role** in this region: its role is – in addition to raising awareness – nothing but harmonise (as one of the most efficient bottom-up instruments), for the purpose of achieving the sustainability objectives, the processes taking place at strategic and operative levels, be involved in their dialogues, and promote social integration for the sake of harmonic development. (Naturally, all this supposes the innovative ability of the regional system of education and the inherent human resource development opportunities.)

The county of BAZ has a further feature in that due to the backward situation of its economy and the restricted migration opportunities, the appreciation of those involved in education and through this their commitment is much higher. This is proved by the research done in several counties by OKI, which examined the innovative opportunities of general education:

"Economic depression, on the other hand, retains the persons living in the area and involved in education, which is further strengthened by the smaller chances of migration, thus the participants of education who want to act strive to improve their positions remaining within the system or on their particular place in the system."[26]

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[25] An examination of the National Development Policy Concept from the aspects of sustainability and nature conservation. Background material by experts, prepared by: Dr. Iván Gyulai, Gusztáv Vágvölgyi, Dr. Zsolt Szilvácsku, Magyar Természetvédők Szövetsége, July 2005.

[26] Source: A közoktatás területi rendszerének innovációképessége, In: Balázs, Éva: Közoktatás és regionális fejlődés, 6. fejezet, OKI, 2005.

According to the results of the research, the innovation of the general education of the county of Borsod-Abaúj-Zemplén is currently average, on the other hand, through the commitment and openness of the heads of the educational institutions, it offers opportunities for further developments (this is also suggested by the fact that e.g. pl. one of the driving forces of the Dutch-Hungarian manager training project initiated by Amsterdam is the county of Borsod-Abaúj-Zemplén) [8], and the county has proved to be initiative regarding the social integration projects as well.[27]

Twenty-twenty-five per cent of the Roma population of the country live in the region, which exerts a strong influence, while the national average is only 10.8 %. [28]. 136 out of the 355 settlements of the county have a population of fewer than 500 people. Unemployment is highest in the small region of Encs with 33.8%, and 10 % of the number of registered unemployed have not finished primary school with its 8 classes. The average number of classes completed is 7.8. Approximately 20,000 people have dropped out of the labour market completely, they have no connections whatsoever with the employment agencies.

Shaping attitudes and environmental education

Environmental education as an innovative educational activity is a central instrument of the implementation of sustainable development. Although this idea is not new today, it is still surprising that the research works of the National Institute of General Education show that it is exactly the experts of education that do not regard promoting sustainable development as a long-term pedagogic objective. The national survey of institutions[29] reports namely that in the schools surveyed the promotion of sustainable development is not a realistic pedagogic aspect in the course of the establishment of environmental education. None of the educational institutions surveyed in the county of BAZ have stated that they formulate supporting sustainable development as an educational objective, instead, the development of environment-conscious thinking, the transfer of knowledge and the related education into an active citizen appear as outstanding causes.

Iván Gyulai (Institute of Ecology for Sustainable Development Foundation) writes the following about the importance of environmental education in the situation analysis of the region of Borsod:

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[27] "Regarding the numbers of participants of projects supporting the social integration of the Roma by means of education and enlisting innovative forces the representation of the region of Northern Hungary is the largest (32.7% of all projects), this region receives most of the subsidies, although it is of lower proportions than the number of projects (22.4%). Within the region, the population of the county of Borsod-Abaúj-Zemplén was mostly involved in the projects." Source: A közoktatás területi rendszerének innovációképessége, In: Balázs, Éva: Közoktatás és regionális fejlődés, 6. fejezet, OKI, 2005.

[28] Improving the labour market situation of the Roma population of the Hernád valley Equal HU 0101-01/3 The statistical figures are based on the publications of KSH (Central Statistics Office - reports on years 2000 and 2001); Kertesi, Gábor – Kézdi, Gábor: The Roma population in Hungary (Bp., Socio-typo, 1998), publications of the Employment Centre of BAZ County, as well as information provided by local Roma organizations, http://www.autonomia.hu/Equal/ehelyszinen.html

[29] Havas, P., Széplaki, N., Varga, A: A környezeti nevelés hazai gyakorlata, OKI, 2003.

"In the strongly polarised, rising consumer society of the county following the change of regime, the environmental consciousness remained underdeveloped. Information about the world, about sustainable development, the interdependence of the issues of environment and development is of a low level. People do not appreciate the relatively good state of their natural environment, and do not understand the connection between the increase in consumption and the probable deterioration of the environment.
Social and livelihood issues push the environmental aspects into the background."….
"People are not aware of the environmental problems arising in relation to their consumption and use of the products, environment and the quality of life hardly represent a point in shopping."[30]

The above description – although it is topical on a national level as well – is particularly true in the county of Borsod-Abaúj-Zemplén. However, it may be a guarantee of teaching and learning that the comprehensiveness and high standards of Hungarian education are also characteristic of the county, formal support of the projects can be achieved also here, and experts on education policy are confident that there are chances for gradually shaping attitudes and awareness:

"The legal environment is supportive towards learning in the interest of sustainable development, the existing initiatives and projects are successful and those involved are committed. The involvement of civil and professional organisations in formal and informal education is outstanding and successful."[31]

In contrast, however, it has to be stated that the following have to be fought with (not only in the region): the education system is compartmentalised and often strengthens social differences and increases segregation. Furthermore, it is also true that the willingness to learn of the adult population living here and their adaptation skills are not strong enough. Lifelong learning sounds like an empty concept here. (However, formal and informal adult training and re-training and raising awareness could play a major role in overcoming the above-average rate of unemployment, 10-11 % at present.)

Thus the regional implementation of the education strategy in the interest of sustainable development faces a great number of challenges, but it can be established that several successful projects are in operation both in general education and in higher education.

Educational aspects of government-initiated projects with sustainability objectives in the region:

- In the **Foundation Program of Kindergarten Education** and in the National Basic Curriculum environmental education, which is one of the pillars of the pedagogy of sustainability, is a compulsory task for all teachers in general education.
- Successful adoption of the compulsory elements of the **National Basic Curriculum** and of the **Middle-term General Education Development Strategy** into environmental education.

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[30] Source: Gyulai, I: ROP előzetes véleményezés – A régió környezeti sajátosságai (kézirat), 2002.
[31] Source: Tanulás és tanítás a fenntartható fejlődés érdekében - részstratégia, 2. változat, Készítette: Czippán K., Könczey, R., Varga, A.

- **Environmental Education Workshop** in the region of Northern Hungary (a project of the Project Directorate of Environmental Education and Communications) for experts and heads of institutions with the objective of strategy development.
- **In the Operative Program of Human Resource Development** improving the infrastructure conditions of training and education for the purpose of decreasing unemployment in the region.
- One of the central objectives of the **Regional Operative Program** is to improve the human resources and knowledge of the region and to improve environmental thinking.
- One of the objectives of the **Environmental Program of the county of BAZ** is to promote a change in attitude of the people, the instrument of which is training and education. The objectives are implemented on the basis of annual planning and allocation of funds.

Successful general education initiatives – Forest School Program (since 2000)
The organisation of forest school is successful in the region (11 institutions are involved on a permanent basis), but the distribution of the settlements showing a demand for the initiative shows very big differences:
- The seat of the county (Miskolc) 17 %
- Other towns 26 %
- villages (with a population over 2500) 9 %
- villages (with a population below 2500) 47 %

It can be seen that the schools in the smaller villages are more open towards organising forest schools. Overcoming the lower interest seen in towns and larger settlements is a strategic task.

Demand for organising forest schools according to type of school
According to the distribution based on type of school, the forest schools held in the region are mostly taken advantage of by pupils in classes 1-8 of primary school, with the different types of secondary school presenting the biggest challenge:
- lower primary schools (classes 1-4) 10.5 %
- primary schools (classes 1-8) 71.7 %
- secondary grammar schools 4.7 %
- vocational training schools 9.3 %
- comprehensive schools 13.2 %

It can be established from the statistics that the program has been appearing as a regular activity in 35% of the schools for several years, and 15% of the schools began developing the activity as recently as 2003-2004. The county has about 50 venues[32] suitable for forest school activities, which is a unique incidence and thus opportunity in the country.

Successful training-education projects in higher education

Since it is not general education, and the compulsory feature does not hold, in higher education it is much more difficult to accomplish environmental education efficiently. Yet

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[32] Source: Forest school database, www.omai.hu/download.php?ctag=download&docID=113

the University of Miskolc operating in the region (and counting as a representative institution) is in a very good situation as regards its environmental education projects.

- The engineering faculties of the University look back on several decades of academic programs in environmental engineering and offering environmental courses.

- Recently the programs in humanities, law and economics have also started to offer environmental courses. "At the Faculty of Economics of the University of Miskolc all types of academic programs (undergraduate/part-time/postgraduate/MBA/PhD) include environmental courses. In the period examined (2000-2004) a total of 16 courses were offered at the Faculty. Environmental economics is a selective course in full-time and part-time programs, and so is environmental management in the supplementary part-time program. In addition, postgraduate programs offer a relatively wide choice of courses in their curricula. The topic of the environment also appears in the theses. A total of 75 undergraduate theses, 2 PhD theses and 4 papers for the Students' Scientific Societies have been written. The last ones were entered for the national competition. Research topics also include environmental protection, i.e. the discipline of environmental sciences."[33]

- The independent *Institute of Environmental Sciences* of the University is involved in *offering courses in physical geography and ecology, writing environmental impact studies, surveys of regional development and regional potentials.*

- A typically good example for the sustainability of **the cooperation between the University and companies** is the **Miskolc Digital Community Centre** operating since 2002. The basic motivation for the more than 40 million HUF investment by Hewlett-Packard Hungary was to make distance education programs available through supporting adult and higher education, and thus to increase the ratio of highly qualified labour in the region. The project was extended in 2004 to cover general education and courses of civil organisations; currently with the objectives of *ensuring the freedom of access to information, environmental education (Enviotréner Program) and reducing regional unemployment.* The initiative was also welcomed by the Ministry for Environmental Protection and Water Management.[34]

- The *'Miskolc Protestant Open University for Sustainability'* has been operating successfully organised by the Ecumenical Pastor's Office of the University of Miskolc

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[33] Source: Környezeti oktatás, kutatás helyzete a Miskolci Egyetem Gazdaságtudományi Karán, Dr. Szintay, István, 2005. 02.04

[34] "The Digital Community Centre, which serves primarily the purposes of environmental education and research, was inaugurated in December 2002. So far it has been mostly used by the academic staff and students of the University, but last year its use was widened: we established relations with the county Association of Environmental Educators, thus environmental education in primary schools is involved in the Centre. In addition, we have launched a program of environmental engineering assistants, which will involve secondary schools in the program, in the form of post-secondary training: accordingly, they were supplied with the appropriate hardware, where the teaching material can be passed on in electronic form from one institution to the other. This is what we would like to extend so that further schools in the region could be involved, possibly also civil organisations as well." – Interview by Dr. József Bőhm in Kossuth Rádió, 2005.03.18., 17.45.

since October 2005. The objective of the Open University is to examine the issue of sustainability from economic, social, ecologic and ethical aspects in a two-year project, to gather specialist professionals, researchers, university academic staff and students and offer opportunities for forums and workshops, thus promoting the development of the region as well.

- The sustainability workshop within the project 'Region for the Students, Students for the Region' started in 2005 strives to develop a new type of cooperation. It wishes to strengthen the connections between the University and the business sphere, and through that makes efforts to promote strengthening environmental consciousness and responsibility. The main objective is that it uses the examination of the environmental performance of the cooperating partners it promotes moving towards cleaner technologies, waste minimisation, energy rationalisation and legal compliance.

Summary

The county of Borsod-Abaúj-Zemplén is one of the most controversial regions in Hungary: despite its excellent natural and environmental potentials, its role in preserving traditional culture and its role as a umbilical cord, it is in a very difficult situation regarding the economy and social progress: its performance indicators or the indices related to sustainability and measuring human development cannot be claimed to be good. However, the positive changes in the recent period – e.g. in terms of the environmental compliance of the companies, waste emission, use of chemicals in agriculture, institutional development, programmed awareness raising and shaping attitudes in general and higher education – hold out hope. Taking advantage of the absorption capacity of the region, consciously planned development and investment creating jobs, promoting cross-border cooperation, further changes in attitude and training can be used to take successful steps towards sustainable development.

THE SITUATION OF THE TOWNS OF THE REGION OF NORTHERN HUNGARY IN THE COMPETITION AMONG HUNGARIAN TOWNS

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Abstract: The past one and a half decades have transformed the special structure of the region of Northern Hungary, changed the socio-economic weight of the settlements, their location potentials and competitiveness. The paper investigates the situation of towns in the region of Northern Hungary with a population of more than 10,000 with factor analysis. With the exception of the towns of Rétság, Eger and Tiszaújváros, the rankings of the towns of the region are not very promising, and the seats of the two counties are also included here: Miskolc and Salgótarján. Analysing the regional rankings it can be seen that the two most developed towns of the region are Eger and Tiszaújváros. It can be established that in the backward regions the main problem is constituted in many cases by the unfavourable economic structure and not by the low level of innovation or by the underdeveloped infrastructure.

The past one and a half decades have transformed the special structure of the region of Northern Hungary, changed the socio-economic weight of the settlements, their location potentials and competitiveness. Some towns of the region have lost some of their importance (e.g.: one-time centres of heavy industry and mining), others (e.g.: tourism centres) have strengthened their positions. The paper investigates the situation of towns in the region of Northern Hungary with a population of more than 10,000 (according to figures of the Central Statistics Office - KSH – of 1 January 2000).

Figure 1. **Locations of the towns in the study**
Source: compiled by the author

The study covers 18 out of the 39 towns of the region /according to the situation on 31 December 2005/ (Figure 1). Due to limitations in space it was not possible to study all the towns. Their histories, demographic situations (Table 1), and social conditions show considerable differences.

The populations (number of residents) of the majority of the towns have decreased due to natural decrease and the negative migration difference in the past 15 years.

1. Table 1. **Demographic data of the towns in the region for the year 2003**

No.	Settlement name	Year of being declared a town	Number of residents at the end of the year (persons)	Domestic migration difference	Natural increase or decrease(-)
				Per 1,000 residents (persons)	
1.	Balassagyarmat	1923	17,708	6.3	-4.1
2.	Bátonyterenye	1989	14,240	-6.5	-5.7
3.	Edelény	1986	11,117	-2.2	-2.9
4.	Eger*	1900	56,458	-2.3	-2.9
5.	Gyöngyös*	1900	33,117	-2.7	-4.1
6.	Hatvan	1945	22,660	-7.2	-6.4
7.	Heves	1984	11,336	-4.4	-4.3
8.	Kazincbarcika	1954	31,914	-15.8	-0.9
9.	Mezőkövesd	1973	17,717	-2.1	-6.4
10.	Miskolc*	1900	177,809	-9.8	-4.7
11.	Ózd	1949	38,463	-5.7	-3.0
12.	Pásztó	1984	10,316	6.0	-3.1
13.	Sajószentpéter	1989	13,137	-10.8	1.9
14.	Salgótarján	1922	43,681	-12.5	-4.6
15.	Sárospatak	1968	14,293	-8.8	-5.9
16.	Sátoraljaújhely*	1900	17,759	-7.5	-4.8
17.	Szerencs	1984	10,035	-6.3	-8.4
18.	Tiszaújváros	1966	17,377	-9.8	1.0

Note: *a town in 1900

Source: KSH Gazetteer, KSH county statistics yearbooks 2003

Methodology

The past years have seen several attempts at examining the positions of Hungarian towns (e.g.: multi-dimensional scaling, Lengyel-Rechnitzer, [2000], factor analysis Molnár, [2002], dual and triadic approach to regional development, Nemes Nagy, [2004]). This paper will apply the method of factor analysis to examine the Hungarian towns, for the task can only be accomplished by examining a great number of indicators. (Narrowing the number of indicators entails the risk of losing important information, and weighting involves the risk of subjectivity. Factor analysis is suitable for concentrating the information into hypothetic, fictitious variables (factors); and presents, in the background of qualitative variables, hidden variables that can explain the greater part of the phenomenon[35].

In choosing the indicators efforts were made to present, in addition to the data of the technical, health, education and human infrastructure of the settlement under examination, the income and welfare data of the population, as well as the data of the profit and non-profit organisations of the settlement, together with figures for the management activity of the local government administration.

The indicators involved in the study were used to produce 10 factors by factor analysis, according to which the ten factors explain the original information content carried by the 43 indicators studied to an extent of 74.725%. On the basis of the values of the factors, it is possible to assign a value to each settlement, which will give the ranking of the settlement[36].

Groups of indicators:
a, administration data of the local government of the settlement;
b, service infrastructure data of the settlement;
c, infrastructure data of the housing stock of the settlement;
d, health care infrastructure data of the settlement;

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[35] In using factor analysis it is an important point that the number of observation units must exceed the number of variables; this study met this criterion, for it includes 43 indicators for 256 towns in Hungary in the calculations. The study relied on data for the years 2002 and 2003 of the T-STAR system (Regional Statistics Database System).
[36] The Kaiser-Meyer-Olkin value, which shows the suitability of the database for factor analysis, was 0.832, which is a very good result.

e, education infrastructure and demographic data of the settlement;
f, data of settlement environment and entertainment possibilities;
g, data of the economic and non-profit organisations of the settlement;
h, income and welfare data of the population of the settlement.

Findings of the study

In the calculations main component analysis was used, and in the interpretation factors with an intrinsic value higher than 1.0 were taken into account (Table 2).

Table 2. **Development of intrinsic value percentages in factor analysis**

Factor	Intrinsic value	%	Cumulative %
F_1	8.091	18.817	18.817
F_2	7.912	18.401	37.217
F_3	3.569	8.301	45.518
F_4	2.368	5.506	51.025
F_5	1.995	4.640	55.665
F_6	1.782	4.144	59.809
F_7	1.771	4.118	63.927
F_8	1.676	3.898	67.825
F_9	1.572	3.657	71.482
F_{10}	1.395	3.243	74.725

Source: calculation by the author

The ten factors explain the original information content of the 43 indicators studied to an extent of 74.725%. Following the matrix examination of the rotated factor weight, the following factors were identified during the analysis of the contents of the factors:

The factor of income-welfare-enterprises (F1) (explaining 18.817 % of the original information content) includes the following seven most important indicators:

	Factor weight
Total personal income tax/1,000 persons	0.895
• Number of passenger cars/1,000 persons	0.834
• Number of enterprises in operation/1,000 persons	0.775
• Number of tax payers/1,000 persons	0.734
• Number of private telephone main lines /1,000 persons	0.665

In the first 20 places of the ranking established on the basis of factor F1 (income – welfare – enterprises) only Gödöllő, Rétság, Eger and Tiszaújváros break the pre-eminence of the towns in Dunántúl (Table 3). It is favourable that three of them belong to the region of Northern Hungary.

Table 3. **The first 20 towns of the national ranking on the basis of the values of factor F1**

Ranking	Settlement	Factor value	Ranking	Settlement	Factor value
1	Budaörs	3.53774	11	**Rétság**	1.93272
2	Répcelak	2.88308	12	Paks	1.89028
3	Budapest	2.5575	13	Balatonfűzfő	1.85375
4	Szentendre	2.45026	14	**Eger**	1.85213
5	Százhalombatta	2.36705	15	Győr	1.78559
6	Székesfehérvár	2.29701	16	**Tiszaújváros**	1.76539
7	Veszprém	2.15446	17	Szombathely	1.76178

8	Budakeszi	2.12981	18	Bábolna	1.74075
9	Szekszárd	2.03036	19	Kisbér	1.73621
10	Gödöllő	1.95387	20	Zalaegerszeg	1.66713

Source: calculation by the author

In the course of the investigation, the numbers of ranking of the towns in the region of Northern Hungary offer information on the strengths of the settlement, on the area where it lags behind the others involved in the comparison. As regards factor F1, the rankings were as follows:

Table 4. **National ranking of the towns of the region on the basis of the values of factor F1**

Settlement	Ranking	Settlement	Ranking
Eger	14	Mezőkövesd	125
Tiszaújváros	16	Kazincbarcika	134
Gyöngyös	45	Sárospatak	135
Pásztó	68	Bátonyterenye	149
Salgótarján	71	Heves	151
Hatvan	77	Sátoraljaújhely	184
Miskolc	78	Edelény	224
Balassagyarmat	95	Ózd	226
Szerencs	110	Sajószentpéter	238

Source: calculation by the author

With the exception of the towns of Rétság, Eger and Tiszaújváros, the rankings of the towns of the region are not very promising, and the seats of the two counties are also included here: Miskolc and Salgótarján. This also indicates that the high unemployment rate and low employment rate in certain areas of the region exert a negative influence on incomes and on the standard of living.

The factor of tourism and services (F2) (explaining 18.401 % of the original information content) has the following components:

Factor weight
* Total number of commercial accommodations/1,000 persons
    0.930
* Number of nights spent in commercial accommodation/1,000 persons
    0.899
* Number of catering facilities/1,000 persons
    0.864
* Number of retail shops/1,000 persons
    0.716
* Number of flats built/1,000 persons
    0.706

Table 5. **National ranking of the towns of the region on the basis of the values of factor F2**

Settlement	Ranking	Settlement	Ranking
Mezőkövesd	30	Edelény	200
Sajószentpéter	66	Miskolc	201
Bátonyterenye	76	Hatvan	209
Pásztó	81	Sárospatak	217
Gyöngyös	84	Salgótarján	218
Heves	123	Sátoraljaújhely	234
Eger	151	Kazincbarcika	238
Ózd	160	Balassagyarmat	242
Szerencs	176	Tiszaújváros	254

Source: calculation by the author

In the national ranking according to factor F2 (tourism and services), the tourism infrastructure of small and medium-sized towns (Hévíz, Zalakaros, Balatonföldvár, Harkány, and Balatonlelle) is decisive. When the settlements of the region are investigated, the same image arises again, although in some cases the number of flats built and the number of retail shops are more pronounced (e.g. in the case of Sajószentpéter). The low rankings also prove that the development level and infrastructure background of tourism falls short of what would be desirable, and that developments in this direction might be possible points of breakout for the region (according to the concepts for 2007-2013).

The factor of the administration development of the local government (F3) (explaining 8.301 % of the original information content) has the following constituents:
- Revenues of the local government for 2002/1,000 persons
- Expenditure of the local government for the year under review/1,000 persons

Table 6. **National ranking of the towns of the region on the basis of the values of factor F3**

Settlement	Ranking	Settlement	Ranking
Balassagyarmat	5	Kazincbarcika	86
Sátoraljaújhely	12	Gyöngyös	91
Tiszaújváros	14	Ózd	94
Edelény	45	Mezőkövesd	96

Sárospatak	49	Heves	126
Salgótarján	59	Miskolc	139
Hatvan	60	Eger	174
Szerencs	61	Bátonyterenye	201
Pásztó	67	Sajószentpéter	212

Source: calculation by the author

In a national comparison again the data of small and medium-sized towns (Tokaj, Lengyeltóti, Tiszafüred, Százhalombatta, and Balassagyarmat) are outstanding according to Factor 3 (development of the administration activities of the local government). This phenomenon is also reflected in the regional data; due to the use of specific indicators, larger towns fell back also because of the higher number of institutions and possibly of the additional tasks.

The factor of infrastructure state of the settlement (F4) (explaining 5.506 % of the original information content) has the following constituents:
- Overall length of municipal paved roads over the overall length of municipal roads
- Number of playgrounds/1,000 persons
- Number of households connected to cable television network /1,000 persons

Table 7. **National ranking of the towns of the region on the basis of the values of factor F4**

Settlement	Ranking	Settlement	Ranking
Kazincbarcika	6	Edelény	67
Miskolc	14	Szerencs	73
Salgótarján	23	Eger	78
Ózd	25	Sajószentpéter	107
Tiszaújváros	27	Pásztó	129
Gyöngyös	37	Balassagyarmat	159
Sátoraljaújhely	48	Mezőkövesd	166
Bátonyterenye	58	Heves	186
Sárospatak	64	Hatvan	190

Source: calculation by the author

Unlike the previous findings, here medium-sized and large towns even on a regional and national basis appear at the head of the ranking. In several cases they represent the headquarters and seats of the one-time heavy industry, which gives an explanation for the relative development of infrastructure.

The factor of health care and education (F5) (explaining 4.640 % of the original information content) has the following constituents:
- Total number of existing hospital beds/1,000 persons
- Number of cinema visits/1,000 persons
- Number of full-time secondary school students/1,000 persons.

Table 8. **National ranking of the towns of the region on the basis of the values of factor F5**

Settlement	Ranking	Settlement	Ranking
Balassagyarmat	3	Heves	85
Miskolc	10	Edelény	99
Eger	16	Tiszaújváros	109
Kazincbarcika	31	Ózd	110
Salgótarján	47	Sárospatak	113
Gyöngyös	49	Szerencs	128
Sátoraljaújhely	55	Sajószentpéter	130
Mezőkövesd	75	Pásztó	164
Hatvan	76	Bátonyterenye	202

Source: calculation by the author

The performance of medium-sized and large towns in terms of factor F5 (health care and education) represents leading rankings, which is due to the larger number of institutions and the more numerous tasks.

Factor of settlement environment and entertainment possibilities (F6);

Table 9. **National ranking of the towns of the region on the basis of the values of factor F6**

Settlement	Ranking	Settlement	Ranking
Eger	9	Kazincbarcika	119
Sárospatak	10	Bátonyterenye	124
Balassagyarmat	40	Hatvan	131
Mezőkövesd	44	Ózd	184
Miskolc	52	Sajószentpéter	185
Salgótarján	53	Gyöngyös	189
Szerencs	59	Tiszaújváros	212
Sátoraljaújhely	62	Pásztó	213
Heves	89	Edelény	238

Source: calculation by the author

The values of factor F6 show a correlation with the size, number of population, and in certain cases, with the tourism development of the towns. Nevertheless, it is thought-provoking that Miskolc is only ranked 5th in the region.

Factor of higher education (F7);

Table 10. **National ranking of the towns of the region on the basis of the values of factor F7**

Settlement	Ranking	Settlement	Ranking
Edelény	27	Sárospatak	106
Bátonyterenye	34	Eger	110
Ózd	35	Kazincbarcika	126
Pásztó	38	Gyöngyös	144
Sajószentpéter	39	Tiszaújváros	162
Mezőkövesd	47	Hatvan	173
Miskolc	59	Sátoraljaújhely	188
Szerencs	78	Salgótarján	201
Heves	104	Balassagyarmat	233

Source: calculation by the author

As regards factor F7, it is interesting that the towns of the county of Heves are ranked lower and appear only in place 9 of the regional ranking. The distribution of the leading places in the ranking shows a pre-eminence of the towns of the county of Borsod-Abaúj-Zemplén, which can also be explained by the larger number of the towns involved. More than half (ten) of the 18 towns involved in the study belong to the county of Borsod-Abaúj-Zemplén.

The percentages of the intrinsic value of the factors F8, F9 and F10 do not even represent 4% of the total information content. They contain information that is difficult to interpret, and no visible regularities can be detected in their rankings, so only their denominations are included here. The names of the rest of the factors are as follows:
Factor of enterprise and health care infrastructure (F8);
Factor of pupils in primary education (F9);
Factor of technical infrastructure and water supply (F10).

Evaluation

The development of the network of towns in Hungary has been determined by state intervention for many decades. Control from above has not always and necessarily meant intervention by the government, by the state, but investment by large companies (state-owned large companies), controlled industrialisation, maintenance of institutions and financing of settlements. The consequences can be seen in certain cases even today, for some towns have more developed infrastructure than could be supposed in view of their present economic situations. The economic structure has been essentially transformed after the change of regime, which has also had a significant impact on the changes in the network of settlements and the network of towns in Hungary. These changes can be perceived in previous works describing the situations of the towns (Beluszky, [2000]), (Lengyel, [1999]).

Among the rankings of the towns of the region, rank 3 of Balassagyarmat (in the national ranking according to factor F5), rank 5 of Balassagyarmat (in the national ranking according to factor F3), rank 6 of Kazincbarcika (in the national ranking according to factor F4) and rank 9 of Eger (in the national ranking of factor F6) are outstanding. In addition, rank 1 of Tokaj, which was not included in the study due to the small number of its population, is outstanding in the national ranking according to factor F3

(factor of administration development of the local government). It should not be neglected that in the rankings of the two most important factors, F1 and F2 (each of which represents 18% of the original information content), with the exception of Eger, Rétság and Tiszaújváros, the towns of the region do not perform satisfactorily. It follows also from the diversity of the rankings that the towns that have performed well in some of the rankings also have very poor placements, which is characteristic not only of the towns of the region (rank 174 of Eger in the ranking according to factor F3 or its rank 245 according to factor F8).

Table 11. **National ranking of the towns of the region according to values of factors F1-F7**

Town	National ranking according to factor						
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**
Eger	14	151	174	78	16	9	110
Tiszaújváros	16	254	14	27	109	212	162
Gyöngyös	45	84	91	37	49	189	144
Pásztó	68	81	67	129	164	213	38
Salgótarján	71	218	59	23	47	53	201
Hatvan	77	209	60	190	76	131	173
Miskolc	78	201	139	14	10	52	59
Balassagyarmat	95	242	5	159	3	40	233
Szerencs	110	176	61	73	128	59	78
Mezőkövesd	125	30	96	166	75	44	47
Kazincbarcika	134	238	86	6	31	119	126
Sárospatak	135	217	49	64	113	10	106
Bátonyterenye	149	76	201	58	202	124	34
Heves	151	123	126	186	85	89	104
Sátoraljaújhely	184	234	12	48	55	62	188
Edelény	224	200	45	67	99	238	27
Ózd	226	160	94	25	110	184	35
Sajószentpéter	238	66	212	107	130	185	39

Source: calculation by the author

Analysing the regional rankings it can be seen that the two most developed towns of the region are Eger and Tiszaújváros. This coincides with the rankings and analyses in the literature. The small regions of the two towns in the region count as the most developed ones in the analysis of the KSH, which also proves that different development paths may be successful. The poorest performance in the national rankings was shown by Edelény, Ózd, Sajószentpéter and Balassagyarmat, which did perform well in some cases. This also proves that it is possible to find weak points and areas with a poorer performance in the case of every town with areas that should be developed. This is also proved by other analyses (Kocziszky-Bakos-Nagy, [2002]).

It can be established that in the backward regions the main problem is constituted in many cases by the unfavourable economic structure and not by the low level of innovation or by

the underdeveloped infrastructure. In addition to improving the economic basis, it will provide an opportunity for the settlements currently in a more difficult situation if the roles of the following factors gain in value: the demand of "highly qualified labour" for a high standard residential environment, or the opportunities for "taking advantage of the knowledge basis", the roles of towns in networks, the efficiency of the marketing of towns, the entertainment facilities, the "qualities of the leadership/management of the towns" (Horváth, [2001]).

Literature

[1] Beluszky P.: **Adalékok a városállomány 1990 utáni átalakulásához - Magyarország területi szerkezete és folyamatai az ezredfordulón.** Pécs, MTA RKK, 2000. 115-130. old.

[2] Horváth Gy.: A **magyar régiók és települések versenyképessége az európai gazdasági térben.** Budapest, Tér és Társadalom, 2001. 2. 203-231. old.

[3] Kocziszky Gy.-Bakos I.-Nagy Z.: **Észak-magyarországi régió innovációs potenciál vizsgálata**. Kutatási jelentés, Miskolc, 2002.

[4] Lengyel I.: **Mérni a mérhetetlent? A megyei jogú városok vizsgálata többdimenziós skálázással.** Budapest**,** Tér és Társadalom, 1999. 1-2. 53-73. old.

[5] Lengyel, I.- Rechnitzer J.: **A városok versenyképességéről - Magyarország területi szerkezete és folyamatai az ezredfordulón.** Pécs, MTA RKK, 2000. 130-152. old.

[6] Molnár L.: **A települési szintű relatív fejlettség meghatározása.** Budapest, Közgazdasági Szemle. 2002. január. 74-90. old.

[7] Nemes Nagy J.: **Új kistérségek, új városok Új versenyzők?** in. Térségi és Települési növekedési pályák Magyarországon, Budapest, Regionális Tudományi Tanulmányok 2004.

A SITUATION OF DISADVANTAGE TURNED INTO AN ADVANTAGE?
CONVERGENCE OPPORTUNITIES FOR BACKWARD SMALL REGIONS IN THE REGION OF NORTHERN HUNGARY

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Abstract: Regional backwardness is a complex phenomenon that can be easily studied in the region of Northern Hungary and that covers approximately one third of the settlements of the region. It can only be managed by a multi-front approach, by integrated development exerting a combined impact on the factors of deprivation. The local development efforts arising from the wish for convergence and aimed at constructing the fundamental infrastructure and creating a mass of concentrated jobs may be fortunately combined with innovative development ensuring a new development path that is considerably encouraged from outside in the scenario built on strengthening the social economy.

One of the fundamental objectives of regional development is to decrease the regional differences prevailing in a given area and to bring the areas lagging behind in development up to the more developed ones. The first chain of questions to be clarified in interpreting the objective and then in planning the path of achieving it is what regions qualify as backward, what their backwardness manifests itself in, and the most exciting one: what they are to be brought up to. The last question becomes interesting when the interpretation of regional development is undergoing changes. And today we are witnessing such a change in paradigm. Being developed means something different in the post-industrial age than in industrial societies just as the range of human needs becoming emphatic changes [10] [14].

1. Vicious circles of poverty concentrated in space

For the geographer, one of the most important characteristics of regional backwardness is that a considerable lag can be found not only in one element of the geographical environment of a given region, but in all its elements as compared to other units of comparable size included in the same larger area. In addition, the individual environmental elements block each other through the interactions between them and create a complicated vicious circle of causal relations that is almost impossible to break. Myrdal's theory of cumulative causality describes the mutually strengthening or weakening mechanisms of effects of the demographic, economic-production, redistribution, infrastructure, socio-cultural and socio-political relations starting from the example of the developing countries [12].

The vicious circle of regional backwardness is constituted by five main factors on the basis of the examples of the region of Northern Hungary. No order can be established between them: each of them exerts its effect on all the others and it is no longer possible to find out what the original cause and what the effect was.

1.1. *Break up of the demographic equilibrium*

As a result of the processes taking place in the previous historic period, the population in most of the settlements has become old. Young people have moved away, thus the large families have broken up and the old live far away from their children. The existing family relations work as a draining force of the regional resources rather than an accumulation factor of the resources. The education and qualification levels of the young people that have remained here and their motivation to change are low. Their individual life strategies are devoid of ambitions, and they often end up with drinking problems. The state of health of the population is poor, partly due to aging, and partly to the way of life. As a result of the imbalances of the material status and private life, mental disorders are frequent. In addition to the depreciation that has come to prevail owing to the selectivity of emigration, the selectivity of immigration to the region causes further conflicts in the original inhabitants. The immigrants are mostly Roma families looking for a cheaper way of life (property, overheads, food), needy from the outset, often trying to escape ethnic discrimination in villages offering smaller resistance. They reproduce poverty cumulatively as a result of the more rapid biological reproduction typical of the group. Their mobility is weak, and so the ways leading to the region become practically one-way.

There are ways leading out of the region only for more educated and more dynamic young people, and ways leading into the region for the poor. All this results in a special concentration of poverty, which is also manifest as ethnic concentration.
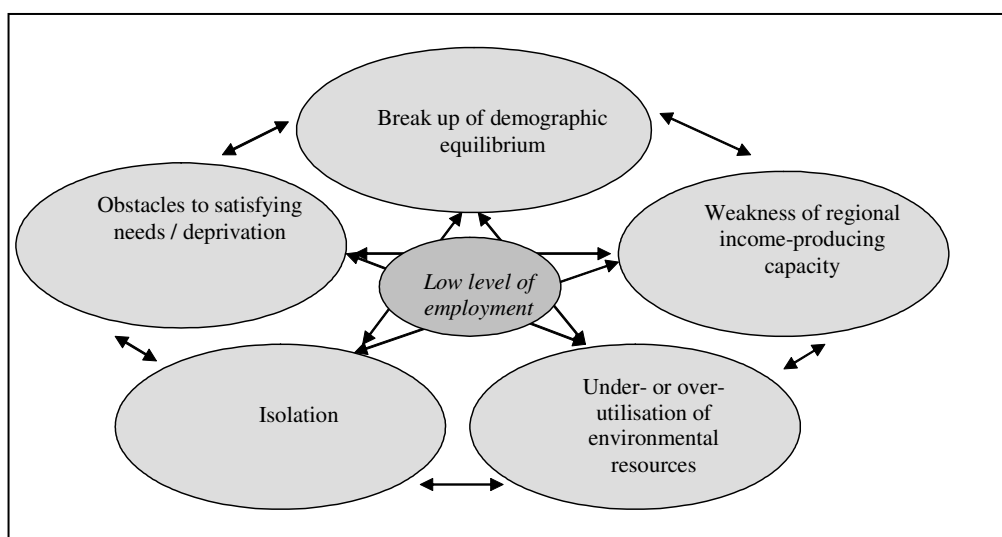

*Figure 1.:***Factors of regional backwardness**
Source: compiled by the author

Demographic processes exert their influence on all the other elements of the environment: the shortage of qualified labour harms the competitiveness of enterprises, therefore there is

no regional income, and the absorption ability is weak. Not even substantial subsidies make it easy to move the economy away from the standstill. The lack of solvent demand and the impossibility of meeting the requirements of the economy of scale make it impossible for the local services to operate. The low level of qualifications and skills also increases isolation, for the local population is unable to use or pay for the means of communications. At the same time it hinders the beginning of self-organisation as well as efficient regional representation of interests.

The weakness of an environmentally conscious approach – which is also related to the level

of education – and the lack of proprietary interests also increase the risks of environmental

pollution and damage to the protection of nature and the failure to complete environmental

rehabilitation.

1.2. Isolation

Being left out of the modernisation processes of the earlier periods also meant that the conditions for up-to-date transportation were not built in these regions. Railway lines either bypass, or run along the periphery of the region. Roads are neglected, settlements often have only subsidiary roads leading to them, and villages frequently have access to them only from one direction. Low population density and low solvency of the population do not make it worth operating the lines of public transport or even the filling station and garage infrastructure of road transport (cars).

The channels of telecommunications and information flow are also underdeveloped. The wired telephone network was built too late. The region is not covered by mobile telephone networks and there is no Internet access. Television reception is poor and limited, and the population does not have the spending power to realise these investments in the form of own-resources development. Owing to the lack of channels built and also to the low number of newspaper subscriptions, information is difficult as a process, and information does not reach the population and communications both into and out of the region is weak.

The lack of accessibility causes further problems in other factors as well: it contributes to the slacking of family ties, weakens mobility, hinders breaking down the limits in approaches, thus contributing to further demographic erosion.

It weakens the competitiveness of enterprises and the absorption ability, thus hindering the economic strengthening of the region, and eventually the formation of regional income.

Due to the difficulty of commuting, there is a decrease in taking up employment, as well as in the possibility of obtaining income through employment. At the same time higher-level services are unavailable or they are too expensive to get, which beyond a certain level of demand increases family expenditure out of proportion and makes the region uncompetitive also as a place of living. Therefore it is impossible to break out of the selection processes.

Advantage may arise from isolation perhaps only in the field of preserving the regional resources, although this is also of doubtful value, for it also renders the exploration and any form of the economic utilisation of the resources impossible.

1.3 Weak regional income producing capacity

Lack of capital and the low performance level of the economy are usually named as the major obstacles to breaking out of backwardness. The capital required for convergence cannot be produced locally, for there are hardly any enterprises. The performance capacity of the majority of local enterprises hardly exceeds the capacity of the households. They are hardly competitive on the local markets. On the other hand, the narrow local market does not make it possible for the enterprises to operate steadily. They cannot break into external markets, neither their product structure, nor the quality, nor their capacities are suitable for that. External companies do not settle down in the region because of the weak human resources, the underdeveloped infrastructure and the weak business environment. If they still do, they withdraw their income, and their activities contribute only moderately to the generation of regional income. The tightness of the local market appears also on the supply side, because of which the participants of the economy are obliged to perform their purchases outside of the region, which also results in an outflow of resources. Regarding products and services available locally, there are often purchases from outside the region due to prestige or other, often subjective, reasons, which again decreases regional resources.

In addition to the weakness of the capacity of the economy of producing income in its own region and retaining or even multiplying that income through local purchases, these regions are not able to absorb external subsidies either. This is due partly to the lack or weakness of the ability to enforce interests required for obtaining external resources, partly to those of the application/project writing abilities that are increasingly important for the redistribution of the resources, and partly to those of a well-prepared management essential for the intelligent use of the resources.

In turn, the lack of regional income affects all the factors, for it entails a lack of development funding, a deterioration of the physical environment, the difficulty of producing the resources for making a living, further narrowing of retail trade, local, transportation, and IT services, a further deterioration of competitiveness and absorption ability, finally emigration and consequently a further spiralling of the vicious circle.

1.4. Obstacles to satisfying needs

If regional development is interpreted as satisfying the needs of increasingly larger groups of people in the region to wider and wider extents, two direct obstacles of satisfying the needs: a lack of income in the families and the deterioration of the available services cause most of the dissatisfaction in those living in the region. The families are unable to obtain the income required for their livelihood due to a lack of jobs, low wages, the high rate of inactive people, and the traps of joblessness covering a growing proportion of the population. Among these factors the most dangerous in terms of regional development is the trapped situation emerging in the process of support – losing one's job – unemployment of several generations – turning away from work, and characterised by a strengthening of the attitude of losing the will to break out of unemployment. This can only be prevented by

creating jobs, and if that is impossible due to the weak sphere of entrepreneurs, then it can be achieved by a greater involvement of the community and the consequent use of the instruments of active employment policy.

In addition to the fact that the incomes of the families are low and consist mostly of allowances and other state or local governmental benefits, satisfying even the basic needs comes up against constraints. Hardly anything can be obtained locally, and the high specific transportation costs arising due to the long distances and small amounts increase the prices for the local population. The construction f housing is more expensive, retail products cost more, and it is not worth operating the public services. In order to ease the tension, the local population can make a choice of shouldering the higher expenditure, increasing self-sufficiency and/or lowering their level of demand, or moving away from the region. After a certain age the latter one is not a realistic alternative, for the regional difference between property prices puts those living in a backward region at a disadvantage that cannot be overcome. And the young leaving the region represent a double loss: the region loses its intellectual capacity and a relatively considerable capital divestment is effected through the assistance provided by the parents.

1.5. Under – or over-utilisation of environmental resources

The natural environment is mentioned most often as the relatively well-preserved – and mostly only – asset of the backward regions at present.

The physical environment can, however, only become a real asset, and a development potential in terms of the development of the region if this asset is known, has been explored and is appreciated, ways are found for its utilisation and keeping sustainability in mind, it is utilised while its values are preserved. The assets of the backward regions are mostly hidden at present, they are unexplored, and are not in a state suitable for utilisation. It can also be said that this is fortunate, for the underdevelopment of the approach to the environment and the technologies polluting the environment could easily endanger sustainability. Initiatives already started, unfortunately, provide examples for that: planting orchards with intensive cultivation and increasing the erosion of the soil and chemical pollution, unjustified clear-felling of the forests for the sole purpose of profits, peasant houses painted mauve or red, waste management polluting the water bases, the propagation of modern energy resources that can be taken to the region only at very high costs, collecting protected plants, collecting and hunting animals, selling off values that appear as values in other places and thus creating a seller's market.

The state and way of utilisation of the environmental resources are closely related to demographic and cultural factors, to physical and information isolation, but are in interaction with the income producing capacity of the region as well.

Naturally the various batches of problems can be assigned the indicator systems clarifying them. Thus the range of indicators expressing regional backwardness includes the following:

1. Demography
   - Decrease in the number of population between 1949 and 1980 >= 30%
   - Rate of 19-59 olds within the total population in 2001 < 50%
   - Number of school classes per 1 resident in 2001 < 9

2. Isolation
   - number of telephone subscribers for 100 residents in 2004 >= 20
   - tourism nights projected for 100 residents in 2004 = 0.

3. Income producing capacity
   - number of dependents and inactive persons for one employed in 2001 >= 4 persons
   - enterprises per 1000 residents in 2004 < 25 pieces
   - amount of added value for 1 employed in 2004 = 0
   - annual amount of personal income tax paid for 1 resident in 2004 < 40 thousand HUF
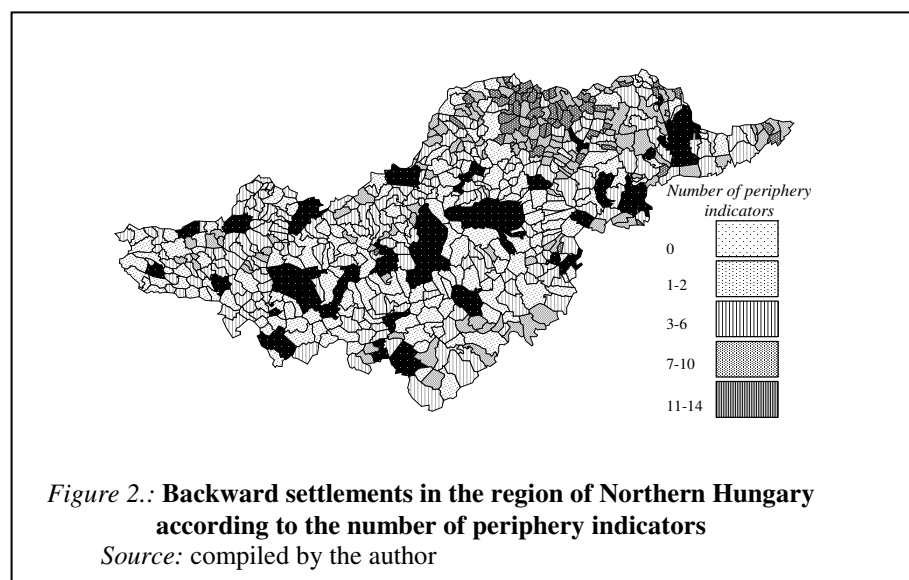   - annual amount of allowances paid for 1 resident in 2003 >= 20 thousand HUF

4. Living conditions
   - rate of flats built before 1960 in 2001 >= 50%
   - rate of locally available basic services out of 12 basic services in 2004 < 50%
   - number of retail shops for 1000 residents in 2004 < 6 pieces

5. Utilisation of environmental resources
   - number of flats connected to domestic or mains sewage in 2001 < 60%

The incidence frequencies of the above 14 periphery indicators can be used to draw the backward settlements of the region of Northern Hungary (Figure 2). There are a total of 173 settlements where at least 7 periphery indicators meet. This includes 55 settlements which belong among those with the most deprived situation in terms of 11-14 aspects. These settlements belong typically to the region of Cserehát and to a smaller extent to the area of Zemplén.

Figure 2.: **Backward settlements in the region of Northern Hungary
according to the number of periphery indicators**
Source: compiled by the author

In the various small regions of planning and statistics the presence of backward settlements can be used to establish the most backward small regions of the region[37].

The ranking of small regions can be created according to several aspects. Thus consideration was given to:

a.   the average periphery value of the settlements of the small region weighted with the accessibility factor value of the small region (The accessibility vector value was taken over from the calculations of TERRA Stúdió based on the time needed to reach Budapest and the nearest motorway [9].),

b.   the number of settlements with a periphery indicator of at least 7,

c.   the rate of settlements with a periphery indicator of at least 7 to the total number of settlements in the small region,

d.   the rate of the number of population of the settlements with a periphery indicator of at least 7 to the total number of population of the small region,

Based on the average of the ranks in the four rankings, 10 small regions with particularly backward situations were established (Table 1).

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[37] Further methods for determining backward settlements and regions can be found in the works by Nemes Nagy, József [13], Faluvégi, Albert [5], and István, Tiborné [8].

Table 1.: **Small regions of the region of Northern Hungary according to the strengths of the periphery characteristics**

Small region	a. Average score	b. Settle-ment	c. %	d. %	Ranking a.	b.	c.	d.	Average ranking
Abaúj-Hegyközi	8.96	17	70.8	81.2	4	4	3	1	3.0
Encsi	10.14	25	71.4	31.2	1	2	2	9	3.5
Edelényi	9.11	32	69.6	35.1	3	1	4	8	4.0
Sátoraljaújhelyi	7.34	8	42.1	36.4	6	7	6	6	6.3
Kazincbarcikai	5.42	9	27.3	78.5	11	5	11	2	7.3
Szikszói	9.17	17	73.9	0.4	2	3	1	23	7.3
Bodrogközi	7.65	8	47.1	17.0	5	6	5	14	7.5
Sárospataki	6.88	6	37.5	30.9	7	9	7	10	8.3
Ózdi	6.10	7	24.1	35.2	8	8	12	7	8.8
Hevesi	4.41	5	29.4	74.8	12	10	10	3	8.8
Tokaji	6.00	4	33.3	12.0	9	12	9	17	11.8
Balassagyarmati	3.75	5	17.9	43.4	17	11	16	5	12.3
Mezőcsáti	6.00	3	33.3	6.7	10	16	8	19	13.3
Pétervásári	3.95	4	20.0	26.5	16	13	13	11	13.3
Mezőkövesdi	3.29	4	19.0	51.9	21	15	14	4	13.5
Szerencsi	4.22	2	11.1	24.3	*13*	19	20	12	16.0
Tiszaújvárosi	4.19	3	18.8	0.0	14	17	15	25	17.8
Füzesabonyi	3.16	3	15.8	3.3	22	18	17	20	19.3
Pásztói	3.73	4	15.4	0.0	18	14	19	27	19.5
Rétsági	3.08	2	8.0	12.9	23	20	21	16	20.0
Szécsényi	4.08		0.0	19.8	15	25	28	13	20.3
Bátonyterenyei	3.50	1	7.1	9.0	20	23	22	18	20.8
Salgótarjáni	3.70	1	4.3	0.5	19	22	23	22	21.5
Miskolci	2.03	1	2.5	13.7	25	24	24	15	22.0
Bélapátfalvi	3.00	2	15.4	0.0	24	21	18	26	22.3
Egri	1.43		0.0	1.6	28	28	25	21	25.5
Gyöngyösi	1.71		0.0	0.4	26	26	26	24	25.5
Hatvani	1.58		0.0	0.0	27	27	27	28	27.3
Region total	**4.91**	**173**	**28.5**	**2.3**					

Source: compiled by the author

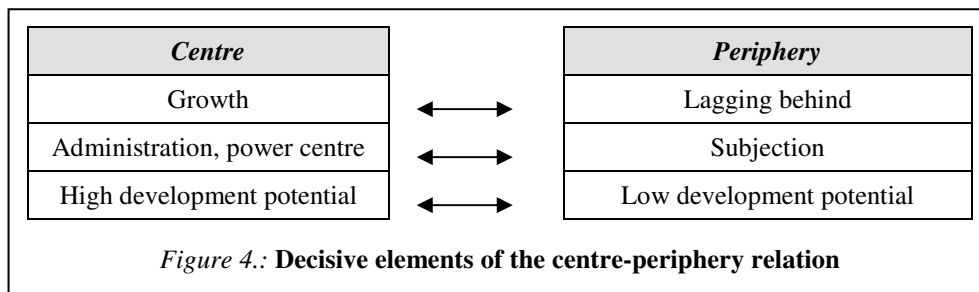## 2. New processes and techniques offering a chance to break out

It is almost impossible to break out of the downward spiral generated by the above factors of regional backwardness under the prevalence of values characterising the society of the modern period and modernisation models. The modernisation techniques known so far have been built on manufacturing production, the concentration of the economy and the population, good transport connections, on the cultivation site and property structure potentials of intensive agriculture, the unconditional enforcing of the aspects of economy, and on the other side, on the exploitation of environmental resources. The reason why backward regions were left out of these processes is that they did not possess such resources and potentials.

The question is whether there have appeared by now new development models or whether there exist new techniques that can be employed with success also under the conditions described.

If there is no such hope, then the possible scenarios for the regions under examination may be going along the downward spiral, at the end of the road with depopulation or slumming resulting in increasingly loud political dissatisfaction, the completion of poverty spatially concentrated. Deterioration can only be slowed down by external funding and support. The bottomless well of social support can swallow everything, but it does not bring about real changes, instead may speed up slumming, and may at least make the lives of those remaining a bit more bearable.

Fortunately, today roads have opened for changes according to other scenarios with the propagation of post-modern values. Looking at the developed countries it can be seen that new, different values have come to the foreground in evaluating the development potentials of the regions. In contrast to the previous situation, the purity of the natural environment, the individual profiles of the regions, the preservation of the cultural heritage shaping it to a considerable extent, local expertise, the potentials of extensive farming, the ability to cooperate, quality as opposed to growth, the conditions for striving for completion increase in value [4]. At the same time up-to-date info-communications technologies that can be constructed anywhere in principle have been developed for bridging geographical distances and for connecting into globalized space.

Reaching back to the classic centre-periphery problem, and highlighting its three most characteristic elements, the peripheries are characterised by lagging behind the centres, which may be extreme, subjection to the centres as centres of power, and low development potential. In my view, in this last element there may take place a substantial change in the post-modern society.

Centre		*Periphery*
Growth	⟷	Lagging behind
Administration, power centre	⟷	Subjection
High development potential	⟷	Low development potential

Figure 4.: **Decisive elements of the centre-periphery relation**

Some years ago when determining the development potential of a region, the focus was on infrastructure potentials, the development of accessibility, the condition of human resources, the supply of capital, and the economic cooperation possibilities. These factors were used by companies in selecting the optimum locations for their facilities. The starting point and often the final conclusion was that regional development was driven by competition and comparative advantages decide whether regions regarded today as peripheries have a chance to break out of that existence and to undergo development at a rate required for convergence.

Today, however, if we look at the same questions, we are faced with new factors. Among the factors of the development potential the roles of the knowledge concentrated in the area, of the social capital, the environmental quality will appear, mass production supposing large structure will be opposed by uniqueness favouring the small, communications will become decisive in the information society. In addition to competitive advantage, the cooperation advantage, partnership and solidarity essential for it will increase in value [1].
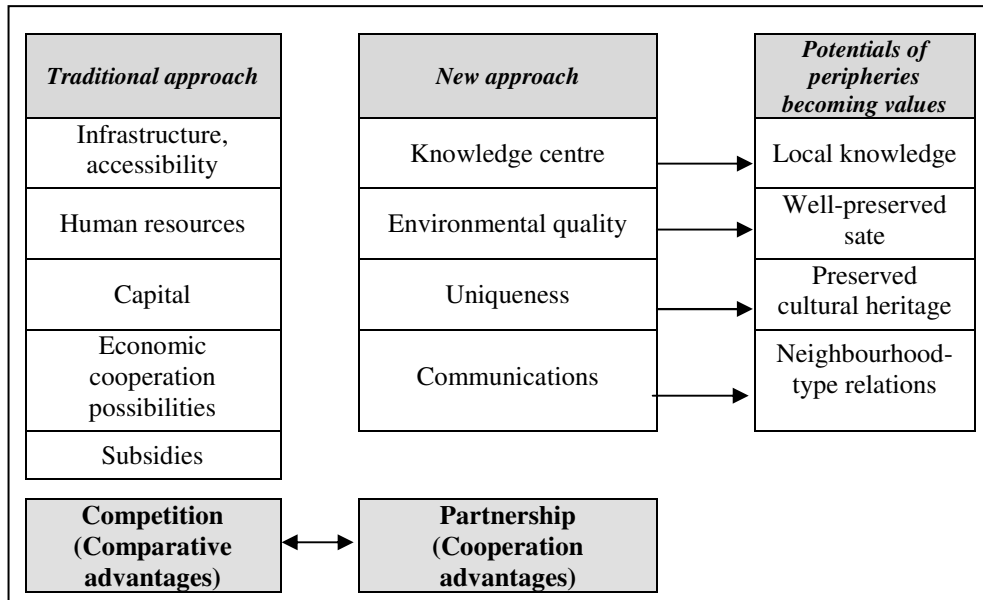
Traditional approach	*New approach*	*Potentials of peripheries becoming values*
Infrastructure, accessibility	Knowledge centre	Local knowledge
Human resources	Environmental quality	Well-preserved sate
Capital	Uniqueness	Preserved cultural heritage
Economic cooperation possibilities	Communications	Neighbourhood-type relations
Subsidies		
Competition (Comparative advantages)	**Partnership (Cooperation advantages)**	

Figure 5.: **Factors of development potential and the values of peripheries included**

The opinions according to which competition should not be overestimated in the relations between regions, for competition-centred strategies cannot be expected to result in efficient development of the peripheries are getting louder and louder and gaining more and more ground. For the peripheries to step forward, they should not overtake or beat another, more developed region, but should join it [3] [11]. Cooperation can only be based on mutual interests.

The reality of the concept is supported by the increasing interests of the centres in the sustainable utilisation of the resources of the peripheries, in moderating the disadvantages resulting from the existence as a periphery.

The factors appearing in the new interpretation of the development potential encourage us to re-evaluate the resources of the peripheries. Knowledge includes local knowledge representing the foundations of sustainable development. However, this local knowledge appears concentrated, although so far mostly hidden in the periphery. Following this thread, one of the most interesting questions is the change in the interpretation of innovation. Previous research into the scope of innovation regarded innovation as the invention, introduction and propagation of new products, technologies and other processes created in R&D workshops. In the information society, however, innovation becomes more common, the demand for something 'new' and the possible response appear in the practice of everyday life, the answer to local problems can be given locally – naturally, with a knowledge of the innovations by others, considering their adaptability [7].

Through being left out of the previous modernisation, the state of the environment of the peripheries is in general better preserved, as it suffered less from industrial pollution. As uniqueness comes to the foreground, it promotes the interest in the cultural heritage that has preserved the traditional elements that have been transformed to a lesser extent in the localised peripheries due to delayed modernisation.

In the propagation of information and innovation in the peripheries, communications connected to the relations in the neighbourhood that have been largely preserved play a major role.

All these features suggest that the potentials of peripheries that have not been previously valued and that have developed because the peripheries have been left out of the mainstream of development become assets in the post-modern society. These assets hold out a hope of development (Figure 5).

Thus we are faced with a radically new situation. As the lack of possessing the driving force of the age can be blamed for the lagging behind of the peripheries, now we can see a step forward exactly in this field. The elements that can form the foundation for the re-evaluation of the relation between the centre and the peripheries are emerging slowly. 'Aces' may appear in the periphery that may make the centre interested in not wanting to dispossess and overcome the periphery clearly, but in launching cooperation formulated on a basis of mutual co-ordination. The periphery should not mean unavoidable deprivation, but a different quality in this relation. In the re-interpretation of the centre-periphery relation, which must appear idealistic for many, but representing the only point of break-out for the peripheries, thus these fields are not opposed to each other, but supplement each other. In addition to the vertical relations realised previously in the functions of the agglomeration of commerce, institutions and services and administration, horizontal relations obtain their roles. The fields of horizontal relations represent the upwards re-evaluation primarily in the fields of housing, recreation, and the administration and management of natural resources.

The question is how the change in values mentioned above and the change in function of the peripheries appear in the development strategies formulated recently.

Central strategies	Small region strategies
Convergence in the focus	Sets of wishes without strategies
Uniform system of instruments	Copying the developed ones
	Idyllic utopias
	Isolated revolutions

Figure 6.: **Appearance of new values in development strategies**

In the central strategies it is the 'cohesion' direction of regional development and regional policy that wishes to reduce regional differences that deals mostly with the peripheries. These strategies have convergence in their central point. If we look a bit at the background and find out where and how they want the peripheries to converge, we find that the standard is represented by the regions that can be regarded as developed today and the previous modernisation techniques are thought to be expedient. This means that they designate the path for the peripheries that was previously followed by the present developed regions. They want the peripheries to follow the path of modernisation the harmful consequences of which are obvious today and moreover which does not hold out any hope of reducing the deprivation.

This approach brings practically the destruction of the values emerging here and now. Another very conspicuous thing in the central strategies is: the uniform system of means and instruments that does not make a difference between centre and periphery. We should not be thinking primarily of the ratios of resource allocation here, but rather much more of the uniform methodology of subsidies, and the selection of the instruments. We also want to establish an industrial park in the periphery, for we think that industrial parks give the periphery a chance of development.

Thus central strategies have a confusing, palpably doubtful stand point.

As regards the strategies concerning small regions, the first problem to highlight is that the documents called small region strategies quite often have absolutely confused strategic arguments. They can be regarded as a set of wishes rather than a strategy. Naturally, peripheries have problems with everything. Housing, roads, utilities, employment are present problems and all of them appear itemised as objectives in these strategies as well. It cannot be seen where the fixed point is from where the region could be made to move. One type of small region strategies is represented by the "copiers". In that case also the small regions themselves want to copy the regions that have become developed in the course of modernisation. They hope that what has worked well in the case of the regions that can be regarded today as developed will achieve success for the underdeveloped regions in a different period and under different conditions as well. Another type is constituted by the

'utopians'. Part of the regional development strategies mainly trust that an escape into some world of the peasant village may bring some change to the small regions or to the local conditions. Obviously this does not have either any reality or any chance of bringing about any change. The third type is that of the "lonely knights". They would like to create something new, up-to-date, something that matches the new system of values, but do not find any connections. They keep trying in isolation, and are bound to fail in spite of all their heroism.

An essential change in approach is needed in order to raise awareness of the change of values promoting changes and in order to speed it up perhaps. Four substantial elements are highlighted here:

1. A periphery is not something that should be socially supported, is not something that should be "made to converge", but is in possession of values that are also needed for the centre to develop. It is necessary both to make up for the deficiencies and to perform innovative actions generating the utilisation of values.

2. The strategic objectives need to be re-formulated accordingly and differentiated instruments taking into account the different potentials of the centres and the peripheries should be determined. Within that, instead of following infrastructure development, the application of preventive infrastructure development matching the new values may be highlighted.

3. In the regions bound by the cumulative causal relations of deprivation a change can only be achieved through integrated interventions synchronised in several areas at the same time.

4. It is not the last aspect that the participants are to be motivated and then prepared to use these instruments and to be able to generate the processes leading to change by themselves in a responsible way.

3. Alternative scenarios of convergence in the backward small regions of Northern Hungary

Going back to the initial theses: in the backward small regions of the region the biggest problems are caused by the mass and deepening joblessness (unemployment and high inactivity), the unsatisfied internal requirements, deteriorating services, the perishing natural and cultural values, as well as the increasing isolation and consequently the emigration among qualified young people, concentrated poverty and the resulting intensifying conflicts.
At the same time the unutilised local environmental potentials, some local enterprises, unskilled and helpless labour that has been forced out of the labour market in the long term are available as the conditions of convergence, and there is a considerable lack of innovation ability, of the acceptance of the values providing the foundation for adaptation to the new, global trends, of self-organising ability, infrastructure and financial sources.

In the development of what are called alternative scenarios, which depart from the deterioration going on at a quicker or slower rate, the decisive role is played, beyond the external environment, and the development of the macro-conditions, but in close connection with them, by the changes in the migration trends, the development of the systems of values and motivations, the quantity and quality of human resources, the activities of the local and immigrating enterprises, the activities of the local governments, the situation of the external relations and the communications, as well as the conditions for living that can be provided locally, including housing and the establishment level of the market and public services. The development of these factors – and thus the development of the scenarios – is determined by what development strategy and methodology is followed by the interventions directed at the regions in question.

3.1. Regional development scenario relying on the local initiatives based on the existing local participants and their needs

In the basic case of a development based on local resources matching the logic of regional development it is the improvement of the competitiveness of the local enterprises, typically connected to agriculture, in the internal and external markets and the diversification of the activities that entails an increase in the regional income produced and in the internal resources of development. In turn, the developments launched and effected generate further growth and contribute to the general development through changing the direction of the spiral running downwards so far and through similar mechanisms. The only question is how the regional development techniques can be used to improve the competitiveness of the enterprises within the region. One of the fundamental problems is that the most important target group of regional policy, the group of the agricultural entrepreneurs, has not been present in these regions since the 1960, or have been present in a peculiar form of double life. The "socialist" industrialisation of the 1960s and 1970s moved people away from agriculture. The old or new owners did not really know what to do with the lands returned to them after the change of regime in 1990 in lack of machinery, knowledge, and market.

The Roma population that amounts to a considerable part of the population (15-20%) did not get hold of any land then either. It takes more to establish and then to maintain the competitiveness of enterprises than to increase the technical and technological development of the enterprises and to increase their financial standing. Without general development of the infrastructure, the improvement of the market environment, and a change in approach, the enterprises can at most stagnate.

On the other side, the development directions, formulated by the local participants on the basis of current knowledge and models, and the scenarios emerging from them are mostly based on following the models of the areas that are now developed and typically concentrate on making up for the unrealised developments. They would like to catch up and expect the construction by the state of roads, pavements, mains gas supply and jobs in the industry to make up for the losses. The small number of innovative ideas, the shortage of independent initiative, the lack of well-prepared local management, and the preference for intensive technologies destroying the environmental values in some case are all a fundamental hindrance to exploiting the possibilities described above. Without a

comprehensive change in approach, learning about the new possibilities and the techniques to take advantage of them, and the emergence of local innovative cores, and relying exclusively on the current initiatives it is impossible to launch a long-lasting development process or to create the foundations of own-resources development.

3.2. Innovative regional development scenario based on immigration population and enterprises, and on new economic activities

The missing ideas, entrepreneurial spirit and knowledge can be brought to the deprived regions in the shortest time by attracting external immigrants and re-immigrants possessing the characteristics mentioned. The resources that can be utilised will sooner or later spontaneously attract investors. A good example for that is the interest in afforestation areas, orchards, and country houses that can be restored from outside the region and the most valuable lands and properties getting into external ownership. This spontaneous process, however, poses considerable risks for the local population. In the process of the acquisition of wealth without local control, they have to count with the emergence of some sort of colonisation and an increase in internal polarisation, in addition to losing the asset base of change.

In order to encourage the immigration and settlement of external population and entrepreneurs involved in the sustainable utilisation of local resources, offering benefits to the current population as well, it is necessary to render the host environment attractive and to make the target group interested. We know about projects in which it was possible to obtain plots of land for 1 HUF, or in which all young families with small children and having jobs are given 500 thousand HUF for the purpose of settling down, or the immigrant enterprise gets local tax exemption, however, these projects are not well-elaborated and their long-term impacts have not been measured. In addition, the local management in most cases does not think in terms of attracting external people, either because they do not want any changes or because they are afraid of conflicts and of the depreciation of their own roles.

External resources can be taken to a region by means of regional development instruments, without particular local initiative. It is possible to encourage the settlement of innovative enterprises that will revive the economy of the region, and the development of a concentrated business environment suiting such enterprises, e.g. focused on the centre of a small region. The dangers are again the same as those experienced in the case of spontaneous settlement.

3.3. Scenario of social economy, combining innovation brought in from outside with local initiative and based on non-profit-oriented enterprises

The third scenario building on externally generated and subsidised non-profit enterprises with local involvement can combine the previous two scenarios, particularly their advantages.
Social economy comprising non-profit economic activities is in the European Union a recognised instrument of widening employment and providing services enhancing the

quality of life of the population, as part of the European employment policy. At the same time, in addition to the profit-oriented economy constituting the mainstream of capitalist market economy, it also embodies a new direction that primarily wishes to satisfy human needs on an increasing scale and by covering an increasing choice, that is based on solidarity and not on profits [2].

Its fundamental objective is to provide a solution both to unsatisfied needs, unemployment and the deprivation in combination with each other. This means the following:
−   It satisfies definite demands through producing products and providing services.
−   It improves the situation of the deprived through employment.
−   It strengthens the solidarity and identity-awareness of the individuals and communities involved, and increases the social capital.

The participants are foundations, societies, cooperatives and mutual funds.
Typical organisational forms:

1.   self-employing micro- and small enterprises between households and business enterprises, usually organised on a family basis or grouped into a cooperative, meeting existing market demands without generating profits,

2.   community enterprises operating on a non-profit basis, not striving for profits, but dividing the profits between the employed and the consumers, based on solidarity,

3.   transit employment organisations, and social enterprises operating with state subsidies, undertaking the employment of those handicapped in the labour market, their reintegration into the labour market through complex services (training, mentoring, mental hygienic care, debt management, placement service, etc.),

4.   social enterprises with massive state subsidies, performing the long-term employment of people with diminished capacity to work and forced out of the labour market on a basis of social solidarity.

The fields of activities of the social economy can be related primarily to social and personal services, the management and operation of settlements, to tending the countryside and forests, nature conservation, cultural, leisure, tourism and information services, to social, commercial and public transport services, agricultural cooperatives and communal agriculture.

In backward regions lacking in enterprises, these economic organisations may offer an alternative to support by organising worthwhile employment for those forced out of the labour market and jobs useful for the society and producing wages and providing the now missing services at the same time.

Since there is not sufficient capital, knowledge or even intention available locally for exploring the innovations underlying the new opportunities, it is necessary to bring in external resources. Entrepreneurs coming from outside will, however, not necessarily strive for the sustainable utilisation of the resources and providing benefits for the local population, therefore it is justified to strengthen local control and to restrict profit making within reasonable limits.

On the basis of our research in the region of Northern Hungary [6] it is possible to identify three basic elements of the development of the sector:

1. *Strengthening community and social enterprises*

   The community and social enterprises that have started in response to previous projects or are starting now should be enabled to perform economic and social functions in combination. As a basic condition for that, the basic infrastructure of non-profit employment organisations is to be developed, together with the professional competence of their staff and the professional assistance background of the sector.

   In addition to strengthening the organisation, the technological modernisation of the existing community and social enterprises and enabling them to launch new economic activities may be a step towards making the activities sustainable and thus to making the employment and production or the services provided continuous. A fundamental condition for the survival of community and social enterprises is the provision of operating capital.

2. *Improving the market background of social economy*

   Similarly to profit-oriented enterprises, the success of community and social enterprises, which can be interpreted in terms of the continuous provision of employment and products and services important for the community, of the continuous reduction of the ratio of public funding used for public purposes, i.e. of the sustainability of the enterprises, depends on the market performance of the enterprises. Strengthening the demand and improving the presence in the market may increase the safety and income producing capacity of the non-profit enterprises. In their case demand is represented by the solvency of the population and the public tasks with the sources meant for their performance are represented by the local governments. In both cases the market may be widened by strengthening the awareness-raising campaigns, the marketing of the products and services, and making product design more professional. At the same time the reluctance of the local governments to transfer public tasks may be moderated by providing task-oriented consultancy and professional assistance.

3. *Implementation of local employment initiatives aimed both at improving the labour market chances of deprived groups and at meeting local production or service needs*

   Previous projects have proved that the long-term employment of deprived people and their transit employment aimed at returning them to the labour market as economic activities cannot support itself in the initial period. They are in need of subsidies even for the operation costs: wages, basic materials, overheads, etc. Its degree may decrease parallel with the increase in the experience and performance of the workers, however, it can be interpreted in any case in terms of a period of several years.

   The costs of the management organising the employment and of the services improving the ability to work cannot be covered from the market revenues either. It may represent a new solution in supporting the employment projects and strengthening the competition between the organisations, thus increasing the social impact of the projects if the entitlement to support as "capital stock" is brought by the individual into the community enterprise.

4. Summary

Regional backwardness is a complex phenomenon that can be easily studied in the region of Northern Hungary and that covers approximately one third of the settlements of the region. It can only be managed by a multi-front approach, by integrated development exerting a combined impact on the factors of deprivation. The following local development efforts arising from the wish for convergence and aimed at constructing the fundamental infrastructure and creating a mass of concentrated jobs may be fortunately combined with the innovative development ensuring a new development path that is considerably encouraged from outside in the scenario built on strengthening the social economy.

The non-profit economy, on the one hand, will ensure that the local population obtains advantages, and that the aspects of sustainable development prevail, and on the other, it both receives and generates innovative changes. Through its activities it demonstrates that is possible to achieve changes also in these regions, that there exist new paths and development directions that are different from the familiar ones, and that the local population is able to move forward along them provided they obtain the necessary knowledge and skills. The social and community enterprises belonging to the sphere of social economy promote the acquisition of this knowledge, preparation for the new activities and at the same time provide models and pave the road for other community enterprises and also for other enterprises not operating in the community framework any longer. In order to achieve success:

− The necessary management, entrepreneurial and social knowledge is to be provided
− The training and information networks are to be built
− The community infrastructure promoting the increase of the social capital is to be built
− The appropriate forms of financing are to established (local funds, investment clubs, organisations in close connections with the public institutions, entrepreneurial networks involved in financial activities).

The beginning of the process is indicated by uncoordinated community entrepreneurial initiatives present in the region, supported from European Union funds, but operating currently in isolation.

References

[1] Bauhaus Foundation et al (eds) 1996: *People's Economy. Approaches towards a new social economy in Europe.* Dessau: Bauhaus Foundation

[2] Birkhölzer, K. 1999: Local Economic Development. A European-wide movement towards more economic democracy and social justice. *Local Economy* Vol. 14, No 1, London: Local Economic Policy Unit.

[3] Brugger, E.A. 1986: Endogenous development. A concept between utopia and reality. In: Bassand et all (eds.) *Self-reliant development in Europe.* Gower Publishing Company.

[4] Daly, H.; Cobb, J. B. 1990: *For the Common Good. Redirecting the economy towards community, the environment and a sustainable future.* London: Green Print

[5] Faluvégi A. 1995: Az elmaradott térségek lehatárolásának módszerei. *Statisztikai Szemle* 7. 571-590.

[6] G. Fekete É. – Solymári G. 2004: A szociális gazdaság kiépítésének esélye és feltételei az Észak-magyarországi régióban. *Észak-magyarországi Stratégiai Füzetek* 2. 32-78.

[7] G. Fekete, E. 2001: *Együtt! – De hogyan? Innovációk a kistérségi fejlesztésekben.* MTA Regionális Kutatások Központja, Miskolc-Pécs

[8] István T.né 2001: Az elmaradott megyék országon belüli és egymáshoz viszonyított helyzete. *Területi Statisztika* 3. 301-307.

[9] Laky I. 1999: *Az elérési viszonyok alkalmazása a kedvezményezett térségek lehatárolásában.* TERRA STUDIO Kft., Tanulmány

[10] László E. 1974: *A Strategy for the Future.* Braziller, New York

[11] Laville, J.-L. 1998: *Perspectives for the Social Economy in Europe. From the Social Enterprises to a Civil and Solidarity-Based Economy.* Paris: CRIDA-LSCI (National Centre of Scientific Research)

[12] Myrdal, G. 1956: *Development and Underdevelopment.* World Bank, Kairo

[13] Nemes-Nagy J. 1998: Vesztesek – nyertesek – stagnálók. *Társadalmi Szemle* 8-9. 5-18.

[14] Oberle, W., J. Darby, and K. Stowers. 1975. Implications for Development: Social Participation of the Poor in the Ozarks. *Journal of the Community Development Society.* Vol. 6, No. 2: 64-78.

DER PROZESS DER TRANSITION DER WIRTSCHAFT

FÜR IMMER ARBEITSLOS?

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Abstract: Following the period of the first industrial revolution that was begun in the 19th century from the second half of the 20th century on, the second industrial revolution based on automation and the third based on computerisation have been launched in the developed countries. The process has resulted in a huge increase in productivity and the intensification of the employment problems. Developing countries have become more and more involved in the international division of labour in the framework of globalisation, thus further deepening the problems of unemployment in the developed world.

In the developed countries the demographic processes lead to a stagnation and decrease in the number of population, as well as to an increase in the average age. The economic and demographic problems of the developed countries endanger the sustainability of the achievements of the welfare society. The author makes a proposal for the transformation of the social systems and for the renewal of the social market economy. This includes a proposal for the equal distribution of jobs, as well as for providing social services as a counterpart of socially beneficial non-profit activities.

1. Einleitung

Die wirtschaftliche Entwicklung

Wie wir wissen unterlag die Welt schon immer einer ständigen Veränderung und das nicht nur in den letzten 200 Jahren. Für die Betrachtung der Transition, d.h. dem industriellen Wandel der Wirtschaft, ist es sicherlich ausreichend, nur diesen Zeitraum genauer zu betrachten.

Bei der Analyse des Sachverhalts stößt man unweigerlich auf den Begriff *"Industrielle Revolution*", der zum ersten Mal von Arnold Toynbee *(1852-83, Lectures on The Industrial Revolution in England, 1884 posthum veröffentlicht)* geprägt wurde. Dieser Begriff wurde zum Symbol gravierender Veränderungen in der Wirtschaft und der damit einher gehenden veränderten Gesellschaftsformen.

Im 19. Jahrhundert war die *erste industrielle Revolution* in Europa geprägt durch den Übergang zur maschinellen Produktion in Großbetrieben in Verbindung mit dem

Aufkommen mechanisch angetriebener Verkehrsmittel wie Eisenbahn und Dampfschifffahrt.

Die Menschen zogen vom Land in die Stadt, *um zu arbeiten*, es entstanden Industriereviere, Großstädte, und der wirtschaftliche Wandel vom Agrar- zur Industriegesellschaft nahm seinen Lauf.

Ab der Mitte des 20. Jahrhunderts begann die Welle der Automatisierung industrieller Prozesse. Man definiert diese Epoche auch als *zweite,* und im Zusammenhang mit dem Einsatz von elektronischen Steuerungselementen wie Mikroprozessoren wird nun von der *dritten industriellen Revolution* gesprochen (Abbildung 1).
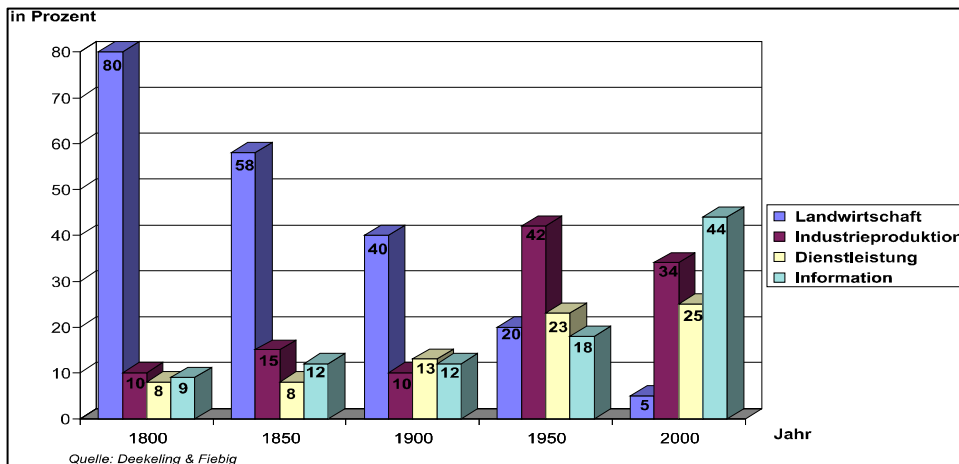
Abbildung 1: **Wandel von der Agrar- zur Industriegesellschaft (1)**

Diese Einteilung mag manchem Wirtschaftshistoriker oberflächlich vorkommen, doch entscheidend ist die Tatsache, dass bis zu diesem Zeitpunkt die mit den Revolutionen verbundenen Produktivitätssteigerungen ***stets so viele neue Arbeitsplätze geschaffen haben, wie* vernichtet *wurden,*** d.h., dass Massen von Menschen Seite an Seite mit den Maschinen die Waren und Dienstleistungen produzierten.

Nicht nur in Europa gab es solche Revolutionen, sondern z. B. auch in den USA. Nur ein Fall von vielen soll hier exemplarisch aufgeführt werden:

Im Oktober 1944 trafen sich ca. 3000 Menschen auf der Baumwollplantage in Clarksdale im Staate Mississippi, um die Funktion der ersten Baumwollpflückmaschine mit zu erleben. Mit Ehrfurcht bestaunten die Baumwollpflücker die funktionierende Maschine und erlebten gleichzeitig einen unvorstellbaren Produktionszuwachs. Die Maschine pflückte 1000 Pfund Baumwolle in der Stunde, während ein Baumwollpflücker gerade mal 20 Pfund schaffte.

Durch diese Entwicklung wurde die größte Binnenvölkerwanderung in den USA ausgelöst. In der Zeit von 1940 bis 1970 wanderten etwa fünf Millionen Afro-Amerikaner in den Norden der USA. Das Industriezeitalter hatte somit die Voraussetzungen für das Ende der Sklavenarbeit geschaffen.

Heute im Informationszeitalter gilt die **alte Weltanschauung** nicht mehr,

> *„dass die enormen Produktivitätssteigerungen es ermöglichen, billigere Waren zu produzieren und diese abermals die Nachfrage stimulieren. Eine gestiegene Nachfrage führt nun wiederum zu einer höheren Produktivität, die ihrerseits einer steigende Nachfrage verursacht und so die Menschen dauerhaft beschäftigen würde – ein Kreislauf ohne Ende -?"*

Es ist einfach Fakt, dass durch die Informationstechnologie mehr Arbeitsplätze vernichtet als geschaffen werden. Der dadurch entstehende Produktivitätszuwachs ist um ein vielfaches größer als bei den früheren industriellen Revolutionen.

Alliance Capital Management untersuchte den Abbau von Fabrikarbeitsplätzen der 20 größten Volkswirtschaften in Relation zu deren Produktivitätszuwächsen. Nach der im Jahr 2003 veröffentlichten Untersuchung wurden im Zeitraum von 1995 bis 2002 etwa 31 Millionen produktionsnahe Stellen abgebaut. Im gleichen Zeitraum stieg die Produktivität um 4,3% und die Industrieproduktion nahm um mehr als 30% zu. (2)
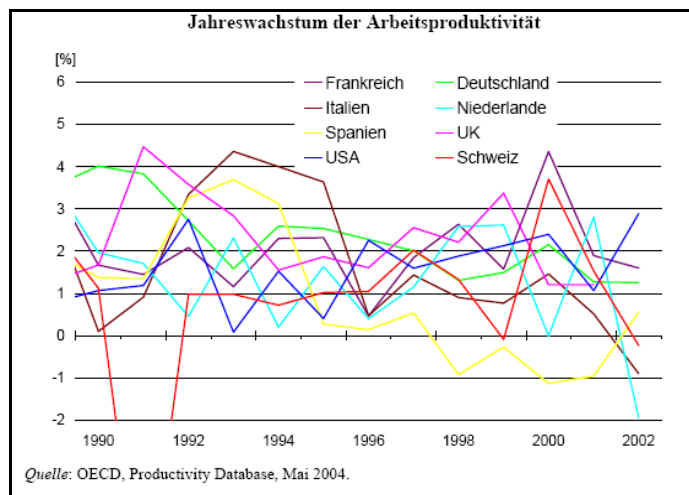

***Abbildung 2:* Produktivitätsentwicklung einiger Industrieländer**

Die weltweite Zahl der Beschäftigten im produzierenden Gewerbe beträgt heute ca. 163 Millionen Stellen und Prognosen zur Folge rechnet man im Jahr 2040 nur noch mit wenigen Millionen. Eine globale industrielle Massenarbeitslosigkeit gekennzeichnet durch den neuen Begriff der *technologisch bedingten Arbeitslosigkeit* ist nach den jetzigen Gegebenheiten unausweichlich. (2)

Wirtschafttheoretisches Handeln und der technische Fortschritt

Die Annahme, dass technische Neuerungen und der damit verbundene stetige Produktivitätszuwachs auf Dauer nachhaltiges Wachstum und Vollbeschäftigung gewährleisten, hat seit Bestehen dieser These eine ständige Diskussionen ausgelöst. Die Wirtschaftspolitik aller Industriestaaten beruht nach wie vor auf diesem - seit der ersten industriellen Revolution - vertretenen ökonomischen Lehrsatz:

> *„Die Produktivität wird durch neue Technologien gesteigert, dadurch werden die Kosten gesenkt und somit das Angebot an billigeren Waren vergrößert. Aus diesem Prozess heraus wachsen Kaufkraft und Märkte und es werden immer neue Arbeitsplätze geschaffen.“*

Die Folgen dieser Logik zeichnen sich für Kritiker und Befürworter immer deutlicher am Horizont ab: (Abbildung 3)

- stetiger Rückgang der Kaufkraft,
- dauerhafte Überproduktion,
- ständig steigende Arbeitslosenquoten,
- ein seit Jahren geringes Wirtschaftswachstum mit sich tendenziell anbahnenden Wirtschaftskrisen.
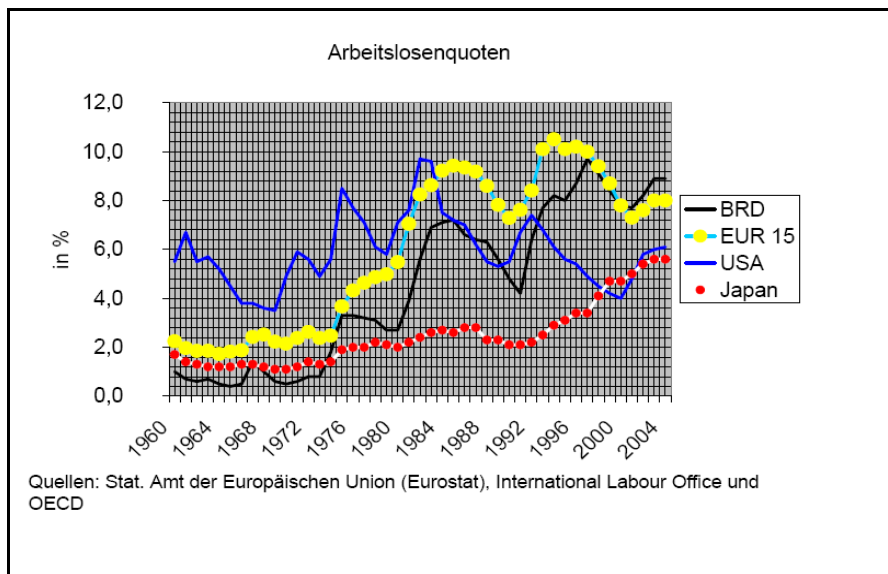

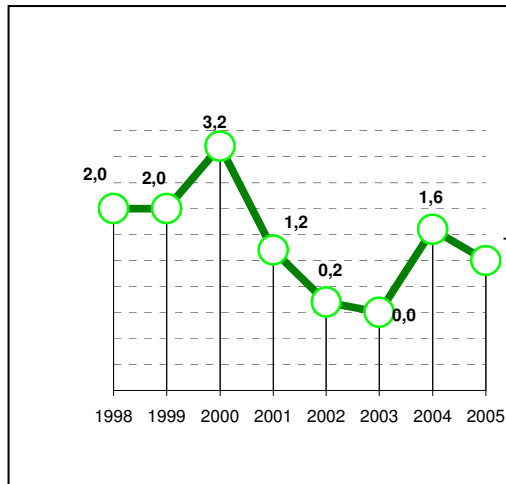*Abbildung 3:* **Arbeitslosenquoten in der Bundesrepublik, Europa, USA und Japan von 1990 bis 2004**

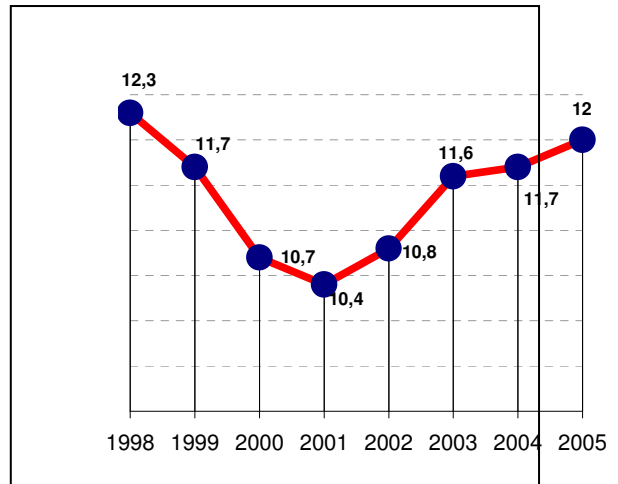*Abbildung 4:* **Steigerung des BIP in Prozent (Quelle: Destatis)**

Abbildung 5: **Durchschnittliche Arbeitslose in Prozent (Quelle: Destatis)**

Zu Jahresbeginn 2005 war die Prognose der Bundesregierung 1,4% Wachstum für dieses Jahr. Der Wert wurde auf 1% zurückgenommen. Die Prognosen für 2006 pendeln sich ebenfalls um den Wert 1% ein. Geht man aber von den Korrekturen der vergangenen Jahre aus, so wird der Wert eher bei 0,8% liegen, was faktisch wieder einem Null-Wachstum gleichkommen würde.

1867 vertritt Karl Marx in seinem ersten Buch die These, dass die Unternehmer immer bestrebt sind, die Lohnkosten zu senken und die Produktionsmittel soweit als möglich in ihre Verfügungsgewalt zu bekommen. Sie ersetzen daher, wo immer es möglich ist, **Menschen durch Maschinen** und profitieren somit nicht nur von der steigenden Produktivität und den sinkenden Kosten, sondern auch noch von der entstehenden Reservearmee von Arbeitlosen, deren Arbeitskraft in anderen Wirtschaftszweigen ausgebeutet werden kann. Marx vertrat darüber hinaus die These, dass im Laufe der wirtschaftlichen Entwicklung durch Automatisierung und den damit verbundenen Produktivitätssteigerungen alle Arbeiter überflüssig werden würden.

Marx konnte allerdings nicht voraussehen, dass eine Vielzahl von sozialen Absicherungssystemen und eine straff organisierte tarifpolitische Landschaft entstand. Beide Entwicklungen haben es bis zum Beginn der informationstechnischen Revolution verhindert, dass ein Reserveheer von Arbeitern entstand, deren Löhne immer weiter gedrückt werden konnten, so dass sie alsbald keine Kaufkraft mehr besaßen, um sich noch bestimmte Produkte leisten zu können.

In Europa fallen derzeit etwa 50%, in den USA dagegen nur ca. 28% *(New York Times 9.8.93)* Lohnnebenkosten an. Die Frage ist, wie lange wir uns das noch leisten können, denn diese Entwicklung wird immer mehr zum Handelshemmnis.

Welche Narben schlug die Informationstechnologie bis heute in unsere Arbeitsgesellschaft

Die dritte industrielle Revolution zeigt weltweit ihre destabilisierende Wirkung. In allen entwickelten Nationen setzen neue Technologien sowie den technologischen Möglichkeiten angepasste Managementmethoden die Arbeitnehmer unter Druck und viele verlieren ihre Arbeit. Die bereits angesprochene Reservearmee von Gelegenheitsbeschäftigten, Jobsuchenden und Langzeitarbeitslosen rekrutiert sich seit langem. Die Kluft zwischen Arm und Reich vergrößert sich ständig (BRD-Vermögensbericht 2004).

In den Ländern der OECD waren 1994 etwa 35 Millionen Menschen arbeitslos und es gab im gleichen Zeitraum ca. 15 Millionen, die ihre Arbeitsuche aufgegeben hatten *(Organization for Economic Cooperation and Development 1994 /7)*. In Lateinamerika beträgt die Arbeitslosenrate der Stadtbevölkerung ca. 8 bis 10%, in Pakistan und Indien weit mehr als 15% *(Human Development Report 1993 / 35)*.

In Europa haben wir uns mit zwei Phänomenen auseinander zu setzen, und zwar mit

- der Sklaventheorie (*nach Helmut Polzer*) sowie
- der Produktivitätssteigerung aus informationstechnischer Sicht.

Zu Punkt 1:

Marx hatte sicherlich mit der Annahme recht, dass die Unternehmer ständig nach billigeren Produktionsmöglichkeiten Ausschau halten. Nach heutigem Wirtschafts- und Managementverständnis ist dies eine der primären Aufgaben eines Unternehmens. Das Wirtschaftswachstum ohne Mehrbeschäftigung, das so genannte jobless recovery, ist deshalb z.Zt. die größte Plage der Politiker und auch mancher Wirtschaftsexperten.

Die Bundesrepublik Deutschland war 2005 Exportweltmeister bei dabei ständig steigender Arbeitslosenzahl. Dieser Effekt war nur durch Verlagerung der Fertigungstiefe in Billiglohnländer möglich (Abbildung 6).

Arbeitskosten in Mittel- und Osteuropa 1997 (in DM)			
		davon	
	Arbeitskosten insgesamt	Direkt-entgelte	Personal-Zusatzkosten	Zusatzkosten-quote
Slowenien	10,93	6,31	4,62	73%
Polen	5,48	3,04	2,44	80%
Slowakei	4,85	2,91	1,94	67%
Ungarn	4,81	2,61	2,2	84%
Tschechien	4,8	2,76	2,04	74%
Estland	3,67	2,32	1,35	58%
Lettland	3,37	2,16	1,21	56%
Litauen	3,24	2,04	1,2	59%
Rußland	3,03	1,71	1,32	77%
Rumänien	1,81	1,06	0,75	70%
Bulgarien	1,42	0,82	0,6	74%
Westdeutschland	47,92	26,36	21,56	82%

Abbildung 6: **Arbeitskosten in Mittel- und Osteuropa 1997**

Das bedeutet nichts anderes, als dass für die wirtschaftliche Herstellung technisch hochwertiger Produkte in den Industriestaaten billige Arbeitkräfte benötigt werden – vergleichsweise wie damals in den Südstaaten der USA billige Arbeiter benötigt wurden, also

Zu Punkt 2:
Nur durch eine Anzahl von Beispielen lässt sich verdeutlichen, was die Produktivitätssteigerung international verursacht hat.

1. **Stahlindustrie**

In den USA stieg in den letzten 20 Jahren die Stahlproduktion von 75 Millionen auf 102 Millionen Tonnen (3). Im gleichen Zeitraum, von 1982 bis 2002, nahm die Zahl der Stahlarbeiter von 289.000 auf 74.000 ab. Weltweit werden derzeit 1053 Millionen Tonnen Stahl produziert
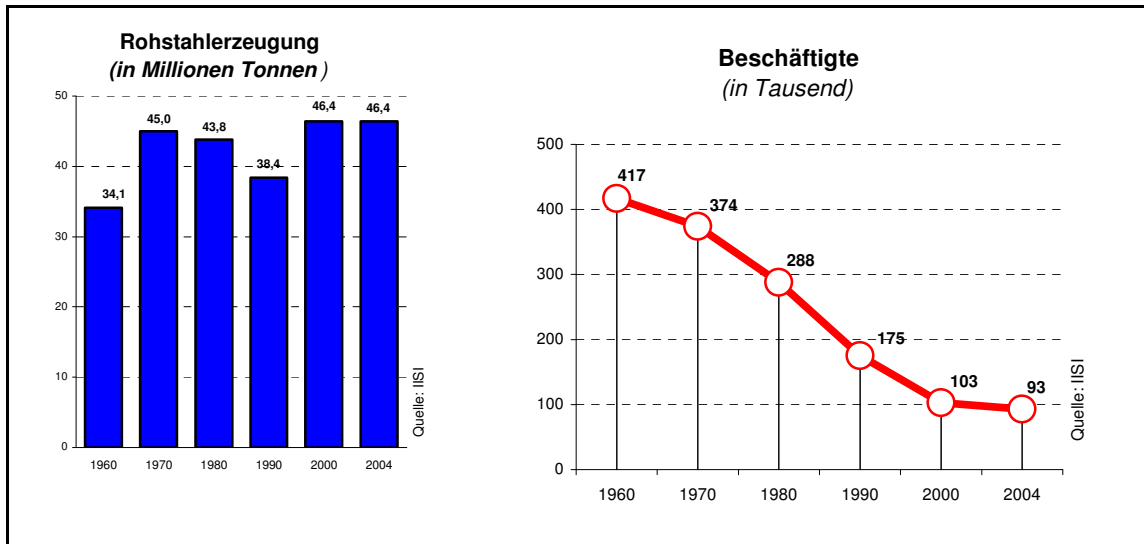In Deutschland ein ähnliches Bild.

Abbildung 7: **Rohstahlerzeugung und Beschäftigte in der Stahlindustrie in Deutschland**

2. Telekommunikation

Die Telefongesellschaft Sprint in den USA hat im Jahr 2002 ihr Auskunfts- und Vermittlungspersonal durch einen Spracherkennungscomputer ausgetauscht. Die Produktivität stieg um 15%, der Gewinn um 4,3%, 11.000 Mitarbeiter verloren ihren Job (4).

In Deutschland hat die Telekom seit der Privatisierung im Jahre 1995 jährlich rund 10.000 Arbeitsplätze abgebaut, das heißt, bis heute haben ca. 100.000 ihren Job verloren. Geplant sind in den Jahren 2006 und 2007 nach eigenen Angaben die Streichung von weiteren ca. 32.000 Stellen in Deutschland. Derzeit werden weltweit ca. 240.000 Mitarbeiter beschäftigt, davon 170.000 in Deutschland (Stuttgarter Zeitung vom 9.2.2006). Der Gewinn der Telekom im Jahr 2004 betrug 4,6 Milliarden €.

3. Automobilbereich

Der weltgrößte Industriezweig stellt jährlich ca. 50 Millionen Automobile her. Die Detroiter Autofirmen produzieren ca. 12 Millionen Autos mit ca. 2,5 Millionen Arbeitern im Jahr. Kenichi Ohmae, einer der führenden Unternehmensberater Japans, prognostiziert, dass bis zum Ende dieses Jahrzehnts für 12 Millionen in Japan produzierte Autos nicht mehr als 600.000 Arbeiter benötigt werden.

Auch DaimlerChrysler plant in Deutschland einen Stellenabbau im Jahr 2006 von rund 15.000 Arbeitsplätzen. Solche Beispiele könnten noch beliebig fortgesetzt werden, das bedauerliche ist, dass diese Entwicklung erst der Anfang der "Informationsrevolution" ist. Der US-Ökonom William Leiseräson meint: Das Heer der Arbeitslosen ist genauso wenig arbeitslos wie die Feuerwehrleute oder Polizisten, die auf der Wache auf ihren nächsten Einsatz warten *(zit. n. Political Science Quarterly, 31.03. 1916/12)*. Ist das die Lösung?

2. Die Entwicklung und der Stand der Sozialsysteme

2.1 Basis der Sozialsysteme

Um zu verhindern, was Engels und Marx prognostizierten, nämlich die Verelendung der Arbeiterklasse, wurde in Europa nach dem 2. Weltkrieg ein soziales Netz geschaffen.

1. Auf der Basis von Generationenverträgen wurden eingeführt:
    *   Rentenversicherungen (Als Bismarck im Jahr 1871 die Rente einführte, war das Durchschnittsalter in Deutschland ca. 40 Jahre),
    *   Arbeitslosenversicherungen,
    *   Krankenversicherungen,
    *   Pflegeversicherungen,
    *   ein Solidaritätszuschlagsystem,
    *   etc.

Die Gründungsväter und Architekten dieser Sozialsysteme hatten das Ziel, keine Zwei-Klassengesellschaft von Armen und Reichen entstehen zu lassen.

2. Die Tarifautonomie in Europa half auch noch kräftig nach, um der arbeitenden Gesellschaft das Leben so angenehm wie möglich zu gestalten.

Folgende Faktoren in der Bundesrepublik Deutschland spielen in den globalen Märkten eine wesentlich Rolle:
*   bezahlte Feiertage sowie Urlaub von ca. 40 Tagen,
*   Sonderzahlungen wie Urlaubs- und Weihnachtsgeld,
*   die sehr geringe Jahresarbeitszeit von etwa 1.360 Std.,
*   paritätische Mitbestimmung bei Kapitalgesellschaften,
*   etc.

Der Staat verstärkte die Situation noch durch hohe Abgaben für die Unternehmen (Abbildung 8).
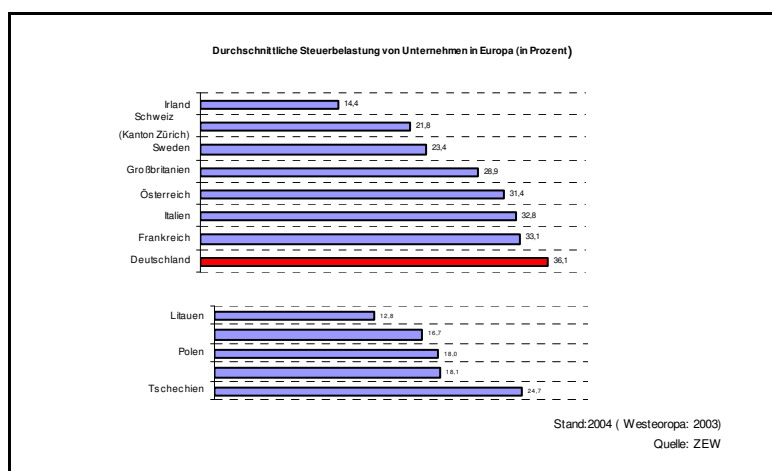
Durchschnittliche Steuerbelastung von Unternehmen in Europa (in Prozent)

Land	Prozent
Irland	14,4
Schweiz (Kanton Zürich)	21,8
Sweden	23,4
Großbritanien	28,9
Österreich	31,4
Italien	32,8
Frankreich	33,1
Deutschland	36,1
Litauen	12,8
	16,7
Polen	18,0
	18,1
Tschechien	24,7

Stand:2004 (Westeoropa: 2003)
Quelle: ZEW

Abbildung 8: **Steuerbelastung der Unternehmen in Europa**

Diese Absicherungssysteme entwickeln sich als Hemmschuh kontinuierlich weiter, besonders für die deutsche, aber auch im zunehmenden Maß für die europäische Wirtschaft, ***denn sie sind nicht mehr finanzierbar*** und heute bereits bankrott.

2.2 Die „Eurosklerose" der sozialen Sicherungssysteme

Um die empirische Aussagekraft dieser Betrachtungen zu gewährleisten, wird eine Generationenbilanz der Sozialsysteme vorgenommen, der folgende Datenbasis zugrunde liegt:

- Es werden die Daten aus den Konten der Volkswirtschaftlichen Gesamtrechnung (VGR) für das Basisjahr 2002 verwendet.
- Es werden die Profile herangezogen, die aus der Einkommens- und Verbraucherstichprobe (EVS) stammen.
- Es wird die 5. Variante der 10. koordinierten Bevölkerungsprojektion des Statistischen Bundesamtes mit in die Betrachtung einbezogen.
- Der Diskontierungssatz i wird mit 3%, die Wachstumsrate g mit 1,5 % unterstellt.

Für die Aggregatfortschreibung wird weiter angenommen, dass sich die Entwicklung aller Ausgaben entsprechend dem Wachstum des Bruttoinlandsprodukts (BIP) entwickeln, mit Ausnahme der monetären Sozialleistungen, der sozialen Sachleistungen und der Ausgaben für unser Bildungssystem.

Nach den Veröffentlichungen von Franco und Munzi (1997) wird unterstellt, dass alle Erwerbstätigen zusammen das gesamte BIP erzeugen und jeder im gleichen Umfang dazu beiträgt. Des weiteren wird davon ausgegangen, dass die ostdeutsche Bevölkerung bis zum Jahr 2040 den gleichen Anteil am BIP erwirtschaftet, wie die Westdeutschen.

Die aus dieser Berechnungsgrundlage sich ergebende *Nachhaltigkeitslücke* liegt zwischen 331,3 % und 477,7 % des BIP (5), d.h., bezüglich der verwendeten Indikatoren ergibt sich eine Nachhaltigkeitslücke vom 5- bis 8-fachen der ausgewiesenen Staatsschuld von 60,8 % des BIP.

Um einen zwischenzeitlichen Budgetausgleich zu erzielen, müssten jährlich 129,86 Mrd. € (= 6,16 % des BIP) bzw. 187,2 Mrd. € (= 8,88 % des BIP) aufgewendet werden. Im Jahr 2002 wurden allerdings nur 65 Mrd. € für die Schuldenbedienung aufgewendet (6).
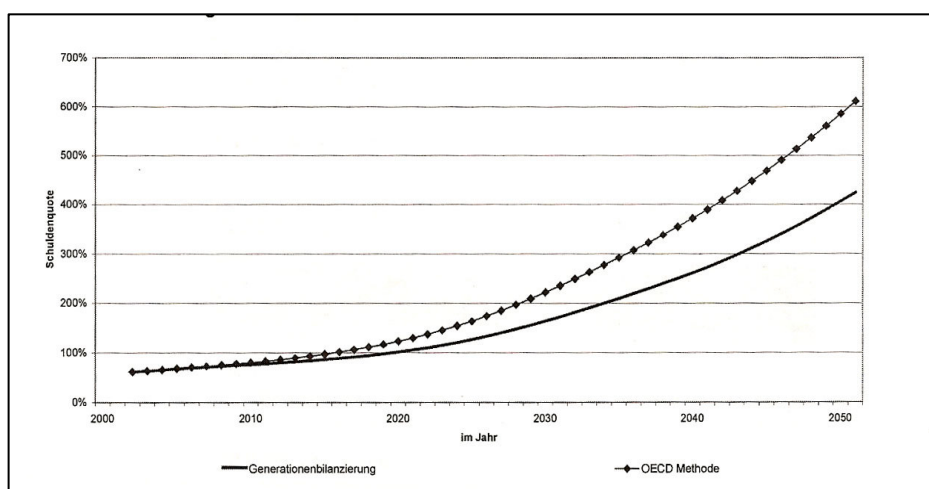
Abbildung 9: **Prognostizierter Schuldenverlauf für die nächsten 50 Jahre**

Dass die Bundesrepublik Deutschland mit einer Nettokreditaufnahme von 38,3 Milliarden € auch im Jahr 2006 die Maastrichter Kriterien nicht erfüllt, ist nichts Neues, dass aber in den nächsten 20 Jahren das Maastricht-Kriterium der Staatsverschuldung von 60% des BIP überschritten wird und in 40 Jahren sich ein Schuldenstand von über 300 % des BIP einstellen wird, ist sicherlich nicht allgemein bekannt (Abbildung 9).

Die Sozialsicherungssysteme haben im allgemeinen keinen besseren Zustand. Deren miserable Situation soll exemplarisch am Fall der Pflegeversicherung dargestellt werden (Abbildung 10). 1995 konzipierte der damalige Sozialminister Norbert Blüm die Pflegeversicherung (GPV) als umlagenfinanzierten Generationenvertrag, d.h. die junge
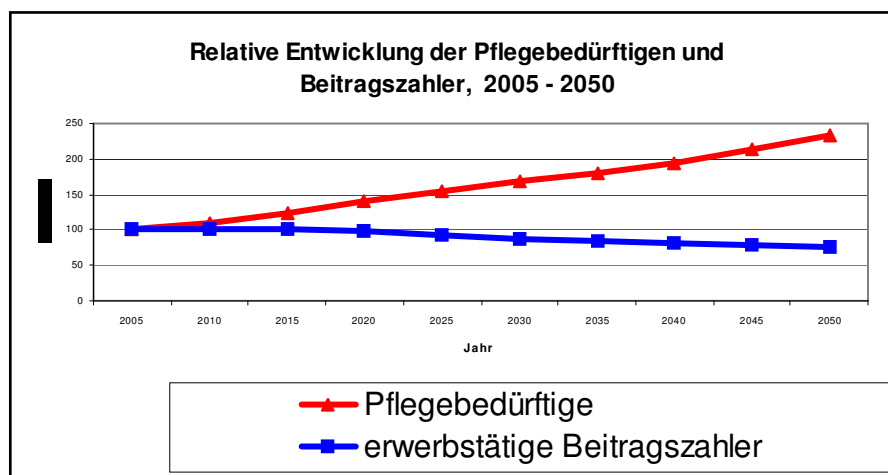
Abbildung 10: **Entwicklung der Pflegebedürftigen und der Beitragszahler (7)**

Generation der Erwerbstätigen finanziert aus ihren Löhnen gemeinsam mit den rentenbezogenen Beiträgen der Älteren die laufenden Ausgaben für die Pflegebedürftigen. Als generationengerecht ist ein Vertrag bzw. Gesetz aber nur dann einzustufen, wenn zukünftige Generationen bei gleicher Abgabenlast die gleichen Leistungen von der staatlichen Gemeinschaft erhalten können, wie die heute lebende Generation. Von einer nachhaltigen Pflegeversicherung sind wir derzeit weit entfernt. Die Senioren erhalten den Großteil der Leistungen bei minimalen Beitragszahlungen (Abbildung 11).
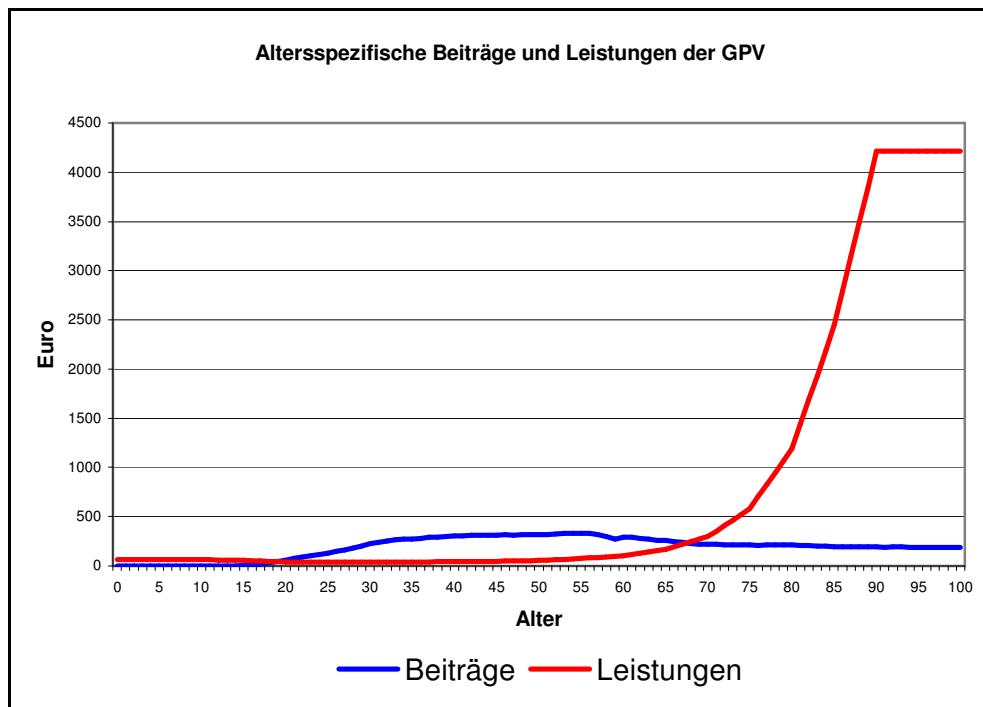
Abbildung 11: **Altersspezifische Beiträge und Leistungen der GVP (7)**

Die heutigen Beitragssätze von 1,7% werden sich bis zum Jahr 2030 verdoppeln, wenn das gegenwärtige Leistungsniveau unter realistischen demografischen Annahmen gesichert sein soll. Bei einem unterstellten Wachstum von 1,5% wird der zukünftigen Generation eine Last von 35,9% des BIP abverlangt. Unterstellt man ein Wachstum von 2,5% ist die Last 67,4% des BIP.

Mit der Generationenbilanz kann nachgewiesen werden, ob eine Lastverschiebung stattfindet, indem man aus den entsprechenden Generationenkonten aller lebenden Durchschnittsbürger je Altersjahrgang saldiert. Das Generationenkonto eines repräsentativen Durchschnittsbürgers erhält man durch Addition des Barwertes aller Einzahlungen über den restlichen Lebenszyklus, wovon man den Barwert der statistisch erwarteten Leistungsansprüche abzieht.
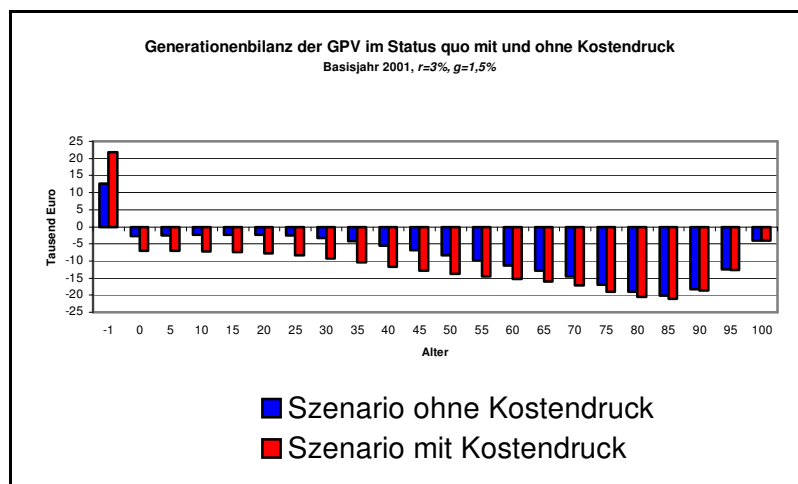
Abbildung 12: **Generationenbilanz der GVP (7)**

Abbildung 12 zeigt eindrucksvoll, dass alle derzeit lebenden Generationen Nettotransferempfänger sind, und kein Durchschnittsindividuum (DID) nur annähernd den Barwert der voraussichtlichen Leistungen durch Beiträge bezahlt.

Wenn man die Generationenkonten der DID mit den Jahrgangsstärken gewichtet und über alle lebenden und zukünftigen Kohorten addiert, ergibt sich daraus die Nachhaltigkeitslücke. Sie zeigt, welche Reserven fehlen, wenn alle zukünftigen Generationen das gegenwärtige Leistungsniveau der GVP erhalten sollen.
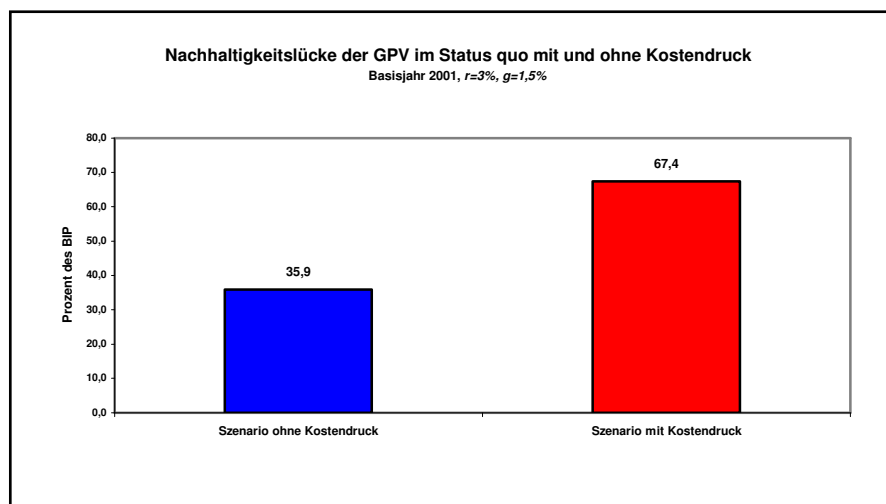

Abbildung 13: **Die Nachhaltigkeitslücke der GVP in Status Quo mit und ohne**

Kostendruck (7)

Die Nachhaltigkeitslücke liegt zwischen 35,9% des BIP, was einem Fehlbetrag von 740 Mrd. € entspricht, und 67,4 % des BIP, was ein Fehlbetrag von 1.400 Mrd. € bedeutet (Abbildung 13). Welcher Wert nun letztlich zum tragen kommt, hängt im wesentlichen von der Dynamisierung der Leistungen ab. Das Beispiel der GVP zeigt exemplarisch den Zustand der sozialen Sicherungssysteme in der Bundesrepublik. Der prognostizierte Anstieg der Arbeitslosen durch weitere Produktivitätssteigerungen wird die derzeitigen Sozialsysteme eklatant belasten und bis zum Jahr 2015 in der jetzigen Form unbezahlbar machen.

3. Die wirtschaftliche Entwicklung der „Dritt-Länder"

Bei der globalen wirtschaftlichen Entwicklung der Dritt-Länder sehen wir uns mit drei wesentlichen Problematiken konfrontiert:

1. Die Bevölkerungsentwicklung und somit das Heer der ankommenden Menschen, die Arbeit benötigen;
2. Die wachsende Zahl der Unqualifizierten, deren Arbeitskraft seit der dritten informationstechnologischen Revolution nicht mehr benötigt wird;
3. Der Produktivitätszuwachs in den Standorten der Dritt-Länder.

Zu Punkt 1 und 2:

Betrachtet man die Bevölkerungsentwicklung weltweit, so zeichnet sich ein düsteres Bild für die Menschen der Dritten Welt ab: Die Weltbevölkerung betrug im Jahre 2003 ca. 6,4 Milliarden Menschen und wird sich bis zum Jahr 2030 auf 8,5 Milliarden erhöhen, also um ca. 30% ansteigen.

Im Jahr 2000 zählte man ca. 606 Millionen ältere Menschen, bis zum Jahr 2050 wird sich diese Zahl auf ca. 1,97 Milliarden verdreifachen.
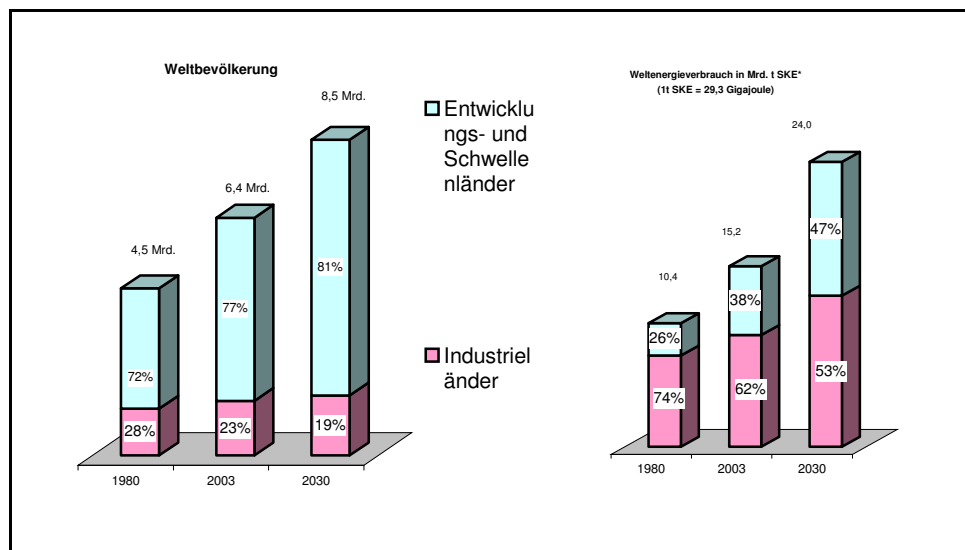
Abbildung 14: **Bevölkerungsentwicklung und Energiebedarf weltweit (8)**

Abbildung 14 zeigt in beeindruckender Weise die drei Tatbestände, dass

1. der Bevölkerungszuwachs fast ausschließlich durch die unterentwickelten bzw. Schwellenländer veranlasst wird,
2. die wenigen Menschen der Industriestaaten über 50% des Energiebedarfs benötigen,
3. in den Industriestaaten weltweit ein Bevölkerungsrückgang zu verzeichnen ist.

Zu Punkt 1:

Auf Grund des Bevölkerungswachstums wird mit einer Zunahme von ca. 700 Millionen Arbeitskräften auf dem Arbeitsmarkt gerechnet. Das sind mehr Arbeitskräfte als 1990 in allen Industriestaaten zusammen am Arbeitsprozess beteiligt waren.

Auch in anderen Regionen der Welt sieht die Situation nicht viel besser aus. Man erwartet in der zentralamerikanischen Region einschließlich Mexiko und der Karibik ein Arbeitskräftezuwachs bis zum Jahr 2030 von weiteren 52 Millionen. Auch auf dem afrikanischen Kontinent wird sich die Zahl der arbeitsfähigen Menschen um weitere 323 Millionen erhöhen – das sind mehr als derzeit in Europa beschäftigt sind *(Population Committee 1989, 18 ff).*

Nach neuerlichen Untersuchungen müssten in den nächsten 10 Jahren eine Milliarde Arbeitsplätze geschaffen werden, um den in den Entwicklungsländern entstehenden Arbeitskräften eine vernünftige Perspektive zu geben (*Human Development Report 1993, 37).* Berücksichtigt man zu der numerischen Betrachtung noch die Qualifikation der Arbeitkräfte, lässt sich leicht erkennen, wie weit sich die Kluft zwischen Arm und Reich verbreitern wird und mit welchen sozialen Spannungen in den nächsten Jahren zu rechnen ist.

Es ist unverständlich, wie die Weltgemeinschaft tatenlos zusieht und es sogar noch zulässt, dass einige wenige Staaten ein überdurchschnittliches Menschenwachstum ohne Perspektive produzieren. Es ist auch nicht nachzuvollziehen, wie Versuche von Geburtenregulierungen wie in China hierzulande ständig kritisiert werden, anstatt sie zu befürworten, um einer Überbevölkerung entgegenzutreten.

Ein Beispiel möge die Situation veranschaulichen:

Bangalore ist der Innbegriff der Hightech-Welt für Indien. Die 4,2 Millionen Stadt wird auch das Silikon Valley von Indien bezeichnet. Die weltgrößten Firmen wie IBM, Motorola, Texas Instruments, Hewlett-Packard, etc. sind hier vertreten. Es arbeiten dort hervorragende Wissenschaftler und Ingenieure mit Weltniveau. Das ist die eine Seite!

Bangalore ist aber auch eine Hightech-Enklave mitten unter Millionen verelendeten Landsleuten. Es hat sich ein Graben zwischen der neuen Schicht und der abrutschenden Mittelschicht sowie der verarmten Arbeiterschicht aufgetan, der sich ständig vergrößert. Der Kontrast zwischen der Hightech-Welt und der Lowtech-Vergangenheit könnte nicht größer sein, wobei ein Großteil der Bevölkerung nicht einmal die technische Revolution durchlaufen hat. Das ist die andere Seite!

Zu Punkt 3:

Die weit verbreitete Meinung, dass heute in Dritt-Länder lediglich alte Technologien mit hohem Arbeitszeitanteil transferiert werden, ist falsch. Die Blüte der Lowtech-Verlagerung war in den 70-iger Jahren, als die Produktionen von Bluejeans, Tennisbällen, Schuhen, Textilien etc. transferiert wurden. Heute hat sich die Strategie vollständig gewandelt.

Nach eigenen Recherchen in China 2005, unter anderem bei Bosch in Shanghai, steht bei einem Markteintritt in ein Land, in dem investiert werden soll, im Vordergrund die Differenzierung zwischen einheimischen und ausländischen Produkten. Diese kann jedoch nur über einen höheren Qualitätsstandard erreicht werden, der wiederum die modernste Technologie bedingt.

Auf Grund dieser Strategie werden die Dritt-Länder ebenfalls von der Produktivitätssteigerung hart getroffen. Die chinesische Regierung hat bereit 1994 ein Programm zur Restrukturierung und Modernisierung aufgelegt, damit inländische Produkte ebenfalls am Weltmarkt konkurrenzfähig werden *(Wall Street Journal 16.02.94, A13).* Man rechnet damit, dass dieses Programm ca. 30 Millionen Chinesen den Arbeitsplatz kosten wird.

3.1 Die Welt wird eskalieren

Abbildung 15: **Arbeitslosigkeit als Ausgangslage**

Aufgrund der wachsenden Arbeitslosigkeit als Ausgangslage (Abbildung 15) sowie auch der falschen Zuwanderungspolitik der Industrieländer wird eine ständig steigende Kriminalität die unausweichliche Folge sein. Wissenschaftler der Universität Utah fanden heraus, dass in den USA der Anstieg der Arbeitslosenquote um 1% zu einer Zunahme

- der Mordfälle um 6,7% (= 1.459 Fälle),
- der Gewaltverbrechen um 3,4% (= 62.607 Fälle) sowie
- der Eigentumsdelikte um 2,4% (= 223.500 Fälle)

führte (9).

Sinkende Einkommen, eine ständig zunehmende Arbeitslosenquote, sinkende Kaufkraft und eine verfehlte, auf Humanität und kulturellen Mix (***Multikulti***) aufgebaute Einwanderungspolitik, führt in den europäischen Ländern zur gleichen Entwicklung wie in den USA. Dazu kommt eine falsch verstandene Toleranz, die zusätzlich Parallelgesellschaften ermöglicht.

Diese Lage soll am Beispiel der Bundesrepublik Deutschland exemplarisch dargestellt werden:
Auf Grund der liberalen Haltung der Bundesregierung kamen im Zeitraum von 1996 bis 2003 ca. 200.000 Kinder und Ehegatten von Ausländern nach Deutschland. Diese Gruppe

von Menschen haben weder unseren Arbeitmarkt bereichert noch dazu beigetragen, dass sich unsere Sozialsysteme erholen konnten.

Der Abbau von Arbeitsplätzen in den traditionellen Wirtschaftszweigen wie der Stahl-, Bergbau- und Automobilzulieferer-Industrie hat besonders die türkischen Ausländer hart getroffen. 1998 waren 21,6% erwerbslos, 1973 waren noch 91% der in Deutschland lebenden Türken in einer sozialversicherungsfähigen Arbeit beschäftigt, 1993 waren es nur noch 29%. Hierbei ist zu berücksichtigen, dass der Zuzug der vielen Familienangehörigen die Zahl geringfügig verzerrt, aber auch diese haben den Arbeitmarkt zusätzlich belastet und nahmen unsere Sozialsysteme in gehörigem Maße in Anspruch.

Bei den schulischen Leistungen sieht es ähnlich aus:

1998 erreichten 80% bestenfalls den Hautschulabschluss. Von ca. 700.000 türkischen Jugendlichen gingen 23.000 (= 3,3%) aufs Gymnasium, ca. 15.000 (= 2,6%) studierten an einer Hochschule (10).

Nach einer UNESCO-Statistik sind rund 27% der Frauen in der Türkei Analphabeten. Durch die liberale Zuwanderungspolitik der Bundesregierung entstehen Familien, deren

Kinder als zweisprachige Analphabeten aufwachsen.

Rund 40% der im Jahr 2000 in Berlin eingeschulten Kinder sprachen kein Deutsch, denn in 37% aller türkischen Migrantenfamilien wird heute noch ausschließlich türkisch gesprochen. Der Grund für diesen hohen Anteil liegt darin, dass viele türkische Familien der Ansicht sind, dadurch ihre türkische Identität erhalten zu können. Der daraus entstehende gesellschaftliche Schaden ist erheblich. Das auf diese Weise früh geschaffene Bildungsdefizit kann kaum aufgeholt werden. So ist es auch nicht verwunderlich, wenn heute ca. 30% der türkischen Jugendlichen nicht einmal den Hauptschulabschluss schaffen. Zur Zeit absolvieren nur ca. 43% der ausländischen Jugendlichen in der Bundesrepublik eine Berufsausbildung. Die Folge dieser Entwicklung ist, dass 44% der Jugendlichen als un- bzw. angelernte Hilfskräfte versuchen, ihren Unterhalt zu verdienen, in einem Hightech-Land, in dem diese Art von Arbeit nicht mehr benötigt wird. Diese Randbedingungen sowie der Produktivitätszuwachs führen zusätzlich dazu, dass die Zahl der Arbeitslosen ständig zunehmen wird und auf Dauer vom bestehenden Sozialsystem nicht mehr aufgefangen werden kann, wie bereits dargestellt wurde. Die Situation sieht in den anderen europäischen Ländern mit hohem Ausländeranteil nicht viel besser aus.

Je mehr Arbeiter und Angestellte durch die fortschreitende Automatisierung ihre Arbeitsplätze verlieren, desto stärker wird die Kriminalität zunehmen. Arbeitslose und nicht mehr Vermittelbare kommen in eine Abwärtsspirale, an deren Ende es niemanden mehr gibt, der sie auffangen kann und wird. Um überleben zu können, müssen sie Kriminelle werden, ausgeschlossen von der globalen Hightech-Welt werden sie sich das holen, was ihnen die Kräfte des Marktes verwehren.

„Technologische Arbeitslosigkeit" und Zuwanderung bringen viele Städte an den Rand dessen, was sie überhaupt in der Lage zu leisten sind. Zunehmende Armut, kulturelle und soziale Spannungen führen zu spontanen Unruhen und kollektiver Gewalt:

- in den Niederlanden 1975 der Molukkenaufstand, ein Kulturaufstand durch die Muslime, die Ermordung von Theo van Ghogh am 2.11.2004;
- in Frankreich der Jugendaufstand 1990 in der Arbeiterstadt Vaux-en-Valin, 2005 Jugendaufstände in Paris, Straßburg und in fast allen größeren Städten Frankreichs;
- in England der Jugendaufstand in Bristol im Juli 1992;
- etc.

Der US-Publizist Nathan Gardel *(Washington Post 11.04.93, C4)* beschreibt die Entwicklung wie folgt:

> *„Die Lage ist schlimmer als die der kolonialisierten Völker. Die Wirtschaft braucht sie nicht mehr ... Wir können nichts mit dem, was sie anzubieten haben, anfangen und sie können nichts kaufen, was wir anzubieten haben."*

Gardel sieht eine Welt der Gesetzlosigkeit auf uns zukommen, in der es in Mitten des Chaos nur noch kleine Inseln von Recht und Ordnung geben wird.

4. Strategien zur Gegensteuerung der aufgezeigten Entwicklung

4.1 Ausgangslage

Erschwerend aus Sicht der heutigen Beurteilung der Wirtschaft ist, dass die EU-Bevölkerung zusätzlich zur steigenden Arbeitslosenzahl veraltet und abnimmt. Zur Zeit sind ca. 2/3 der Erwerbstätigen im Alter zwischen 15 und 64 Jahren. Die Geburtenrate sinkt ebenfalls europaweit. In Deutschland werden derzeit ca. 1,4 Kinder anstatt der notwendigen 2,1 Kinder pro Familie geboren. 2005 verzeichnete das Statistische Bundesamt einen Tiefstand von 676.000 Geburten, 1946 waren es immerhin 922.000. An dieser Entwicklung werden weder die Ganztagsschulen noch die Krippenplatze etwas ändern. Wie stark das persönliche Wohlempfinden eine Rolle spielt, lässt sich an der Entwicklung der ehemaligen Deutschen Demokratischen Republik verdeutlichen: 1988 wurden unter Honecker 222.000 Kinder geboren, 1994 waren es lediglich noch 99.000.

Das hat zur Folge, dass das Heer der Berufstätigen und somit der Steuerzahler in der EU von derzeit ca. 306 Millionen Menschen auf nur noch 255 Millionen im Jahr 2050 nach Schätzungen zur Folge (11) abnehmen wird. Das bedeutet eine Abnahme von 16,7% bei einer gleichzeitigen Zunahme von älteren Menschen um ca. 184%.

In der Bundesrepublik hätten wir bei gleich bleibendem Anstieg im Jahr 2050 ca. 10 bis 12 Millionen Arbeitslose. 28,4% der Erwachsenen werden 65 Jahre und älter sein, bei einer Gesamtbevölkerung, die bis dahin um ca.16 Millionen gesunken sein wird, also nur noch ca. 65 Millionen betragen wird (11). Geht man davon aus, dass die Prognose stimmt und der Altersquotient im Jahr 2050 auf 0,78 steigt, dann wären 50% der erwerbsfähigen Menschen arbeitslos (Eigene Berechnung).
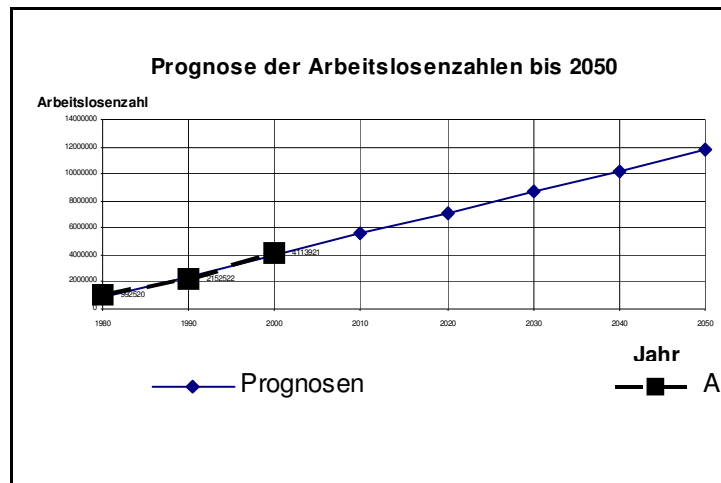
Abbildung 16: **Entwicklung der Arbeitslosigkeit bis 2050**

4.2 Ein verändertes Gesellschafts- und Arbeitssozialmodell

Bereits 1994 hat der Lehrstuhl für Ökonomie der Universität in Miskolc unter Leitung von Prof. Dr. Kocziszky Forschungen bezüglich der dargestellten Entwicklung begonnen. 1996 stellte der Lehrstuhl ein 4-Säulen-Arbeitssozialmodell vor, als eine der möglichen Strategien zur Gegensteuerung der derzeit sich abzeichnenden wirtschaftlichen und gesellschaftlichen Entwicklung.
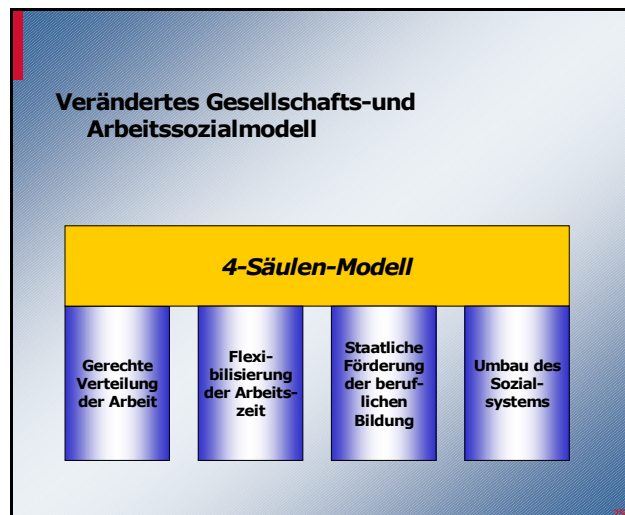

Abbildung 17: **Neues Gesellschaft - und Arbeitssozialmodell (12)**

Seinerzeit war der Leidensdruck in der Gesellschaft noch nicht so groß, dass ein allgemeines oder gar internationales Interesse an der Weiterentwicklung dieses Modellansatzes bestand. Der damalige Schwerpunkt der Diskussion richtete sich auf den Jahrtausendwechsel und auf den Beitritt der 10 neuen EU-Mitglieder im Jahr 2004. Aus diesem Grund sollen im Folgenden die wesentlichen Faktoren sowie die Strategie dieses Modells nochmals dargestellt werden.

4.21 Die gerechte Verteilung der Arbeit

Namhafte Wissenschaftler, so z.B. Dahrendorf (13), haben schon in den 70er Jahren darauf hingewiesen, dass wegen der ständigen Produktivitätssteigerung die wichtigste Aufgabe im 21. Jahrhundert darin bestehen würde, die Arbeit gerecht zu verteilen.

Die Frage, die sich stellt, um einen Produktivitätsausgleich zu schaffen, lautet Reduzierung der Arbeitskräfte oder der Wochenarbeitszeit. Die Industriestaaten der EU haben sich mit den Tarifpartnern im allgemeinen auf die Reduzierung der Wochenarbeitszeit geeinigt. Seit der Industrialisierung vor fast 100 Jahren hat sich die Gesellschaft stets für die Kürzung der Wochenarbeitszeit entschieden.
Zur Erläuterung der „gerechten Verteilung der Arbeit" soll die Lösung zweier EU-Staaten kurz skizziert werden.

Frankreich:
> Die 35-Stunden-Woche wurde im Jahr 2000 für Unternehmen mit mehr als 20 Mitarbeitern *gesetzlich* festgelegt. 2002 wurde das *Gesetz* auf alle Unternehmen ausgeweitet. Ein Lohnausgleich bis zu 39 Stunden wurden festgeschrieben. Um den wirtschaftlichen Nachteil international auszugleichen, subventionierte die Regierung, indem sie die Sozialbeiträge für die Unternehmen senkte, so dass ein Kostenausgleich entstand (14). Darüber hinaus bezuschusste sie Neueinstellungen mit ca. 3 Milliarden € (15). Nach Angaben aus Regierungskreisen konnten so 285.000 neue Arbeitsplätze geschaffen werden (14).

Deutschland:
> In Deutschland sind gesetzliche Bestimmungen wie in Frankreich wegen der Tarifautonomie nicht möglich. Aber die Tarifparteien folgten dem allgemeinen Trend der Wochenarbeitzeitverkürzung. 1995 *erstritten* die Gewerkschaften die 35-Stunden- Woche bei *vollem Lohnausgleich* durch *Streiks*. Im Gegensatz zu Frankreich ging der Schuss allerdings nach hinten los! Die gestiegenen Lohn- und Lohnnebenkosten mussten die Unternehmen durch Produktivitätssteigerungen kompensieren, was bedeutete, dass weniger Menschen auf der Lohnliste standen und die Arbeitslosenzahlen stetig weiter stiegen.

Überall in Europa folgten die Länder dem allgemeinen Trend der Wochenarbeitzeitverkürzung, zumal sich der europäische Gewerkschaftsbund die Erreichung dieses Ziel auf seine Fahne geschrieben hatte. Belgien folgte 2003, und in

anderen EU-Staaten wie Großbritannien, die Niederlande, Dänemark und Norwegen liegt die derzeit durchschnittliche Wochenarbeitszeit bei 37 Stunden. Ziel dieser Bewegung ist es, bis zum Jahre 2030 die Arbeit auf 20 Wochenstunden und einen 6-Stunden-Tag zu reduzieren.

4.22 Flexibilisierung der Arbeitszeit

Bei der Flexibilisierung der Arbeitszeit haben wir zwei Grundsatzinteressen zu unterscheiden:

1. Die Unternehmen:
   Die Unternehmen würden am liebsten auf das Heer der Reservearmee der Arbeitslosen zurückgreifen und eine *„just in time"* -Flexibilisierung anstreben.

2. Die arbeitenden Menschen:
   Für die gesamtgesellschaftliche Ordnung kann dieses Prinzip keine Lösung darstellen, denn sie würde diese ins Chaos stürzen. Es ist zu respektieren, dass arbeitende Menschen nicht ausschließlich Produktionsfaktoren sind, denn sie müssen ihre Familien ernähren und ihr Leben muss in einem gewissen Zeitfenster planbar bleiben.

Die Flexibilisierung der Arbeitszeit hat einerseits die Sicherheit und Bedürfnisse der Mitarbeiter einzubeziehen, andererseits aber auch die Erfordernisse des Marktes zu berücksichtigen. Belgien hat im Jahre 2002 ein beachtenswertes Flexibilisierungs-Gesetz auf Basis von Arbeitskonten verabschiedet mit dem Ziel,

- eine Balance zwischen Arbeits- und Privatleben sicher zu stellen und
- es älteren Arbeitnehmern zu ermöglichen, so genannte karriere- und zweckbezogene Pausen in Anspruch zu nehmen.

Wesentliche Punkte des Flexibilisierungs-Gesetzes sind:
- Ein Mitarbeiter kann bezogen auf seine Lebensarbeitszeit bis zu fünf mal ein Jahr pausieren oder seine Arbeitszeit halbieren, ohne seine gewonnenen Sozialversicherungsrechte einzubüßen.
- Ein Mitarbeiter kann mit dreimonatiger Voranmeldung beim Unternehmen Karrierepausen oder zweckbezogene Pausen einlegen, z. B. um ältere Menschen zu pflegen, Kinder groß zu ziehen, etc. Alle diese Vorhaben werden staatlich bezuschusst.
- Das jährliche Arbeitskonto kann auf bis zu fünf Jahre ausgedehnt werden.
- Wer weniger als fünf Jahre arbeitet, erhält staatliche Zuschüsse in Höhe von 379 € bis 505 € (16).
- Jeder hat die Möglichkeit, seine Wochenarbeitszeit um 20% zu reduzieren. Über 50 Jahre alte Mitarbeiter können ihre Arbeitzeit darüber hinaus auf Dauer bis zu 50% reduzieren (16).

4.23 Staatliche Förderung der beruflichen Bildung

Das deutsche Institut für Arbeitsmarkt- und Berufsforschung in Nürnberg hat die Qualifikationsstruktur der Arbeitskräfte in den Jahren 1976 und 1991 mit einem prognostizierten Arbeitkräftebedarf im Jahr 2010 verglichen.
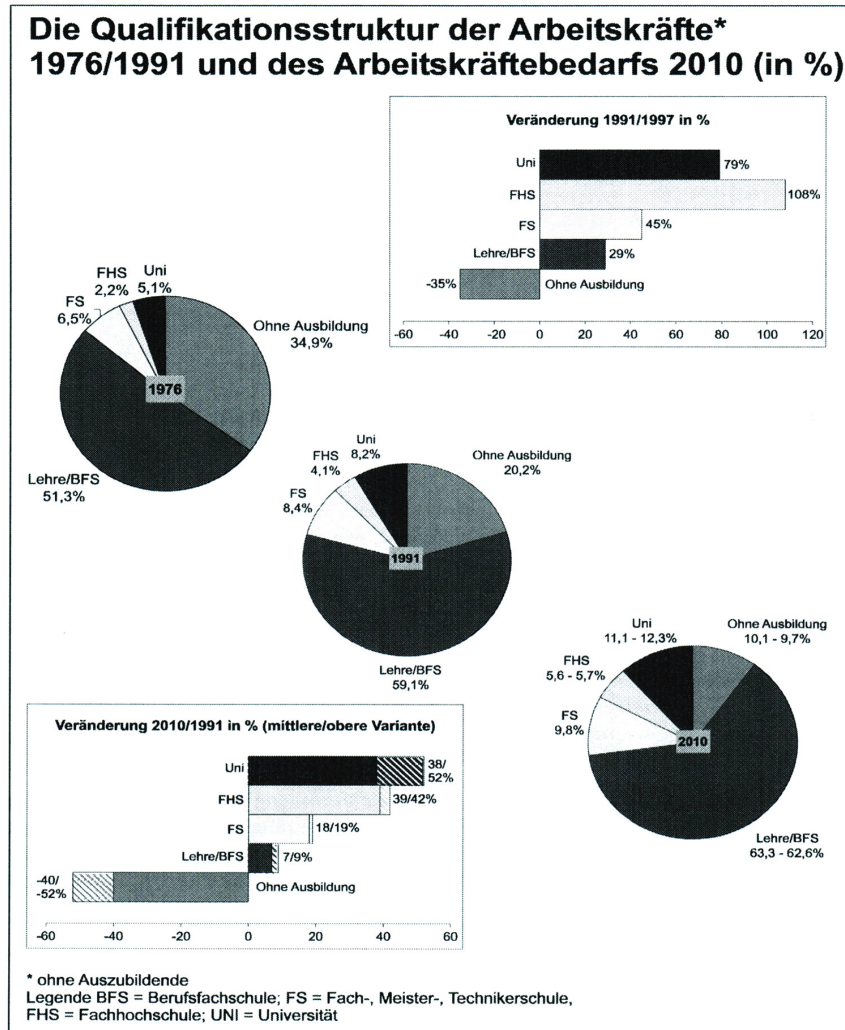

Abbildung 18: **Qualifikationsstruktur der Arbeitskräfte 1976, 1991 und der Bedarf 2010 (17)**

Die wichtigste Erkenntnis und zugleich Bestätigung der allgemeinen Meinung ist, dass ein Rückgang von Arbeitsangeboten ohne Ausbildung von ehemals 34,9% auf künftig 10% zu

erwarten ist. Aber genau dieser Bereich wächst sowohl in Frankreich als auch in Deutschland, unter anderen wegen einer verfehlten Zuwanderungspolitik. Diese Tatsache spiegelt sich auch in der Jugendarbeitslosenrate wieder, die in Frankreich ca. 26%, in Spanien 42%, in Italien 34% und in Deutschland 10% beträgt.

Die praktische Bedeutung des Handwerks steigt von 51,3% auf ca. 63%, allerdings in Richtung Qualität. Am stärksten wächst der Ausbildungsbereich, an Universitäten um 45%, an Fachhochschulen um 40% sowie an Fachschulen um 18%. Gefragt sind staatliche Förderungen, um aus dem Potential der Lernwilligen ein Maximum an Qualifikation zu erreichen.

Es ist erstaunlich, dass man kaum Publikationen findet, die sich mit der Tatsache auseinandersetzen, dass die „Produktion von qualifizierten Menschen" bis heute noch im weitesten Sinne ein „Zufallsprodukt" ist und deren Schichtung nach dem Gaußschen Verteilungsprinzip erfolgt. Der Sprung zu einer höheren Qualifikationsebene gelingt nur bedingt, allerdings sollte ein Optimum in der Qualifikationsschicht selbst angestrebt werden.

Die Arbeiten dieses brach liegenden Bildungspotentials wird ständig in Billiglohnländer verlagert. Es wäre an der Zeit, diese Arbeit nach dem Beispiel von Frankreich im eigenen Lande zu belassen und zu subventionieren. So könnten wir einer jungen Generation, deren Bildungspotential seit der „dritten informationstechnischen Revolution" nicht mehr gefragt ist, wieder eine Perspektive geben.

4.24 Umbau der Sozialsysteme

Wie bereits in Abschnitt 2.2 dargestellt sind die derzeitigen Sozialsysteme nicht mehr in der Lage, ihrer Aufgabe gerecht zu werden. Das wiederum lässt einen Umkehrschluss zu: Wenn die Inhalte der „Sozialen Marktwirtschaft" nicht mehr mit der gesellschaftlichen Entwicklung übereinstimmen, geht der Lebenszyklus der „Sozialen Marktwirtschaft" ebenfalls seinem Ende entgegen.

Um die notwendigen Veränderungen verständlicher zu machen, soll der Begriff „Soziale Marktwirtschaft" zuerst definiert werden:

Man unterscheidet in **Freie**, **Soziale** und neuerdings auch **Ökologische** Marktwirtschaft (oder Neue Marktwirtschaft):

- Eine Freie Marktwirtschaft beruht auf dem Prinzip von Adam Smith (1723-1790), dass allein Angebot und Nachfrage die Tätigkeiten der Wirtschaftssubjekte bestimmen. Die Kraft des Marktes würde daraus einen Nutzen für das gesellschaftliche Ganze ziehen und einen Ausgleich zwischen einem *knappen Güterangebot* und den *grenzenlosen Bedürfnissen* entstehen lassen, wenn jedes Individuum im Rahmen seiner ethischen Gefühle sein individuelles Selbstinteresse verfolgte. Es finden keine gesellschaftlichen oder staatlichen Eingriffe in das Regelwerk von Angebot und Nachfrage statt. Max Weber ergänzte das Modell durch die „Theorie des rationalen Handelns"

- Eine Soziale Marktwirtschaft grenzt sich gegen die Freie Marktwirtschaft durch eine sozialverantwortliche Form ab. Sie unterliegt Systemregeln, die das Handeln des Einzelnen in solche Bahnen lenken soll, dass das Gesamtsystem bei maximaler Freiheit automatisch **soziale Resultate** hervorbringt. Der Begriff der Sozialen Marktwirtschaft wurde 1946 von dem Ökonom Alfred Müller-Armack geprägt.

Genau am Punkt „Soziale Resultate" beginnt nun die Kritik, denn wir schöpfen aus dem Gesamtsystem keine sozialen Resultate mehr. Der Staat greift überall ein, um nur noch zu retten, was zu retten ist. Die Sozialsysteme sind bankrott, die Sozialausgaben der Bundesrepublik für das Jahr 2006 belaufen sich auf 65,5 % des gesamten Haushalts, und so entwickeln wir uns langsam hin zu einer staatlich kontrollierten Volkswirtschaft. Aber auch mit dieser Methode werden wir das grundsätzliche Problem nicht lösen. Ein radikaler Umbau der Sozialstaatlichkeit ist unausweichlich.

Ein neues Sozialsystem muss sich grundsätzlich von der Vorstellung lösen, dass der Staat auch später für mich sorgt, weil er soviel von mir abfordert, ca. 45%, und nicht wie im 17. Jahrhundert nur 10% – das Prinzip der früheren Sklavenhaltung. Heute fordert der Staat viel und lässt uns im Alter im Regen stehen (Stuttgarter Zeitung Nr.57-10.W/ 9.03.06).
Wenn man die Theorie von Adam Smith über die Freie Marktwirtschaft auf eine neue Sozialordnung übertragen würde, könnte man folgendes konstatieren:
„Wenn jeder anderen von sich gibt und dadurch das Wohlergehen der Gesamtgemeinschaft optimiert, bringt das auch das eigene Wohlergehen voran (9, Seite 39)."

Ein neues Sozialsystem muss auf Basis der Kriterien eines **Non-Profit-Sektors** (oder auch einer **nicht kommerziellen** Gesellschaft) realisiert werden, d.h. es muss alle formellen und informellen, nicht auf Gewinn ausgerichteten Aktivitäten beinhalten, die zusammen das kulturelle und soziale Leben einer Gesellschaft ausmachen. Es ist der Sektor, in dem die Menschen die eigentliche Gemeinschaft und Sozialordnung verwirklichen. Dazu gehören:
- Sozialwesen und Teile des Gesundheitswesens,
- Kinderbetreuung und Teile der Weiterbildung,
- Religion und seelische Betreuung,
- Sport und Erholung,
- etc.

Dieser Ansatz muss drei wesentliche Kriterien erfüllen:
1. der Non-Profit-Sektor muss eine austauschbare Sozialwährung (Fungibilität) aufweisen,
2. es muss möglich sein, Sozialkapital zu bilden,
3. für alle staatlichen Unterstützungsleistungen müssen die Empfänger im Non-Profit-Sektor eine adäquate Gegenleistung erbringen.

Zu Punkt 1:
Der Ansatz einer Sozialwährung geht auf den Anfang des 20. Jahrhunderts zurück. Die neuerliche Diskussion kann David C. Clarke, University of the District of Columbia, zugeschrieben werden. Er entwickelte ein Konzept, dass es ermöglicht, die erbrachte Sozialleistung eines Einzelnen auf einem „Zeitkonto" fortzuschreiben und gegebenenfalls (z. B. eine Stunde mit 1 €) zu bewerten. Die Bewertung erfolgt unabhängig von der Qualifikation des Leisteten, Arzt, Hilfsarbeiter, Ingenieur, etc. haben für eine Leistungseinheit die gleiche Bewertung (18). Mit diesem Ansatz könnte die Fungibilität von Sozialleistungen erreicht werden.

Zu Punkt 2:

Jeder, der sich in diesem Sektor betätigt, kann nun ein eigenes Sozialkapital aufbauen. Ein Pensionär, ein Arbeitsloser, ein Unterbeschäftigter, etc. übernimmt Arbeiten im Non-Profit-Sektor, z. B. Essen auszufahren für ältere Menschen, und bekommt dafür bewertetes Sozialkapital auf sein Sozial-Zeitkonto, das er zu gegebener Zeit einlösen kann, wenn er Hilfe braucht. Das Prinzip ist wie beim Blutspenden, ich gebe etwas, was ich später vielleicht einmal selbst benötige.

Zu Punkt 3:

Es ist auf Dauer nicht tragbar, dass arbeitsfähige Menschen von der sozialen Gemeinschaft dauerhaft Leistung (in Form von Geld) beziehen, ohne für die Gesellschaft adäquate Gegenleistungen zu erbringen.

All diese Menschen müssten in den Non-Profit-Sektor eingegliedert werden, um Sozialleistungen zu erbringen. Die über die empfangene hinausgehende Leistung würde man als Sozialkapital verbuchen.

Die heute zur Verfügung stehenden Kommunikationssysteme, wie z. B. das Internet, bilden die technische Voraussetzung dafür, um die benötigten Sozialleistungen transparent und fungibel zu gestalten. In diesem Sektor könnten Millionen von Arbeitkräften eine Tätigkeit finden und unser Gemeinwesen hätte einen dreifachen Gewinn, für die Gesellschaft, für die Wirtschaft und für die Umwelt.

Für viele Menschen, die unterbeschäftigt oder arbeitslos sind und nicht die notwendigen Mittel aufbringen können, um ihr Dasein zu sichern, kann dieser Non-Profit-Sektor das Vakuum füllen, auch außerhalb des Profit-Sektors Marktwirtschaft die Lebensqualität zu erhalten.

Literaturverzeichnis

[1] Polzer, Helmut G., „Innovation der Information", 1996, S. 40

[2] Carson, Joseph G., „US Weekly Economic Update: Manufacturing Payrolls Declining Globally: The Untold Story (Part 2)". Alliance Bernstein, 10.Oktober 2003

[3] Schwartz, Nelson D. „Will Made in USA Fade Away?", Fortune, 24. November 2003, S. 102

[4] Jones, Del und Hansen, Barbara, „Companies do more with less USA Today", 13. August 2003

[5] Raffelhüschen, Bernd, „Soziale Grundsicherung in der Zukunft. Eine Blaupause," Erschienen in: B. Genser (Hrsg.), Finanzpolitik und Arbeitsmärkte, Schriften des Vereins für Sozialpolitik, N.F. Band 289, Berlin 2002, S. 83-118

[6] Raffelhüschen Bernd, „Ein Plädoyer für ein flexibles Instrument zur Analyse nachhaltiger Finanzpolitik", Wirtschaftsdienst, Nr.82/2, S.73-76, (2002)

[7] Benz, Ulrich und Fetzer, Stefan, „Was sind Nachhaltigkeitsindikatoren?", Juli 2004

[8] Welt am Sonntag, Nr.9, 27.02 2005

[9] Rifkin, Jeremy, „Das Ende der Arbeit und ihre Zukunft", Campus Verlag 2004, S.170

[10] Lang, Gerhard, „Wie weit ist die derzeitige Wirtschaftspolitik der BRD in der Lage, den Bevölkerungsrückgang und die Arbeitslosigkeit erfolgreich zu bekämpfen?" Friedrich Pustst KG, Regensburg 2005

[11] Schirrmacher, Frank, „Das Methusalem-Komplott", Karl Blessing Verlag 2004, S. 41 ff.

[12] Polzer, Helmut G., „Europa, Gesellschaftsspiel mit offenem Ende?", Verlag Managementwissen Zukunft, 1999

[13] Dahrendorf, Ralf., „Die neue Freiheit – Überleben und Gerechtigkeit in einer veränderten Welt", München und Zürich, 1975

[14] Honore, Carl, „A time to work, a time to play, France 35-Hour week, Shorter hours result in a social revolution", National Post, 31. 01.2002

[15] Trumbull, Gunnar, „France 35 Hour Work Week: Flexibility Through Regulation." The Brookings Institution, Januar, 2001

[16] European Industrial Relations Observatory Online, Februar 2002

[17] Lafontaine, O. und Müller, C., „Keine Angst vor der Globalisierung", Bonn 1998, S. 209

[18] www.timebanks.co.uk, „What`s a Time Bank? Time Bank UK".

SCENARIOS OF ECONOMIC AND REGIONAL DEVELOPMENT IN EUROPE

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Abstract: Scenario building is one of the most important instruments of long-term economic and regional planning. With the help of scenarios can be explored the manoeuvring space of economic policies. The scenarios described below, have been prepared for the ESPON programme of the European Union about the future of the European regional development with special respect to the economic aspects. The author presents four scenarios, which are based on economic concepts and practical experiences and are arranged along two axes, which represent two economic policy concepts that have perhaps the larger impact on the spatial development of Europe. These concepts are competitiveness and efficiency on the one hand, and equity and cohesion on the other.

Scenario building is one of the most important instruments of long-term economic and regional planning, even at European level. With the help of scenarios one can explore the manoeuvring space of economic policies and making more consciously the choice of political action. It is especially important in the present period, when Europe is facing the fundamental issues of further enlargement, the requirements of the Lisbon agenda, to make Europe the most dynamic, competitive and knowledge base economy in the World and simultaneously it has to preserve the traditional European values of cohesion and solidarity. The scenarios described below, have been prepared for the ESPON programme of the European Union, where I participated as a member of a team working on scenarios of the future of the European regional development with special respect to the economic aspects.

For such huge, multifold and complex systems, as the European economy, an infinite number of development scenarios can be outlined and described. The four scenarios described below are four of these infinite many possibilities. Nevertheless, they have some particular features. They are selected not randomly; they have a systemic relationship to each other:

1. Their selection is based first of all on **economic** concepts, relationships and theories. It was, however, unavoidable to touch upon political, social and other issues of development as well, but the fundamental factors analyses and prognosticated are of economic character.
2. Their selection is based on practical experiences, which could be observed in Europe and in other parts of the World. Obviously, none of the four possible scenarios can be observed in the pure theoretical form, but there were periods and there are countries and regions in great number, whose development path can be identified – to a lesser or larger extent- with one of the scenarios, described below.

3. The scenarios are arranged along two axes, which represent two economic policy concepts that have perhaps the larger impact on the spatial development of Europe. These concepts are efficiency on the one hand, and equity and cohesion on the other.

These two axes are the principal determinant factors of the scenarios, therefore they need further explanation:

Axis No. 1. Equity and cohesion

In the last decades, economic, social and territorial cohesion policy became one of the most important policies of the European Union, representing about 36-38 percent of the Community's budget expenditures. There can be no doubt, economic and social cohesion objectives of the EU played a very significant role in some countries' development. But beyond the policies and instruments of the EU, one has to consider policies with similar objectives in the member states. Though with different intensity and with different financial resources, member states also wanted to mitigate and reduce internal social, economic and territorial disparities in development and income. EU and national "cohesion type" policies have played a decisive role in Europe's development in the last half century.

The formulation and implementation of equity considerations and cohesion policies were, however, always accompanied by criticisms and debates. Criticisms became louder especially in the last years. Cohesion policy has been made – by some experts - to one of the scapegoats for not achieving the Lisbon objectives. The debates on the future of cohesion policy are related, on the one hand, to the future dimension and resources of these policies: what share of Community GNI should be spent for these purposes, what should be their share in the Community level budget? On the other hand, the orientation of cohesion policy is also debated: what should be supported? Should it be restricted to infrastructure, environment, education and culture – as many experts suggest – or should it be extended to the support of job-creating business enterprises as well? How large circle of countries and regions should benefit from cohesion measures? Should cohesion support be limited in time?

The horizontal axis of the system of coordinates represents the equity and cohesion dimension. But the place of a particular policy mix along this axis depends not only on the size of financial means available for cohesion and social equity purposes. It depends also on the importance, attached to these policies, on their being more targeted, concentrated and on their system of delivery.

2. Axis. Efficiency and competitiveness

The traditional equity-efficiency bipolarity is combined in this context with the concepts of cohesion on the one hand and competitiveness on the other. Indeed, competitiveness has become the key notion in the economic policy of recent times. It includes not only economic efficiency, but innovation, marketing, flexibility, structural change and risk management as well. Several recent studies demonstrated that Europe's lagging behind the US in GDP per capita is attributable less to productivity per working hour, rather to the lower working hours per person employed, to the lower employment level, to the lower

level of innovation, to the smaller share of fixed capital accumulation, to the lower expenditure on R&D, to the small amount of venture capital, to high taxes and to the low level of labour and capital mobility. To achieve improvements in all these weaknesses needs substantial changes in microeconomic and macroeconomic policies, in the system of welfare services and in governance methods and practices. All these are included in the dimension of the vertical axis representing efficiency and competitiveness.

The four segments of the system of coordinates, divided by the axes, represent the four scenarios of European economic policy developments and their spatial impacts. The four segments represent: I. Higher efficiency and competitiveness – lower equity and cohesion; II. Higher efficiency and competitiveness – higher equity and cohesion respectively; III. Lower efficiency and competitiveness – higher equity and cohesion; and IV. Lower efficiency and competitiveness – lower equity and cohesion;
But the scenarios are much more complex than that: there are some developments and policy decisions attributed to the individual scenarios which cannot be placed unambiguously within the dimensions of equity and efficiency (enlargement, migration, some aspects of urban development etc.). The arrangement of these policies in the system happened rather on the basis of conceptual and "ideological" affinity to the other elements of the scenario.
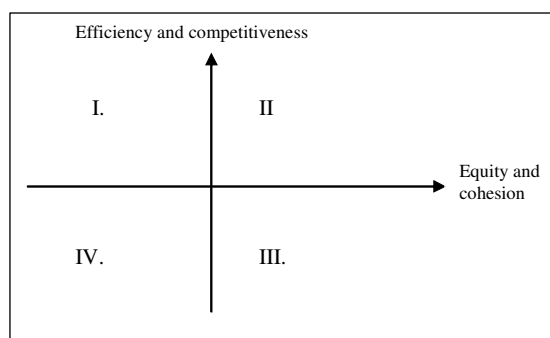
These scenarios are prospective policy scenarios, because they explore the impacts of changes in some important national and community policies. The dimensions of the axes represent rather the importance and priority of individual policies. Their measurement by exact quantitative indicators is rather difficult though we shall make efforts to quantify them. And they are – to a certain degree – holistic scenarios, because they comprise impacts on several aspects and spheres of economy and society, though impacts on other important spheres of life remain unexplored.

And – finally – there is a third – invisible – dimension of the system of coordinates. The main themes and distinctive features of the individual scenarios are different EU policies. Neither cohesion, nor efficiency and competitiveness policies and measures can be implemented without the active role and intervention of the European Union. Therefore, the third dimension is EU commitment, which is indispensable for the implementation of policies in both dimensions but – first of all – for their adequate combination.

Efficiency and competitiveness

I.

II.

EU commitment

Equity and
cohesion

IV.

III.
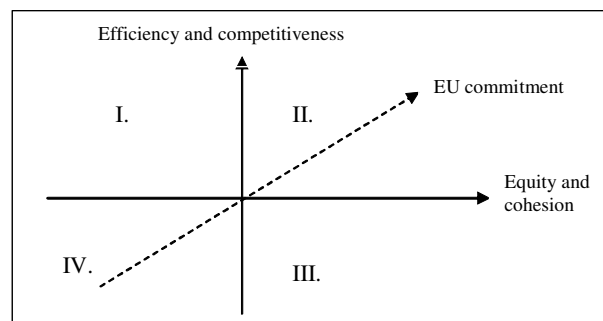
The most important – general - features of the scenarios are as follows:

1. Best foot forward

Scenario hypothesis

The basic hypothesis of this scenario is that efficiency considerations will gradually dominate European and national policies. Europe will consequently follow the objective of catching up with the US and the Far East in respect to competitiveness and growth. The rate of investment will be increased and investment will go mainly to the high-tech and competitive sectors of the economy. Institutions, regulations and policies which are regarded as obstacles of competitiveness and catching-up, will be revised and reforms serving growth and competitiveness will be implemented. Government expenditure will be restricted, which will have an impact on social, employment, environmental and cohesion policies. Simultaneously, business environment will be improved: corporate taxes will be reduced, new entries into the market will be facilitated, and excessive regulations (e.g. concerning employment) will be reduced. State aid will mainly support R&D and innovation. The obstacles of the mobility of capital and labour will be reduced, taxation will be harmonised in a relatively low level.

Driving forces

The main driving force in this scenario is private entrepreneurship. In close connection with it, the second driving force is constituted by agglomeration economies and "tacit knowledge" in the main centres of knowledge and innovation , utilised first of all by big transnational private enterprises. Simultaneously, these enterprises will outsource those activities which do not need to be located in these centres and can best utilise the cheaper production factors of more peripheral areas. The role of national government and EU will be primarily "enabling" and facilitating the free movement of labour and capital. Economic growth will be the most dynamic in this scenario, having "spread" and "backwash" impacts simultaneously. The central area will exert substantial attraction force towards potential highly skilled migrants from the periphery inside and outside the EU. On the one hand, it will enable some transfer of income and knowledge to less developed areas, on the other

hand, it will drain the most skilled and enterprising people from less developed areas threatening seriously their potential to catch up in development.

EU policies

In this scenario, the potential of national governments to tax will be seriously restricted and this will have an impact on their willingness to contribute to the community budget. National contributions to the community budget will be reduced to 1 percent of GDP, or even below this level in longer term. The structure of the expenditures will gradually, but in the long run substantially, change. The share of agriculture and cohesion policy will be substantially reduced, while the share of expenditures under the heading, what is now "Competitiveness for growth and employment" would substantially increase. The share of R&D and of external policies would also increase and private sector R&D will be encouraged via tax credits. One of the main aims should be to make the Single Market more dynamic. It means better coordination between regulatory and competition policies to encourage market access for new entrants and to introduce a more pro-active policy to support labour mobility. This aims, however, will be implemented less by delegating more competences to the supranational institutions, rather by the commitments of member states to the fulfilling of some obligations and a more efficient and closer coordination of national policies.

Enlargement

Enlargement will progress most dynamically in this scenario. The West Balkans, Turkey and perhaps the Ukraine will be members already in the late 2010s and, perhaps, further countries will join the EU (Belarus, Moldova, some countries of the Caucasus, some Maghreb countries) in the 2020s. The main motives of enlargement will be to enlarge the market and political considerations: to ensure a stable political environment for the European economy. The heterogeneity of the European Union will further increase. Obviously, this huge enlargement cannot be implemented with the present institutional and financial system of the EU. Unavoidably, different "levels" of membership will arise; several derogations will be applied to different enlargement "waves", partly because the level of preparedness of the new members will be very different, partly because the "absorption capacity" of the old ones is limited.

Migration

The institutional obstacles of migration within the EU will be removed and even efforts will be made to overcome the other obstacles of labour movement (in terms of the standardisation and acceptance of diplomas, overcoming the language barrier, etc) Consequently a relatively large flow of migrants will arrive to the core areas of Europe. This migration flows, however, will be substantially different from those of the 1960s and 1970s (unskilled or low skilled guest workers from the Mediterranean, Maghreb, and Turkey) and also from those of the 1980s and 1990s (asylum seekers from the poorest and war-ridden countries of the world). A large part of the new immigrants will consist of highly skilled, professional people. The knowledge based economy, aimed at in Europe, will require in ever increasing numbers this type of labour force. This demand will increase

at a higher rate than the educational system and the number and learning capacity of the new generations will be able to satisfy it.

The present composition of immigrants is still different from the type what was described above. They are – in most countries – less skilled and in higher proportion unemployed than the native population. Nevertheless, if, on the one hand, welfare systems will be reformed, and, on the other hand, European development aid to third countries will be more effective,

these measures will – hopefully – generate other type of migration movements than the present ones.

Rural development

Agriculture will enjoy in this scenario significantly less support and protection than at present. The share of CAP in the community budget will be substantially reduced. Consequently, rural areas will undergo a fundamental transformation. Agricultural production activity will be concentrated to those farms and those areas, where competitive production can be practised. These are mostly larger farms where the geographic, soil, climatic and hydrological endowments are favourable for agriculture and where markets are easily accessible. In other areas, full-time agricultural production activity will be radically reduced, even abandoned, the land will be used – in favourable cases – for environmental, recreational, and other non-agricultural purposes. The two types of land use will be separated not only at micro level but sometimes at regional level as well. It means that in some regions rural employment opportunities will be radically reduced. This will occur, first of all, in the new member states of Central and Southeast Europe (the present share of agricultural employment is 20-30 percent in Romania and Poland) but also in some Mediterranean countries. These people will look for new employment first of all in the urban centres of their own country, but also in the European core area. The overall decrease in rural population will be substantially less, because many urban residents will move to live in rural areas near the urban centres, in order to enjoy a more peasant and healthy environment.

Urban development

Urban development in this scenario will be concentrated in the European core area, but not necessarily within the administrative borders of the big cities, rather in the Potential Urban Strategic Horizon (PUSH) areas defined in the project ESPON 1.1.1. These are the surrounding areas of urban centres within reach of 45 minutes by car from the centre. It is most probable that new high-tech jobs will be located not in the core cities but also in these surrounding areas where their most important resource and production factor, the professional and highly skilled labour force is most easily available. Consequently, the fate of the core of cities will depend much less on industry and much more on other factors, like their role as service centre, their tourism attraction, etc.

In the new member states and other peripheral areas the future development trend of the urban system is less incalculable in this scenario. The reason of this is that they will be highly dependent on the outsourcing activity of transnational enterprises and less dependent on endogenous factors. If their main investment motive and location factor continues to be

cheap labour, then transnational enterprises have to look for more and more peripheral and smaller places where this type of labour force is still available. This would result a highly decentralised, but unstructured pattern. If they would increasingly utilise the higher educated and skilled labour force of these countries then it would result in the same type of urban structure as in the more developed countries, obviously at a more modest level.

Regional disparities

This is the scenario, where regional disparities are expected to increase both among and within countries. Economic disparities are expected to increase among countries because knowledge based and research intensive activities would generate the highest income and these activities are expected to increase faster in the core area, where resources for research and innovation are most available. Paradoxically, intensive outsourcing of activities to less developed areas would not reduce but rather increase disparities, because it enables to use labour force in the core area for more productive, profitable and income generating activities.

The concentration of economic activities are expected to increase also within countries, because knowledge based and innovative economy will emerge first in some poles where geographic proximity and "tacit knowledge" (transferable only by direct, personal contact and experience) is enhancing and reinforcing innovative behaviour and competitiveness. In the new member states, where FDI is – and will remain for a while – the principal factor of growth, the increase of disparities, as a result of the very selective location of FDI, will be even marked. The reduced level of structural and cohesion support will be certainly not enough to countervail the impact of market forces.

Fortunately, overall economic growth is expected to be the highest in this scenario. Consequently, increasing disparities do not mean necessarily the stagnation or decline of relatively lagging behind regions. It can mean actually a growth rate which is less than the average. But certainly, there will be regions, where absolute decline will occur.

2. The "European Tigers"

The scenario hypothesis

This is a positive scenario for Europe's future. It is assumed that a mixture of policies can be established both at supranational and national (and regional) level, which combines the traditional, but reformed systems and values of Europe with the institutions, regulations and practices applied in other, more dynamic parts of the world. It assumes also that a more differentiated approach will be applied to countries and regions which are in quite different situations. It assumes finally that external conditions will be favourable, or at least non unfavourable, and enabling to implement the reform of the European Union.

Driving forces

Driving forces of this scenario are economic and business organisations and governments of the member states. Economic organisations (enterprises) will apply business strategies suitable to enhance competitiveness and innovation. Governments and politicians of member states, inspired by their responsibility for the future of Europe, will implement those changes in the institutions, lows and regulations at national and supranational level which are necessary to set the European economy on a new development path, without losing the specific European achievements and social traditions.

EU policies

With the subsequent enlargements the European Union became more heterogeneous. Heterogeneity is, without doubt, a difficulty and a threat for community governance, but simultaneously it is an opportunity as well. The European Union has to apply a more differentiated approach to countries and regions being in very different situations and at rather different development level. Differentiated approach contradicts not necessarily to integration, in specific situations it can even facilitate and promote integration.

The new member states of the Union offer a suitable ground for experiments with new policies and new methods of government. They have not yet deeply rooted practices in dealing with European affairs; they have not yet long ago acquired and anxiously guarded rights. Experimentation with new methods in the new member states has not been a foreign idea to the European Commission even so far. For example, the early intention concerning the EAGGF was that the Guarantee section would be larger than the Guidance section by a ratio of two or three to one, but, in practice, this has never been even remotely approached, and the Guidance section hovered somewhere in the region of only 8-10 percent of total EAGGF expenditure. The main reason for it was that member states have not always been enthusiastic supporters of EU agricultural structural policy – mainly because it usually involves contraction of the sector and/or bringing about changes to which agricultural interests are opposed. Now, in the new member states, the European Union applied a 50:50 proportion between Guarantee and Guidance sections immediately after accession. This proportion will bring about a much more rapid structural change in rural areas than what we could observe in the old member states.

This radical change in policies might have been motivated by the intention to pay less direct support to farmers in the new member countries. Nevertheless it can be, and in fact it has been applied also in other fields, with the intention of positive discrimination.

(For example, the share of Cohesion Fund within structural instruments is 18 percent in the "old" cohesion countries and 30-34 percent in the new ones. Or, Structural Funds in old member states are "regionalised", in the new member states they are not). There are many ways to restructure European agricultural, social, R&D, cohesion and structural funds in order to promote stronger structural change and growth. These changes can be applied first

in the new member states, and if they work well there, they can be extended to the whole territory of the EU.[38]

The economies of the new member states – and those of the "old" cohesion countries as well – are now growing faster than the EU average. Obviously, their economic weight is not sufficient to give a momentum to the overall growth of the EU, nevertheless, theirs can be a valuable contribution to the dynamics and to the more balanced spatial structure of the EU beyond their proper weight, if managed properly. That is one of the main elements of this scenario.

Enlargement

Enlargement is a dynamic process also in this scenario. Nevertheless, this process is not exclusively guided by market expansion and political control considerations, as in the first scenario. The deepening of integration is as important aspect of the process as widening of the EU. Therefore, the enlargement process is subject to reasonable limits, set by political, social and economic absorption capacity. The present candidate countries (Bulgaria, Romania, Croatia and perhaps Turkey) will join the community but further enlargement is not to be expected within the time horizon of the scenario.

The policy approach toward individual member states or groups of member states will be differentiated, but – in contrast to the first scenario – this differentiation will not represent a kind of hierarchy or "degree" of membership. It will reflect the different position, and situation of member states. As described in the previous paragraph, pioneering role can be played times by the old, developed member states, but times also by the new members.

Migration

Migration will be a rather large-scale and dynamic process in this scenario, but not so unidirectional than in the first scenario. For many of the new migrants, the destination of the migration will be the new growth centres outside the Pentagon area (described in the "Urban development" paragraph below). This migration will be even more intensive than that to the traditional destinations, because, in these areas, more people will be affected by rural structural change. As a result, the Pentagon area will be partly relieved from a part of the migration pressure.

Rural development

EAGGF allocations to countries and regions will not dramatically decrease (their sum will remain unchanged) but within that sum the share of Guidance section will increase substantially, first in the new member states then in all countries in the EU. That means that radical structural changes will take place in the rural areas. Their accessibility will improve

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[38] There are examples already also for this practice. The so called simplified method of calculating agricultural direct support – irrespectively of the type of land use and of the species of plants produced and animals kept – has been introduced in the new member states in 2004. From 2007, this metod will be extended to the old member states as well.

substantially. Structural Funds will support the generation of non-agricultural jobs and income opportunities in these areas. In the new member states, small villages will establish microregional cooperation for employment generation. Before 1989, a large part of income and employment in rural areas was generated through non-agricultural activities of agricultural cooperatives (mostly supplying services for large enterprises). After the political and economic change this source of employment and income disappeared. The acquired skills and infrastructure are still there and can be re-utilised, certainly in other organisational and ownership forms than in the past. These measures are indispensable in countries where the share of agricultural employment is still very high.

Urban development

The name of the scenario "European Tigers" refers to the emerging growth pole system outside the Pentagon in the European Union. According to the philosophy of this scenario, policentricity (decentralised concentration) at European level can be best achieved by fostering the development of these poles.

The experience of the last years seems to confirm the viability of this strategy. The table below is showing the share of capital regions in the increment of GDP in the Central and Southeast European candidate countries in the period between 1995 and 2001. In Romania and Bulgaria this share is more than 100 percent, because in all other regions GDP had declined. In the Czech Republic and Hungary capital regions have produced about two third of the increment of GDP. Even in Poland and Slovakia, where development was more balanced, capital regions produced more than one third of the increment which is much higher than the respective regions' share in population.

Table No. 1. **The share of capital regions in the increment of GDP in the candidate countries 1995-2001**

Country	Capital region	The share of capital regions in the increment of GDP
Bulgaria	Yugozapaden	151 %
Czech Republic	Praha	65 %
Hungary	Közép-Magyarország	58%
Poland	Mazowieckie	35 %
Romania	Bucuresti	278 %
Slovakia	Bratislavsky	38%

Source: CEC: The Third Report on Economic and Social Cohesion. Statistical Annex. Brussels 2003

Table No. 2. **The change of the relative development level of capital cities and capital regions in the EU 1995-2000**

Country	Capital city or region	Per capita GDP as a percentage of EU15 average		
		1995	2000	Change
SVE	Stockholm	129,6	147	+17,4
CZ	Praha	114	121	+7
ESP	Madrid	102,9	110	+7,1
HU	Budapest	82,4	100,9	+18,5
SK	Bratislava	91,5	97,9	+6,4
RO	Bucuresti	38,1	48,1	+10
GR	Attiki	75,7	77,1	+1,4
PT	Lisboa e Vale do Tejo	90,7	90,9	+0,2
FINN	Uusimaa	128,8	143,2	+14,4
HU	Közép-Magyarország	65,7	75,6	+9,9
PL	Mazowieckie	42,7	58,9	+16,2

Source: CEC,Second Progress Report on Economic and Social Cohesion. 2003

But this phenomenon is not unique to the new member states. Practically all capital regions have increased their relative level of development (compared to EU average) in the Northern, Southern and Eastern periphery: Stockholm, Helsinki, Budapest, Bucharest and Warsaw with more than 10 percentage points. Beside capital regions, there are a few other regions outside the Pentagon which can fulfil the growth pole function.

This means that without these regions the "catching-up" process in these countries could not take place, these regions and cities are actually the "carriers of growth" in the relevant areas. It is a fact that cannot be disregarded. It is assumed in this scenario that EU policy will build upon this process as a very important factor of European cohesion policy and, simultaneously, factor of European growth and competitiveness. Additionally, this development process will largely contribute to a more polycentric structure of European space and urban network.

Regional disparities

Growth poles and gateway cities, outside the Pentagon, are "carriers of growth" in these countries and areas. As a result, these countries will catch-up with the more developed countries of the EU. Simultaneously, disparities within these countries will increase (as it has been experienced in the last one and half decade), since the large part of national GDP increment will be born by these leading regions. Economic disparities among countries in the European Union will decrease, while disparities within countries – especially within the less developed, peripheral countries will increase. These increasing disparities can be regarded as of transitional, provisional character. Filtering down and "spread" and "pull" effects sooner or later will have their impact upon the growth of the other regions of the respective countries, though this internal catching up process might prove to be of rather long run character. Nevertheless, within countries there is always a budgetary redistribution process, so that poorer regions are beneficiaries of higher income generation in the growth poles even in the short run.

3. The beaten track

The scenario hypothesis

Relatively high equity and high level of social protection, but lower efficiency and – what is the consequence – lower growth rate in the last decades, than in other parts of the developed world, first of all in the United States and in the Far East: these are the characteristics of the European economy during the last decade. The basic hypothesis of this scenario is that the principal policy directions – at EU and national level – will not change fundamentally in the next decades. Obviously, this hypothesis does not exclude minor changes in the formulation of policy objectives and their implementation. The argument behind the hypothesis is that the existing supranational, national, social, sectoral and professional interests and their representatives are in the position to block mutually any more radical rearrangement of institutions or redistribution of resources. Development will take place in the present framework. This framework is flexible and good enough for enabling the development of the European economy without major crises and shocks, but not adequate for switching it over to a substantially higher rate of growth.

Driving forces

No specific and new driving force can be observed in this scenario. Obviously private capital and entrepreneurs will be interested in growth, expanding markets and business-friendly economic environment, and they will lobby for improving these conditions. But European institutions will continue to be dominated by intergovernmental decision-making in which business interests are only one factor of influence. Trade unions, farmer's unions, national, regional and local administrations, and - what is most important – voters' opinion are also factors to be considered. From this plethora of interests are emerging policy directions and decisions governing the member states and the Union, as a whole. But the endeavour to meet very different and sometimes contradictory requirements and expectations would result necessarily in partly contradictory and inconsistent decisions, measures and policies. These contradictions will weaken the effectiveness of these decisions and policies significantly. Examples for this case will be given in the next paragraphs.

EU policies

With the subsequent waves of enlargement, the number and share of small and less developed countries has increased significantly in the European Union and so did their influence on European decision-making. Being net beneficiaries of Community budgetary allocations, their interest is to maintain the payments to the common budget on a possibly high level and to maintain a high share of cohesion and structural funds and – perhaps to a somewhat lesser extent – that of agricultural supports. It is probable therefore, that contributions to the common budget cannot be reduced to the extent that net contributors would like to see, nor can the share of structural, cohesion and agricultural supports. What can be perhaps achieved, it is the concentration of cohesion and structural supports to the least developed – mostly new – member states and their regions. In this respect, there is a kind of agreement between the largest net contributors and the poorer members. Cohesion

and structural supports will be spent in the least developed and peripheral areas, where support is really needed, but its effectiveness and the capacity to absorb it efficiently is ambiguous.

On the other hand, old member states will succeed in achieving that the whole of cohesion support and the overwhelming majority of structural supports will be spent on infrastructure, environmental improvements, human resource development and not on direct support to (medium and small) enterprises. By referring to the regulations of competition policy, the arguments in favour of these proportions can be strongly supported. Nevertheless, the fear of cheap labour's concurrence, reinforced by EU support, plays an important role in this endeavour of the old member countries.

Unfortunately, small and medium size enterprises did not exist in the new member countries before the political and economic change. All such businesses were established in the last fifteen years. They did not have the time to accumulate resources and therefore they need desperately capital support.

Experience has proved that the development of infrastructure and human resources, the improvement of the environment are necessary but not sufficient conditions for development and growth in these countries and regions. Technical and financial support is also required. There are several examples even in the old member states for the case that huge infrastructure and environmental investments did not yield the expected results in terms of income and employment generation (East Germany, Southern Italy, Spain, Greece).

The impact of harmonisation of taxation will have similar impact. Harmonisation in that case means not the lowering of tax levels in the "overtaxing" countries, but the raising of tax levels in countries where the tax level has been low. Large and highly developed member countries want to avoid in this way the "flight" of capital to these "countries of low taxes". Their argument is that these countries can afford to impose low taxes only because they are compensated by Structural Funds support for the loss of tax income. Nevertheless, for some countries it would be worthwhile even to lose some Structural Funds, if they could attract additional FDI into their countries to generate income and employment.

Enlargement

In this scenario, the main objective of the European Union is deepening the integration. More functions and tasks are delegated to the supranational institutions, but without the fundamental reform of these institutions and of decision-making (as it happened so far). Consequently, this deepening will be in contrast with the increasing heterogeneity of the community. The result will be to slow down the enlargement of the European Union. The present candidate countries (Bulgaria, Romania) will be – though perhaps with some delay – accessed to the EU, but further enlargement will be postponed for an indefinitely long period.

Migration

One of the main objectives of this scenario is to create employment and income for people in their native country and region. The large transfer of resources – through EU cohesion, structural and agricultural policies – should serve this objective. But if the structure and regulation of these funds will be inadequate for creating more jobs and income, then the huge transfer of resources will not bring the expected results. Consequently, despite the huge resource transfer, disparities in employment level will not decrease substantially and the intention to migrate will be strong in many parts of the European Union. This migration movement will strongly contrast with the objectives of cohesion policy and will give rise again to some incomprehension and dissatisfaction both in the countries, regions of origin and in the countries of destination.

Rural development

Support for agriculture will be the largest in this scenario, because contrasting interests will not enable to reform the CAP radically. Consequently, "stabilisation and peace" in rural areas will be purchased at the expense of other regions, cities and social groups of the population. But even this stabilisation will be only partial. Together with CAP, also its important feature will be preserved, namely, that big farms and developed areas are its main beneficiaries. The development of rural areas will be, therefore, differentiated. Rural areas under favourable natural and economic circumstances will fare rather well, while rural areas and farms in unfavourable circumstances will remain among the lagging and problematic areas of the EU, ridden by unemployment and poverty.

Urban development

One of the basic objectives of cohesion policy in the next programming period (2007-2013) is to improve the accessibility of services of general economic interest for every European citizen. This is the basic idea of urban development in this scenario. Cohesion and structural funds will be used to improve the provision with basic community services in all towns and cities, independently from their size and profile.
Consequently, the development of urban areas will be the most balanced in this scenario. Small towns will have the same chance to receive support for improving their infrastructure, as large ones. EU level urban policies will have the most influence on actual developments in this scenario.
The reconstruction and revitalisation of the central part of cities and towns will enjoy priority. EU cohesion and structural policies will not support extensive urban sprawl. The accessibility of basic services in every area will certainly slow down the excessive population concentration in large cities. Formulating it in "ESPON concepts", the favourite urban formations in this scenario are FUAs and PUSH areas and less MEGAs and PIA areas.

However, the major driving force of the urban system is, undoubtedly, the economy, business and economic growth. It is the economy which creates the basic hierarchies and networks in the urban system. In absence of dynamic growth, no high level infrastructure

and service provision can serve as substitute for the lack of growth poles, "spread" and "pull" effects.

Regional disparities

It is the scenario, in which both the disparities among countries and within countries are supposed to decrease. EU cohesion and structural policies play an important role in these developments.

But this statement on decreasing disparities requires some qualifying additions:

- first: it refers first of all to infrastructure provision, to accessibility of services, to the quality of the environment, to welfare services and to the facilities and level of education and training. It refers less to the level of income and even less to the level of employment. In the last respect, disparities might even increase between countries and regions.

- second: the overall rate of economic growth remains relatively low in this scenario. Not so low, as in the "re-nationalisation" scenario, but certainly low, compared to the expectations. Decreasing regional disparities are, therefore, partly due to the failure of breakthrough in the most developed, leading regions.

4. Balnibarbi for the Balnibarbians

The scenario hypothesis

The name is borrowed from Jonathan Swift, otherwise the scenario has nothing to do with the country of the same name in Gulliver's Travels. The scenario occupies the lower left segment of the system of axes, characterised by low equity and low efficiency. The basic hypothesis of this scenario is that populist politicians and one part of the national elites would pursue alleged national interests in a way which would significantly weaken the cohesion and integration of the European Union. This political movement might be the result of some domestic economic and political difficulties, for which politicians scapegoat the EU, the enlargement, the widening or the deepening of the EU. One reason for this change in policies can be the short term disappointment and frustration with the results and impacts of enlargement either in the old or in the new member states or in both. National governments do not comply with their commitments to European policy objectives and regulations. Obstacles of free movement of labour would be maintained, the period of derogations would be extended. The regulations of EU competition policy will be more frequently evaded. This is the reason why the advantages of integration can be less and less exploited and, simultaneously, the effectiveness of cohesion policy will be also reduced.

Driving forces

The driving force of this scenario is – like in the previous one – vested interest, private capital and profit interest, but not that of transnational enterprises but that of national ones. National elites claim – open or hidden – preferred treatment in public procurement procedures and in subsidy allocations. Trade Unions and Farmer's Unions and other professional organisations demonstrate against specific imports, against migrant labourer,

outlets and shops of transnational enterprises. National political elites – in order to increase their votes – are making concessions to these claimants. Intertwining between economic and political elites can also occur, especially in the less developed member states. All this would limit the dynamics of the Single Market, slow down or even reverse the deepening of integration and through this limit overall employment, growth and cohesion.

EU policies

One common feature of this and the previous scenario is that the capacity and willingness of nations to contribute to the Community budget would be reduced. The centralised resources of the Union will be from the second half of the 2010s not more than 1 percent of the overall GDP of the Community, perhaps even less. The big difference from the previous scenario is that there will be no radical change in the structure of spending. Opposing interests do not enable a structural reform of EU expenditures and the reform of the decision-making system in the EU will be also delayed. Consequently, the EU and the EC should have to perform the same functions and tasks as previously, but only with more limited instruments, possibilities and competencies. The EU will not be in the position to exert - with its instruments and resources - a really significant impact on the developments in the member states, while – before the public – it will continue to share the responsibility for the developments in the individual member states.

Enlargement

Enlargement of the Union will be slowed down or even stopped in this scenario, though the present candidate countries (Bulgaria, Romania and perhaps Croatia – even if with some delay, will join the EU). Even in the case of the member states, which already had joined the Union, derogations and restrictions will be extended. This obviously would give rise to dissatisfaction and frustration in the new member states and, as a result, they will be especially prone to turn to populist and nationalist policies.
It is even more the case in the countries remaining outside of the Union. Populist politicians in several member states will call for referendums on the accession of individual countries and the probability of the NON vote in some member states is rather high. The excluded countries will react with anti-European sentiments, with massive social and environmental dumping and with the neglecting of the border control of illegal border traffic to the European Union. The main victims of such policies will be the respective countries themselves, nevertheless, they can inflict sensible losses also to member states, especially to those on the external EU border.

Migration

One of the fundamental achievements of the European integration was the free movement of labour within the Union. It became subject of some restrictions and withdrawals during the last enlargement. Old member states have applied different derogations for different periods of time in this respect. It means that this policy has been partly "re-nationalised" in the recent period. Some horror scenarios of East-West migration frightened the public in

Western member states. Politicians, facing in some countries high domestic unemployment, could not resist the popular pressure in this field.

The assumption behind this scenario is the continuation of this trend. Restrictions and derogations will be extended for longer periods of time. Meanwhile a radical ageing will take place in most EU member countries, and labour - especially highly skilled labour - will become bottleneck of economic growth and development. If politicians will realise this situation late, and – especially - if they will act to facilitate labour movement and migration only with substantial delay, then the only possibility will be to attract migrants from outside the EU. Namely, ageing and natural decrease of population will take place in most new members even more dramatically then in the old member countries.

Rural development

Changes in rural development will take place slower and in a different structure in this scenario than in the previous one.

Agriculture ("Management of the natural resources") will continue to be one of the largest expenditure item in the EU budget. The vested interest organisations of farmers and national politicians depending on rural voters will spoil any efforts to reform and restructure agricultural policy in the EU. Nevertheless, the overall relative reduction of the EU budget will restrict the volume of agricultural support as well. If national governments should want to maintain the level of support to agriculture, then they will be forced to contribute from their own resources. CAP, one of the entirely supranational policies of the EU will "degenerate" to a mixed one. The first steps in this direction have been taken already during the last phase of enlargement, when new member countries were allowed to complement the direct EU support given to their farmers, and amounting to 25 percent of that of farmers in the old member states, with 30 percent from their own resources. In case of shrinking EU budget, it would certainly happen in old member states as well.

Nevertheless, in case of "re-nationalising" - partly or fully – agricultural subsidies, the competition in agriculture within the European Union will be transformed into a competition of agricultural subsidies, as it is the case already long ago outside the European Union. Rich countries can afford more to subsidise their farmers than poorer countries can do to theirs. Consequently, agricultural production, employment and land use will decrease much more rapidly in less developed member states than in the more developed ones. Furthermore, the extension of environment-friendly land use, the engaging rural people in non-surplus producing agricultural activities requires also support. In absence of this support land will be simply abandoned and exposed to different environmental hazards and to deterioration. In this scenario, the retreat of agriculture and agricultural land use will take place primarily in the less developed, poorer member countries, differentiating land use not according geography, soil and climate but according to the subsidising capacity of the respective member states.

Urban development

The development of the urban system will take place in this scenario mostly within national boundaries, especially in the less developed member states. Cities in border regions

continue to be in peripheral and disadvantageous position, since, at present, the trade between regions within the same country is about 80 times more intense than is trade between two regions which are in two different countries, and this situation in this scenario will not change substantially in the future..

It would follow from narrowing down urban system development into the national context that capital cities of the countries would be in an outstanding position. They would remain the centres of national power, wealth and control. Nevertheless, this scenario is unfavourable even for capital cities of smaller and less developed countries. Their functions will reach only as far as the national borders. They will not be in the position to assume and fulfil European, even transnational central functions. They cannot be integrated fully in the network of European or World metropolises, from European point of view they remain "provincial" cities.

Because of the restricted mobility of foreign capital and the increasing economic role of national governments, administrative function of cities remains one of the most important factors determining the fate of individual cities. Administrative centres will be in a more privileged position, because resource allocation will depend to a significant extent from national and regional governments. These medium size administrative centres will be the main beneficiaries of this scenario while the position of both large metropolises and smaller cities will be unfavourable, compared to other scenarios.

Regional disparities

Re-nationalisation and national isolationism is, obviously, most harmful for small, less developed countries, even if they are frequently most afraid of the "big countries' imperialism". Their market is small; their most important driving force is the assimilation of existing technology and organisational practices of larger countries. Consequently, economic development disparities will increase in the "re-nationalisation" scenario, to the disadvantage of smaller and less developed countries.

Simultaneously, disparities within countries might decrease for two reasons. First, leading regions cannot fulfil the breakthrough in the absence of intensive inflow of capital, knowledge and innovation. Secondly, lagging behind regions and agricultural regions will be more "protected" from European and worldwide competition through national subsidization and bailout of languid enterprises owned by the state and/or managed by the national elites. In sum, overall economic growth is the smaller in this scenario.

References

[1] **Scenarios Europe 2010. Five Possible Futures for Europe**. European Commission. Forward Studies Unit Working Paper. Gilles Bertrand, Anna Michalski, Lucio R. Pench. July 1999

[2] **Europe plus thirty. Analysis and Prospective than and now.** Lord Wayland Kennet and Dimitris Kyriakou. S.P.I. 98. 108. November 1997.

[3] **Europe? Which Europe? Which future Europe?** A collection of different views on the future of Europe. MCRIT, Barcelona web-page. revised December 2002.

[4] **Four futures of Europe.** Paul Tang and Ruud de Moij. Centraal Planbureau. Den Haag. CPB Report 2003/4.

[5] **Europe 2000+.** Cooperation for European territorial development. European Commission. Brussels 1994.

[6] **Perspectives of Europe's role in the future**. Finland Future Research Centre,. Dr. Markku Wilenius. Research Director. FICOR. 2002.

[7] **VISIONS. The European Scenarios**. International Centre for Integrative Studies. The Netherlands. February 2001

[8] **Europe Beyond the Millennium.** Accenture. Vernon Ellis. London 2001.

[9] **EU Regional Policy in the Enlarged Europe 2007-2013.** In: Benchmarking regional policy in Europe. The University of Strathclyde in Glasgow. European Policies Research Centre. 2001

[10] **Scenarios for EU Structural Actions**. 2007-2013. Swedish Non-Paper submitted to the Italian presidency. November 2003.

[11] **Options for spatially balanced developments in the enlargement of the European Union**. ESPON 1.1.3. Second Interim Report. Part II.

[12] **VASAB: Vision and Strategies Around the Baltic Sea** _ Towards a Framework for Spatial Development in the Baltic Sea Region. Karlskrona 1994.

[13] **VISION PLANET. Strategies for Integrated Spatial Development of the Central European, Danubian and Adriatic Area.** Background Report. April 2000

[14] **NorVision. Spatial development perspective for the North Sea Region**. July 200.

[15] **ESTIA. Spatial Policy Integrated Framework of Southeast Europe**. March 2000

[16] **NWMA. North Western Metropolitan Area Spatial Development Vision.** July 2000

[17] **"5+5" L'ambition d'une association renforcée.** Cercle des Economistes. (Scenario for the Cooperation of 5 northern and 5 southern Mediterranean Countries). www. lecercledeseconomistes.asso.fr/5+5.pdf

[18] **Replacement Migration: Is it a Solution to Declining and Ageing Populations?** United Nations Population Division 2003.

[19] **Europe's Changing Demography. Constraints and Bottlenecks**. European Commission. Joint Research Centre. Demographic and Social Trends Issue Papers. EUR 18967EN June 1999.

[20] **Mosaic Living**. IPTS, Seville and Institute for Social and Economic Research, University of Essen. 1999

[21] **Beyond the predictable. Demographic Changes in Europe up to the year 2050**. EUROSTAT, Luxembourg. 1997/98.

[22] **The Spatial Distribution of population in 35 World Cities.** The Role of Market, Planning and Topography. Alain Bertaud, Stephen Malpezzi. The Center for Urban Land Economics Research. The University of Wisconsin. 1999.

[23] **Global Environment Outlook 3.** Nairobi 2002.

[24] **OECD Environmental Outlook**. Paris 2001.

[25] **Scenarios for Society and Environment in 2020.** Copenhagen Institute for Future Studies.

[26] www.mstdr/udgiv/publikationer/2001/87-7944-702-3/html

[27] **IPTS/ESTO Studies on Reform of Agriculture, Education and Social Systems within the Context of Enlargement and Demographic Change in the EU.** Final Report June 2002. Seville.

[28] **Impact of Technological and Structural Change on Employment**. Prospective Analysis 2002. Background Report. European Commission. European Science and Technology Observatory Network. Report EUR20258.

[29] **The Future of Manufacturing in Europe 2015-2020**. The Challenge for Sustainability. IPTS Joint Research Centre. March 2003.

[30] **European Energy and Transport. Trends to 2030.** European Commission. Directorate general for Energy and Transport. National Technical University of Athens. January 2003.

[31] **FANTASIE. Forecasting and Assessment of New Technologies and transport Systems and their Impacts on the Environment**. www.etsu.com/fantasie/FinRep_exec.htm

[32] **Freight Transport in Europe. Policy Issues and Future Scenarios on Trans-border Alpine** Connections. Vrije Universiteit, Amsterdam. Faculteit der Economische Wetenschappen en Econometrie. January 2000.

[33] **Milennium Development Goals**. United Nations. New York 2003. : http://www.un.org/millenniumgoals/

[34] **Global Scenarios for the 21st Century**. California Institute of Technology. http://mars3.gps.caltech.edu/whichworld/explore/scenarios_top.htm

[35] **Global Environmental trends, population and Human Well-being**. World Resources Institute. www.wri.org

[36] **The Changing Geopolitics of Energy. Part I. Key Global Trends in Supply and Demand 1990-2020.** Center for Strategic and International Studies. Washington D.C. Anthony H. Cordesman. August 1998.

CHANCES OF CONVERGENCE OF THE REGION OF NORTHERN HUNGARY

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Abstract: The period 2007-2013 may be of decisive importance regarding the social and economic processes in the region of Northern Hungary for at least two reasons. The first long-term development program (7 years) was prepared after the changes in the economic policy of 1989 in order to improve the competitiveness of the region.

On the other hand, the amount of the funds that can be called (as proved by the analyses) will facilitate to induce a demonstrable economic growth in the region.

The plans take a change in paradigm into account: the convergence of the region is planned to be based on creating and strengthening the foundations of a competitive economy.

If the political intention backs these efforts, it will be possible to stop the process of the region of Northern Hungary drifting towards the periphery that has been going on for two decades now, and there will be hope to establish a new expansion path.

In the past fifteen years the socio-economic-ecological maps of the post-socialist countries, among them that of Hungary, have undergone considerable changes.

In the last decade of the 20th century economic polarisation between the regions has intensified, and as proven by the statistical data, the regional development policy (which has treated the convergence of the backward regions as a declared top priority since 1995) has not achieved any spectacular results. The tendency has namely not changed in effect: the better-off regions in Hungary have got into a more advantageous position[39], and the disadvantage of the backward regions (although only by a few per cents, but still) continued to increase (Figure 1)[40], while only the smaller part of the regional development subsidies found its way to the backward regions, e.g. to the region of Northern Hungary (Figure 2).

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[39] The Central Statistics Office (KSH) has been calculating data of regional and county GDP suitable for measuring and comparing the economic performance since 1994.

[40] The ranking of the regions has not basically changed in the nine years till 2003. According to the per capita GDP value, the first three ranks were taken by Central Hungary, Western Dunántúl and Central Dunántúl, respectively, each year. The other four regions have also shown only moderate and temporary steps forward or backward during the years. Although the regions have maintained their rankings according to the status in 1994, the differences between regions representing the extreme values have become more pronounced: the first three regions could claim an even higher percentage of the per capita national average GDP, while the other regions could claim an even lower percentage than nine years before. The region of Central Hungary has shown particular strengthening, while the economic performance of Southern Alföld was the poorest.
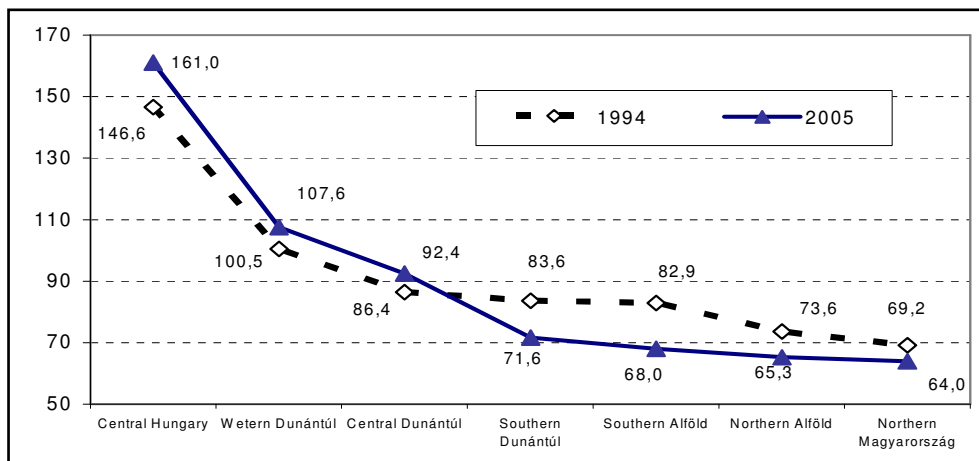
Figure 1. **Per capita GDP as percentage of the national average**
Source: Central Statistics Office (KSH)

By contrast, as can be seen from the allocation of funds, the most developed region of Central Hungary receives nearly half of all the funds (Figure 2).
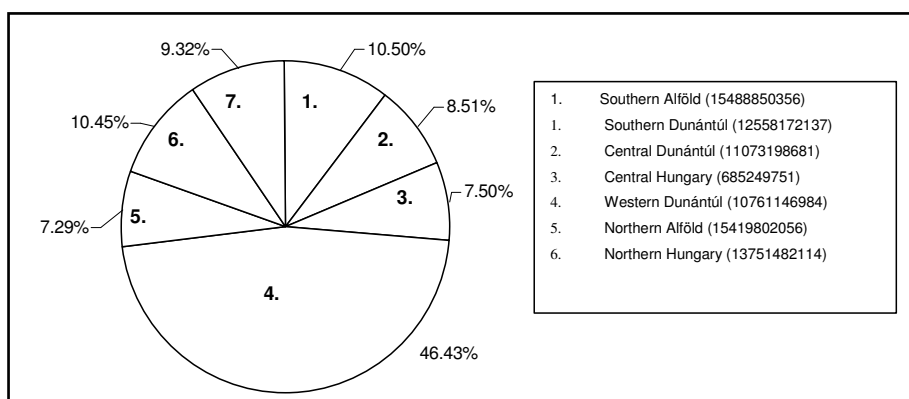

Figure 2: **Per capita decentralised regional development subsidy, 2004 (bn. HUF)**
Source: National Development Office

It poses a question what quota of the new seven-year EU budget the backward regions will be able to call, and whether the funds collected will promote convergence.
(According to preliminary calculations in 2007-2013 Hungary will be able to call annually two and a half times as many funds - 3.5-4 % of the Hungarian GDP - as it did in the first three years after accession.)

It is justified to raise the questions: to what extent will the next 7 years contribute to the convergence of the region of Northern Hungary; will the negative tendency prevailing for more than 15 years be reversed, and if it is, what extent of convergence can be counted with?

Competitiveness versus convergence

Uneven regional development (independent of the level of development) can be detected and shown in all the countries of the world[41].

The specialist literature of regional economics dealing with the issues presents a basically uniform standpoint regarding the causes underlying regional disparities and the issue of the state (budgetary) intervention required for their moderation; but is less uniform in judging the issue of the nature of the role.[42]

Beyond the differing economic policy approaches, the fact that for a long time less attention has been devoted to the socio-economic usefulness of development interventions as well as to showing their impact on regional convergences also plays a role. Perhaps it can also be attributed to that that the rate of regional convergence has fallen behind the desirable level in most countries in spite of the increasing subsidies.

In the regional policy of the EU, the Lisbon strategy[43] launched a change in paradigm. In addition to the previous, almost exclusive objective of convergence, a growing emphasis is laid on increasing competitiveness. This means that it is becoming more and more obvious: when there are no measures strengthening competitiveness, convergence will proceed much more slowly. On the other hand, the deterioration of the competitive position of the Community will generate budget disputes again and again, as a result of which fewer and fewer funds can be obtained for funding the programs designed to achieve convergence.

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[41] An example is the post-accession European Union, where taking the average of the 25 member states as the basis, in the 10 regions with the highest performance in 2004 the per capita GDP was 189 % of the average, while in the 10 most backward regions it was 36 %. As a result, the per capita GDP of 64 regions (more than one fourth of the population of the Union) does not reach an average of 75 %. In the new member states this affects 90 % of the population (with the exception of the regions of Prague, Bratislava and Budapest as well as the population of Cyprus and Slovenia, practically all the population). In the EU-15 it affects only 13 % of the population.
(htp://uropa.eu.int/comm/regional_policy/sources/docoffic/official/reports/interim3:en.htm).

[42] The specialist literature mentions several causes of the development of regional disparities, such as intraregional factor mobility (e.g.: Romer [1990]) and differing growth rate of trade (e.g.: Grossmann/ Helpman] [1990]), sector-specific differences, differences in the efficiency and diffusion rate of R&D intensity (Sepl/ Feser/ Schulze [2005]), differences in transaction costs, qualifications (e.g.: Haas/ Möllner [2001]), as well as in location factors (e.g.: Niebuhr [2000]).

[43] In March 2000 the leaders of the member states set the objective that by 2010 the EU "shall become the most dynamic and competitive knowledge-based economy in the world", "which is capable of sustainable economic growth, with more and better jobs and greater social cohesion and respect to the environment."

These signs have already appeared; in spite of the emergence of the new member states (an increase in the number of "mouths to be fed" and a growth in regional disparities), the amounts of the funds available for regional equalisation have not increased in specific terms. Therefore more definite changes in the methodology are needed, many more characteristic efficiency analyses and impact studies have to be performed than at present at the national level in the allocation of the funds. The practice in Hungary also has to be changed, for today we only now and again find ex-ante analyses. Although the legislation background is well-ordered in Hungary (Act XXI of 1996 on regional development and country planning obliges the government to report biannually to the Parliament on the development of regional processes and the experiences of regional development policy[44]), however, as it is proven by the first two reports, no essential steps have been taken towards the allocation of funds with efficiency as its priority.

We are of the opinion therefore that, in the planning phase preparing the allocation of funds in the next period, it is justified to raise the question of what impact regional development interventions have.

This is a particularly exciting exercise if we think of the fact that the Community funds available annually in the period 2007-2013 are by orders larger that those in 2004-2006. On the other hand, the domestic own resources required for making use of the funds will practically deplete the domestic budgetary allowance for development (that is, beyond what is formulated in the National Reference Framework being prepared now, there will be hardly any government funds for funding further programs). Therefore it does matter what for and with what efficiency the potential financial estimates are used!

The efficiency of using the available funds (beyond the standards of the programs and projects) depends to quite a considerable extent on how the practice in planning in Hungary changes; that is:

a) Does the decision maker intend to demonstrate the expected and actual impacts? Does the amount of the impact shown by the experts play a role in the allocation of funds; are the decision makers influenced in drawing up the financial plans by the social usefulness of the programs, by the extent of their regional impacts, or will they ignore them?

b) Are the experts involved in regional planning familiar with the methods of impact studies?

c) Are the data supplied by the Hungarian statistics system sufficient to show regional impacts?

d) Can the threshold of subsidies quantified, i.e. subsidies whose consequences cannot be measured any longer (in such cases, instead of a concentration of funds, politics uses the principle of 'all those involved should be given a little')?

e) What accountability can be expected; will there be any consequences if the usefulness of the subsidy falls short of that predicted in the ex-ante analysis?

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[44] The formal framework of the report is included in the National Regional Development Concept adopted by an order of the Parliament in 1998, (resolution of the Parliament No. 35/1998/III.20.)

Current practice

The developers of Hungarian regional development policy (following the change in paradigm after 1989) have not really brought anybody to account. The decision makers did not want (or did not dare) to face the low efficiency of the application of funds or its unsuccessfulness, the creation of virtual jobs financed from public moneys, etc. (It cannot be a coincidence that e.g. in the county of Borsod-Abaúj-Zemplén there was not a single ex-post impact study on the regional development subsidies used in 1995-2004, while at the same time a number of studies deal with praising the supports granted to the region.)
It seems that politics has chosen a more convenient and safer method; it has developed 'soft' aspects of assessment, which are suitable for wrapping the subjective (not infrequently selfish) intentions underlying the decisions in an appearance of objectivity.

In the past 15 years demonstrating the expected impacts of regional development was only incidentally dealt with in the period of program making. If, however, there are some examples, mostly verbal impact studies were written, which do without numerical analyses (e.g.: in terms of the number of employed, creating new jobs, and retaining the existing ones, etc.). It is even harder to find examples for showing the expected and actual regional impacts of the development programs, while there are several dozen methods known for demonstrating the consequences of regional development programs (projects) ranging from the simple ones to more complex empirical methods (Table 3).

Figure 3. **Methods for demonstrating regional development impacts**
Source: constructed by the author
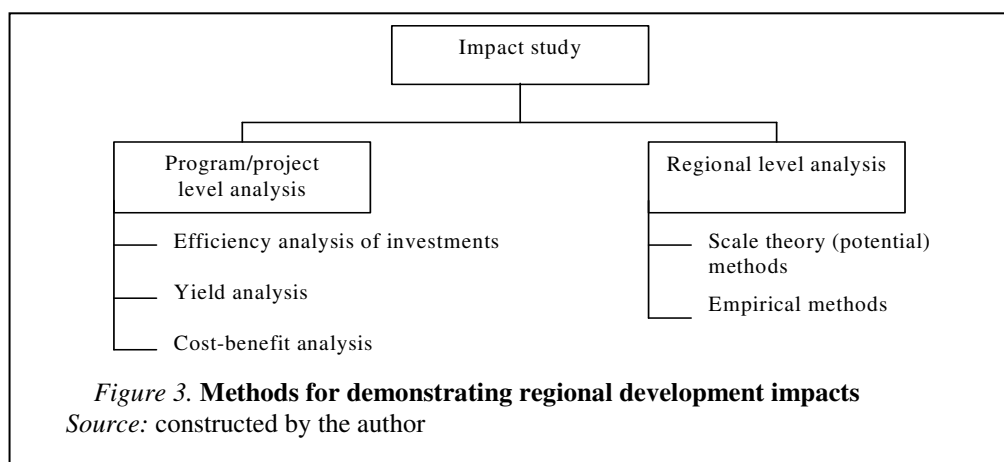
The use of empirical methods obviously requires more time and better professional skills, which may contribute to the fact that we can mostly find verbal analyses in the Hungarian practice.

Potentials and limits

The development objectives of the next seven years (2007-2013) will be fundamentally influenced by the following:

- The region of Northern Hungary is one of the least developed regions of the European Union in economic terms.
- The education level of the Roma population concentrated regionally (living mainly in less developed small regions and in certain parts of the towns of Miskolc and Salgótarján) is low, which results in serious welfare and social problems.
- In the region of Northern Hungary there are few large companies having a strong market position and considerable capital, so the large towns of the region are unable to counterbalance the economic attraction and central role of Budapest.
- The small and medium-sized enterprises of the region lack capital, are struggling with regular liquidity problems, their market positions and competitiveness are weak, and show little willingness to cooperate.
- In the centres of the deprived small regions there is a shortage of industrial zones, incubator houses and related consultancy services promoting the settlement and operation of enterprises or helping new ones. The transfer organisations encouraging the innovation activities of enterprises are missing or are of low standards; the relations between R&D organisations and enterprises are insufficient.
- The income-producing capacity of tourism in the region lags behind the potentialities, primarily due to the non-harmonised and low-standard product structure and supply of accommodations.
- Unemployment in the region of Northern Hungary is higher than the national average, the rate of those permanently unemployed is high, multi-general unemployment is emerging; the level of employment is low, the number of people drawing disability pensions and social welfare exceeds the national average, particularly in areas with small villages.
- The health of the population is poor, there are many inactive people and disability pensioners, and the mortality rate is higher than the national and European average. The population of the region and that of the more backward small regions is continuously aging..
- Lower income levels in the region, the population getting poorer and poorer.
- The education level of the population is lower than the national average, and the number of jobs employing people with higher qualifications is few (particularly in the medium-sized and small towns).
- The towns in the north of the region (Salgótarján, Ózd, and Sátoraljaújhely) are difficult to reach by road; and their public transport infrastructure is obsolete (coach stations, passenger information systems, etc.).
- There are large contaminated industrial areas left after the factories of heavy industry (e.g.: in Ózd, Salgótarján, Kazincbarcika, and Miskolc), and landscape wounds (pit-heaps).

Development objectives

The development program of the region of Northern Hungary for 2007-2013 aims to strengthen the competitiveness of the region, and to reduce the regional, social and economic differences within the region at the same time.
The program formulates five priorities:

a) Creating the knowledge-based *competitive economy* of the region.

b) Strengthening *the tourism potential,* improving the quality of products and services based on natural and cultural values, creating new jobs, a sustainable application of the resources.

c) *Rehabilitation of urban areas,* renewal of urban areas being segregated and contaminated in social terms, strengthening social cohesion.

d) *Improving regional infrastructure*, including the accessibility of the centres of small regions, a renewal of humane public services, improving IT-based public services.

e) *Technical assistance* to support the implementation of the program and to achieve the objectives of the program.

In line with the above objectives, four programs (1. Creating a competitive economy; 2. Strengthening the tourism potential; 3. Rehabilitation of urban areas; and 4. Improving regional infrastructure) have been formulated for the period 2007-2013 together with the related objectives (Table 1).

Table 1: **Strategy and priority level expected impacts, quantification of indicators**

Objectives	Indicators	Targets (2014)
Priority 1: **Creating a competitive economy**	Number of jobs created (pcs)	4,000-4,500
	Number of enterprises settled in the supported logistics parks (pcs)	25-30
	Number of logistics centres supported (pcs)	4-5
	Number of new, supported cooperation with enterprise and/or R&D institutions (pcs)	25-30
	Number of supported investments in creating jobs (pcs)	200-300
	Number of supported technological innovations in the enterprises (pcs)	350-400
	Number of supported innovation services in the SMEs (pcs)	350-400
	Number of supported innovation-technological centres (pcs)	4-6
	Number of persons participating in training (pcs)	1,300-1,500
	Number of organisations transferring supported innovation (pcs)	25-30

Table 1 continued

Priority 2: **Strengthening the tourism potential**	Number of jobs created in tourism (persons)	4,500-5,000
	Number of commercial accommodations (pcs)	41,000-43,000
	Average time spent (nights)	2.7-3
	Number of nights per 1000 permanent residents (nights)	2,100-2,300
	Supported priority tourism products, attractions (pcs)	40-50
	Number of supported refurbished accommodations (pcs)	12,000-15,000
	Number of supported tourism accommodations (pcs)	200-300
	Number of supported tourism management organisations (pcs)	12-16
	Number of those participating in training (persons)	800-1,000
Priority 3: **Rehabilitation of urban areas**	Number of jobs created due to support (persons)	4,000-5,000
	Number of organisations, enterprises settled or offering services in rehabilitated areas (pcs)	150-200
	Number of those successfully completing training (persons)	700-800
	Number of employees returning to the labour market (persons)	700-1,000
	Number of segregated parts of towns supported (pcs)	10-15
	Number of centres of towns supported (pcs)	30-35
	Number of brown-field areas rehabilitated (pcs)	7-10
	Area of brown-field areas rehabilitated (ha)	130-170 ha
	Area of towns rehabilitated (ha)	150 ha
	Number of inactive persons supported in employment programs (persons)	3,000
	Number of supported employment initiatives (persons)	30
	Number of persons participating in training (persons)	1,000
Priority 4: **Improving regional infrastructure**	Number of students in supported educational institutions (persons)	50,000-60,000
	Number of local governments interested in IT development (pcs)	300-400
	Number of supported small region programs (pcs)	82-86
	Number of constructed or reconstructed roads with 4- or 5-digit markings (km)	1,400-1,600
	Number of supported public transport service projects (pcs)	20-25
	Number of educational institutions improved or refurbished (pcs)	150-200
	Number of health institutions improved or refurbished (pcs)	70-80
	Number of projects supported in order to modernise public administration (pcs)	80-100

Source: NORDA [2006]

The program counts with EU funds of approximately 399.0 billion HUF arriving in the region of Northern Hungary in the period 2007-2013 (Table 2).

Table 2. **Development programs of the region of Northern Hungary (2007-2013)**

No.	Program	Sub-program	Funding require ment	Grand total (bn HUF)
1.	**Creating a competitive economy (techno-region)**	1.1 Developing integrated supplier networks in the region.	15.0	73.0
		1.2 Attracting environmental protection industry	20.0	
		1.3 Biomass energetics industry	15.0	
		1.4 Establishing a regional knowledge centre	8.0	
		1.5 Developing a regional logistics network	10.0	
		1.6 Developing business services supporting enterprises	5.0	
2.	**Developing a regional tourism network together with the region of Northern Alföld**	2.1 Developing a coherent and integrated communication strategy, developing region-marketing tools	0.5	101.0
		2.2 Establishing a joint regional cluster centre with the region of Northern Alföld	3.0	
		2.3 Supporting the establishment of regional tourism clusters	82.0	
		2.4 Development of program-related services	10.5	
		2.5 Development of program-related human resources	5.0	
3.	**Creating the conditions for high-standard life, rehabilitation of urban areas**			111.0
4.	**Improving regional infrastructure**			110.0
Total:				**395.0**

Expected benefits of the planned programs

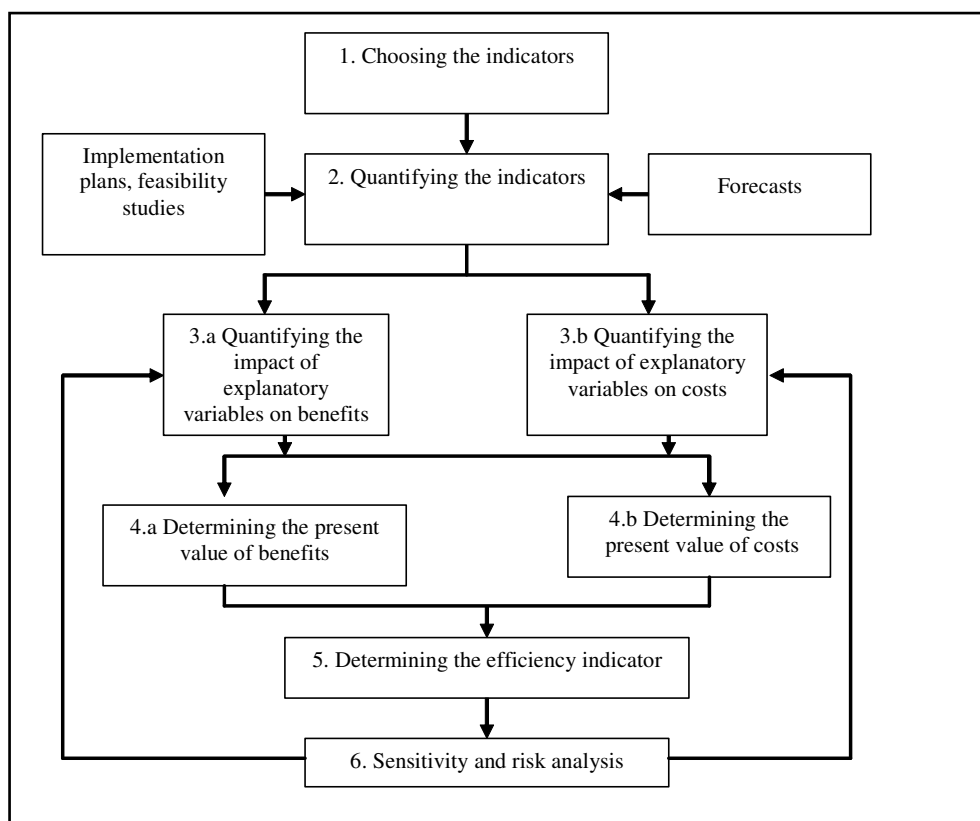The ex-ante evaluation of the planned programs was performed by cost-benefit analysis (Figure 4).

Figure 4. **The logical process of ex-ante-type cost-benefit analysis**
Source: constructed by the author

The allowable costs were classified in three groups:

a) costs arising in connection with preparation (e.g.: preliminary studies, feasibility studies, etc.);

b) costs incurred during implementation (e.g.: property development costs, costs of purchasing machinery and equipment, costs incurred by public procurement, account management, and leasing, the material, energy, wages and contribution costs of the implementation, etc.); as well as

c) annual costs incurred by operation (e.g.: management, maintenance, troubleshooting, etc.). Drawbacks affecting society (and emerging in the course of realisation of a project)

are also included here (e.g.: increase in the load on the environment, health deterioration, etc.).

Costs were determined by a calculative method (e.g. technical, time, etc. norms) on the basis of the feasibility studies or based on the costs of similar programs.

The system handles three benefit tables: direct benefits (H_1); indirect benefits (H_2) and spill-over benefits (H_3). Accordingly, the benefit of a program (H) is given by the sum of the three factors depending on a given utilisation (Q): $H(Q) = H_1(Q) + H_2(Q) + H_3(Q)$.

a) **Direct benefits** appear in the implementation of the project (e.g.: surplus sales revenues, savings in fuel costs, savings in maintenance costs, etc.).

b) **Indirect benefits** take into account income arising for the budget (e.g.: personal income tax, contributions by employers, social security contributions, value added tax, company tax, duties, etc.), savings for the budget due to the retention of jobs, as well as savings expressed by shadow price (e.g.: savings arising from a reduction in the number of road accidents, benefits due to a reduction in the time to get to work, benefits due to a reduction in the load on the environment, etc.).

In determining indirect benefits the **multiplication factor**, which expresses the spill-over effect of the intervention (appearing in a different sector), plays an outstanding role.

In line with the specialist literature, the software interprets four multiplication factors in theory.

- The income multiplication factor, which expresses the spill-over effect of the expenditure effected in a given sector and appearing in a different sector.

- The output multiplication factor, which expresses the impact of unit output in the transportation sector (under examination) appearing in a different sector.

- The employment multiplication factor, which expresses the impact of unit expenditure in the transportation sector (under examination) on employment in other sectors.

- The budget multiplication factor, which expresses the impact of unit expenditure in the transportation industry (under examination) on the central budget.

It was quite a job to determine the current output multiplication factor, i.e. to take into account the spill-over effect of the programs within the region.

The specialist literature offers three models for solving the task: the balance of sectorial connections, the Computable General Equilibrium (CGE), and the Social Accounting Matrix (SAM).

In view of the fact that the Central Statistics Office does not quantify the balance of either the country connections or the balance of regional sectorial connections, the multiplication factor was determined on the basis of the data of the turnover between the sectors (Table 3).

c) **Spill-over benefits**, which express the increase in solvent demand appearing in the region (Table 4).

The program quantifies five indicators of the cost-benefit data determined above (Table 5). Two of them are conservative.

Table 3. **The total multiplication factor of the region of Northern Hungary**

	Sectors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
1.	Agriculture	1.40	0.02	0.03	0.01	0.02	0.02	0.01	0.02	0.00	0.01	0.02	0.04	0.31	0.01	0.01	0.01	0.01	0.01	1.96
2.	Mining	0.01	1.08	0.03	0.00	0.02	0.01	0.00	0.01	0.00	0.00	0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	1.22
3.	Food industry	0.04	0.06	1.20	0.01	0.02	0.03	0.01	0.02	0.01	0.02	0.05	0.04	0.02	0.02	0.03	0.02	0.02	0.04	1.66
4.	Clothes industry	0.02	0.01	0.01	1.02	0.04	0.02	0.01	0.01	0.02	0.01	0.02	002	0.01	0.04	0.07	0.03	0.01	0.02	1.39
5.	Other light industry	0.07	0.04	0.05	0.03	1.19	0.03	0.02	0.05	0.01	0.02	0.04	0.02	0.03	0.02	0.02	0.01	0.01	0.01	1.67
6.	Chemical industry	0.04	0.02	0.06	0.02	0.03	1.19	0.02	0.08	0.04	0.04	0.18	0.03	0.03	0.02	0.02	0.03	0.01	0.01	1.87
7.	Other processing industry	0.01	0.00	0.00	0.10	0.01	0.01	1.01	0.00	0.06	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.29
8.	Machine industry	0.03	0.02	0.03	0.02	0.05	0.02	0.02	1.27	0.04	0.02	0.02	0.03	0.02	0.05	0.06	0.05	0.05	0.02	1.82
9.	Energetics	0.05	0.03	0.04	0.06	0.07	0.08	0.02	0.02	1.16	0.15	0.03	0.03	0.05	0.04	0.02	0.03	0.02	0.02	1.92
10.	Construction ind.	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	1.02	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	1.1
11.	Accommodation, catering	0.02	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.04	0.06	0.11	0.02	0.03	0.02	0.02	0.07	0.02	0.02	0.52
12.	Railway transport.	0.14	0.07	0.11	0.03	0.05	0.08	0.03	0.04	0.03	0.05	0.12	1.08	0.10	0.08	0.06	0.06	0.04	0.05	2.22
13.	Financial activities	0.02	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	1.05	0.00	0.05	0.01	0.00	0.00	1.22
14.	Property	0.03	0.02	0.03	0.02	0.02	0.03	0.03	0.02	0.03	0.01	0.03	0.05	0.02	1.03	0.04	0.03	0.01	0.01	1.46
15.	Public admin.	0.01	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	1.01	0.01	0.01	0.01	1.15
16.	Education	0.01	0.00	0.01	0.03	0.01	0.01	0.03	0.00	0.01	0.00	0.01	0.01	0.01	0.04	0.13	1.04	0.00	0.00	1.35
17.	Health care	0.02	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.02	0.02	0.03	0.03	1.05	0.05	1.39
18.	Other services	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.04	0.02	0.04	0.04	0.03	0.05	0.04	0.04	2.23	2.78
	Total	1.95	1.42	1.7	1.41	1.6	1.62	1.27	1.61	1.51	1.5	1.66	1.49	1.79	1.45	1.64	1.49	1.31	2.51	28.93

Interpretation: Impact of unit demand for the products of the sector in the column on the output of the sectors in the rows with consideration of the induced impacts of spending the wages.

Source: Joint calculations by the county headquarters of the Central Statistics Office in Borsod-Abaúj-Zemplén and the Department of Regional Economics of the University of Miskolc.

Table 4. **Equations of benefit elements (REINPLAN©)**

Direct benefit	**Sales revenue: ΔSI (HUF) = IND * FA.** **Revenue from contribution by employers: ΔET (HUF) = ALKSZ * BATL * MJAR.** **Revenue from personal income tax: ΔPI (HUF) = ALKSZ * BATL * SZJA.** **Replacement of unemployment benefit: ΔNUE (HUF) = ΔALKSZ * MNELK * MJAR * 0.75 * 0.85.** **Surplus company tax: ΔCT (HUF) = NÁ * ADOK** **Local industrial tax: ΔLT (HUF) = NA * ÁTLA** **VAT ΔVTI: (HUF) = B * ÁFAI** **Surplus VAT (services): ΔVTS (HUF) = Á * ÁFASZ** **Surplus local duty revenue: ΔLTP (HUF) = B * I**	IND — indicator FA — specific price (HUF/indicator) ALKSZ — number of employees in the sector (person/year) BATL — gross average wages (HUF/person/year) MJAR — contribution by employers (%) SZJA — average personal income tax rate (%) ΔALKSZ — increment in the number of employees (person) MNELK — number of unemployed employed due to the program (person/year) MJAR — unemployment benefit (HUF/person) Á — gross sales revenue (HUF) NÁ — net sales revenue (HUF) B — investment costs (HUF) ÁFASZ — VAT rate for services (%) ÁFAI — VAT rate for capital goods (%) ΔÁB — net (VAT-free) increment of the revenues of the sector (HUF) ADOK — average company tax rate (%) ÁTLA — average tax rate (%) M_i — olio sector multiplication factor I — average contribution (%) NATL — net average income (HUF) FI — consumption rate (%)
Indirect benefit	**Surplus revenue from other sectors: ΔSII (HUF) = ΔÁB * M_1** **Surplus revenue from contribution by employers in other sectors: ΔETI (HUF) = ΔALKSZ * M_1 * BATL *I** **Personal income tax from other sectors ΔPII (HUF) = ΔALKSZ * M_1 * BATL * SZJA** **Replacement of unemployment benefit arising in other sectors: ΔNUEI (HUF) = ΔALKSZ * M * BATL * SZJA** **Company tax revenue from other sectors: ΔCTI (HUF) = ΔLKSZ * MUNKN * M * MNÉLKJ * ÁTLA** **Revenue from local industrial tax from other sectors: ΔLTI (HUF) = ΔÁB * Mi * I** **VAT (services) from other sectors: ΔVTSI (HUF) = ΔÁB * M *ÁFASZ**	
Spill-over benefit	**Benefit of increase in income: CB (HUF) = ΔALKSZ * NATL * FI**	

Table 5. **Profit and loss indicators of cost-benefit analysis (constructed by the author)**

Type	Indicator		
	Definition	**Interpretation**	**Notation**
Return rate (M)	$$M_t = \frac{\sum\limits_{t=1}^{n} H_t \frac{1}{(1+r)^t}}{\sum\limits_{t=1}^{n} K_t \frac{1}{(1+r)^t}}$$	The program is socially beneficial if $M > 1$	H – benefit K – cost
Benefit present value indicator (HJ)	$$HJ_t = \sum\limits_{t=1}^{n} H_t \frac{1}{(1+r)^t} - \sum\limits_{t=1}^{n} K_t \frac{1}{(1+r)^t}$$	The program is socially beneficial if $H > 0$	
Budgetary return (KV)	$$KV \frac{TJ}{KVJ}$$	To what percentage the subsidy granted for the implementation of the program is returned from the budgetary revenues during time T.	KVJ – present value of budget revenue TJ – present value of subsidy
Import ratio indicator (IH)	$$IH = \frac{KJ}{IJ} \cdot 100$$	What percentage are imports of the costs arising during time T of the program.	IJ – present value of imports KJ – present value of costs
Benefit intensity (HI)	$$HI_t = \frac{\sum\limits_{t=1}^{n} H_t \frac{1}{(1+r)^t}}{\sum\limits_{t=1}^{n} T_t \frac{1}{(1+r)^t}}$$	What percentage of the subsidy is returned from the benefit.	T – subsidy

Findings of the impact studies

Costs were determined on the basis of feasibility studies built on estimates by experts. In the calculations a 3 % increase in wages and a constant contribution percentage were used. According to preliminary calculations by the experts, the programs will induce a considerable demand for employment (Table 6).

Table 6. **Aggregate job creating impact of the programs**

Program	Persons
Creating a competitive economy	25,000
Regional tourism network	29,000
Improving the conditions for high standards of life	21,000
Total:	**75,000**

Regarding the current output multiplication factor the assumption was used that it was static in the period under examination, i.e. in 2007-2013 the values of the elements of the matrix were constant.

The social usefulness of all the three programs is clear, however, as regards their impacts, the three programs do not show the same strengths (Tables 7 and 8).

Table 8. The cost-benefit indicators of the three programs

Indicator	Program of competitiveness	Program of tourism development	Program of improving the standards of life
Return rate (M)	7.29	4.58	3.09
Benefit present value (HJ)	572.983 bn HUF	395.627 bn HUF	371.114 bn HUF
Benefit intensity (HI)	16.28	6.10	1.96

The program of competitiveness generates the highest added value, therefore this program has obviously the highest return rate and benefit intensity as well; while the program of improving the standards of live shows the lowest specific values. This latter one aims at creating social cohesion primarily.

Investigating the regional impact
The investigation of regional impact has a considerable econometric literature[45].
The models adopt mostly the Cobb-Douglas production function (Table 9).

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[45] The models have developed two groups (with some simplification). The first includes the models that aim at quantifying the impact of economic growth on changes in regional GDP (e.g.: Lucas [1988], Grossmann/ Helpman [1989]); the second group aims at modelling regional convergence.

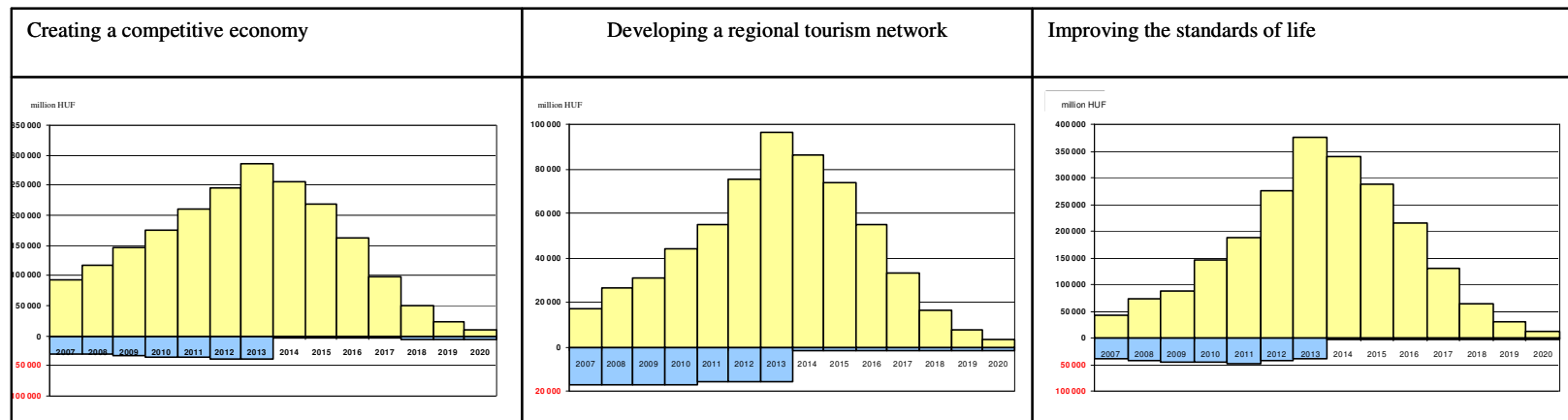*Table 7.* **The cost-benefit curves of the programs**

Creating a competitive economy	Developing a regional tourism network	Improving the standards of life

Table 9. **Production functions (constructed by the author)**

Author	Model	Notation
Eckey/ Kosfeld/ Türek [2000]	$Y=f(\alpha_T, L, H, K)$ $\ln Y = \ln \alpha_T + \alpha_L \cdot \ln L + \alpha_H \cdot \ln H + \alpha_K \cdot \ln K$ $+ \frac{1}{2} \cdot \beta_{LL} \cdot (\ln L)^2 + \frac{1}{2} \cdot \beta_{HH} \cdot (\ln H)^2 + \frac{1}{2} \beta_{KK} \cdot (\ln K)^2$ $+ \beta_{LH} \cdot \ln L \cdot \ln H + \beta_{LK} \cdot \ln L \cdot \ln K + \beta_{HK} \cdot \ln H \cdot \ln K$	α_T - level of knowledge L - labour H - human capital K - physical capital
Sala-Martin [1993]	$Y = f(t, K, L)$ $Y = A(t) K^\alpha L^{1-\alpha}$	A - technical level t - time L - labour K - capital

We attempted to demonstrate regional impact on the basis of two indicators (added value and changes in regional GDP) (Table 5). The added value (HÉi) of a particular sector (i) of the region was determined using the following relationship:

$HÉi = \alpha + \beta Bi + \gamma ALKi + \delta MKi + \varepsilon CPI$,

where:

– i = number of sector,[46]
– α = constant,
– β, γ, δ, ε = parameters,
– Bi = investment effected in the sector in a given year,
– ALK = number of employed in the sector in a given year,
– MKI = average wages in the sector,
– CPI = average inflation.

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[46] The model REINPLAN© developed by the Department of Regional Economics of the University of Miskolc in 2005 can handle 18 sectors simultaneously (agriculture, mining, food industry, clothes industry and other light industry, other processing industry, machine industry, energy and water supply, construction industry, trade, accommodation, catering, transportation, storage, communication, financial activities, property deals, public administration, education, health care and other services).

Regional GDP is equal to the cumulated added value in the sectors:

$$GDP = \sum_{i=1}^{n} HE.$$

The output indicators under examination were determined in the econometric model were determined on the basis of two hypotheses:
– Supposing a 'natural' growth; that is the changes will develop in line with the current economic policy practice;
– Supposing a 'generated" growth; that is what change can be quantified as a result of the subsidy.
The difference obtained between the data as a result of the quantification of the two functions gives the extent of the expected change.
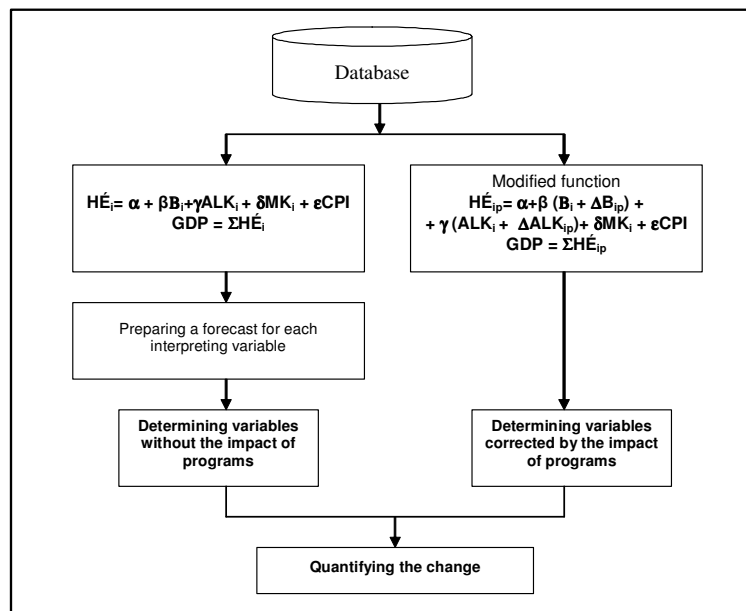
Figure 5. **Model of demonstrating regional impacts (REINPLAN©)**

In determining a national tendency, we counted with the following:
- The rate of technological development remains unchanged;
- The growth rate of GDP in Hungary will exceed the EU average by 2-2.5 per cent in the next 10-15 years.

Regarding regional tendencies we applied the following assumptions:
- The sectorial weight of mining is low in the region and is expected to remain so;
- The agriculture in the region will have a similar fate in the years to come.

Chances of convergence

The mezo-econometric model was used to find the answer to the question whether it will be possible to achieve a growth rate higher by 2-2.5 per cent, which would enable the region to converge upon the average of the domestic GDP in the long run.

Analyses of the regional impact prove that the impact of the planned programs in increasing the added value may ensure a growth above the national average by 2.0 – 2.2 per cent in the period 2007-2009, and by 2.4 – 2.6 per cent in the period 2009-2013 for the region (Table 10).

Table 10. **Regional impact of the development programs**
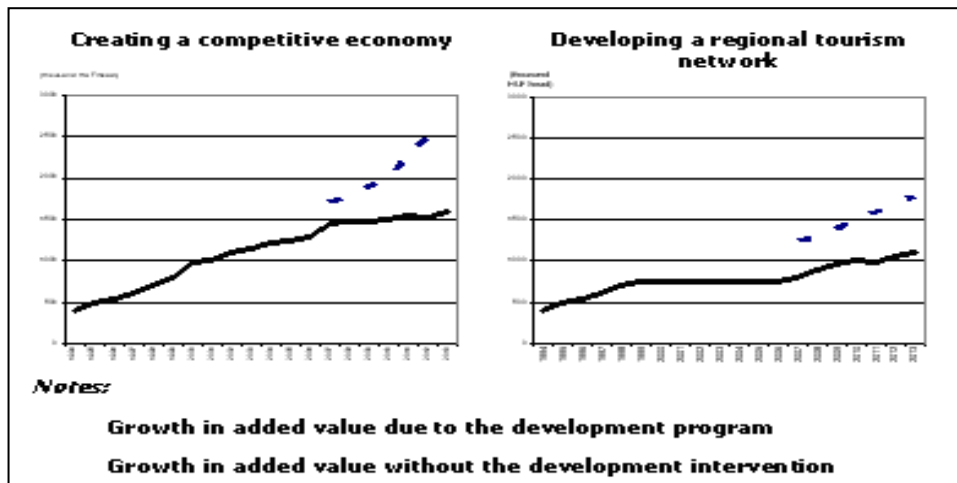
Summary

The period 2007-2013 may be of decisive importance regarding the social and economic processes in the region of Northern Hungary for at least two reasons. The first long-term development program (7 years) was prepared after the changes in economic policy of 1989 in order to improve the competitiveness of the region.
On the other hand, the amount of the funds that can be called (as proved by the analyses) will facilitate to induce a demonstrable economic growth in the region.

The plans take a change in paradigm into account: the convergence of the region is planned to be based on creating and strengthening the foundations of a competitive economy.
If the political intention will back these efforts, it will be possible to stop the process of the region of Northern Hungary drifting towards the periphery that has been going on for two decades now, and there will be hope to establish a new expansion path.

Literature

[1]   *Anselin L.* [1988]: Spatial Econometrics: Methods and Models. Dordrecht.

[2]   Bode E. [1988]: Lokale Wissensdiffusion und regionale Divergenz in Deutschland. Tübingen.

[3]   *Dinwiddy C., Teal F.* [1996]: Principles of cost-benefits analysis for developing countries, Cambridge University Press.

[4]   *Eckey H.F./ Kosfeld R./ Türck M.* [2000]: Regionale Produktionsfunktionen mit Spillover-Effekten für Deutschland - empirischer Befund und wirtschaftspolitische Implikationen. Uni Kassel. Fachbereich Wirtschaftswissenschaften. Nr. 64/04.

[5]   *Grossman G. M./ Helpman E.* [1989]: Production Development and International Trade Journal of Political Economy, 97. pp. 1261-1283.

[6]   *Haas A./ Möllner J.* [2001]: Qualifizierungstrends und regionale Disparitäten. Mitteilungen aus der Arbeitsmarkt- und Berufsforschung (MittAB). 34 (2). pp. 139-151.

[7]   *Kirkpatrick, C., Weiss, J.* [1996]: Cost Benefit Analysis and Project Appraisal in Developing Countries, Elgar, Cheltennan.

[8]   *Kocziszky Gy.* [2005]: Modelling the Regional Impact of Regional Subsidies. Novy Smokovec, 28 September 2005.

[9]   *NORDA* [2006]: Észak-magyarországi régió regionális operatív programja (2007-2013). Észak-Magyarországi Regionális Fejlesztési Ügynökség. Miskolc.

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NOTES FOR CONTRIBUTORS
to the European Integration Studies

Aims and Scope

The aim of the journal is to publish articles on the legal, economic, political and cultural sides of the European integration process.

Frequency of the journal

Two issues a year (approximately 150 pages per issue)

Submission of Manuscripts

Submission of a manuscript implies that the paper has not been published, nor is being considered for publication elsewhere and that permission for publication, if needed, has already been obtained from appropriate sources.

1. Manuscripts submitted should not exceed 35000 characters (including spacing). Reviews and reports should be 7-8000 in length.
2. Please submit typed-printed manuscripts on standard-sized paper.In addition, the text should be submitted on disc or by e-mail. The journal accepts manuscripts in RTF.format.
3. A brief English-language summary is requested.
4. Information on authors should include: name, academic degree, affiliation, country, field of research, telephone, e-mail.
5. References to literature in the text should include the name of the author and the date of publication (Benedict 1935)
6. List of sources and references should appear at the end of the paper in alphabetical order using the following format:
   Book: author (date of publication), title, place of publication, publisher.
   Article: author (date of publication) title, periodical, (volume), number of issue, page numbers.

PUBLICATIONS OF THE UNIVERSITY OF MISKOLC
A SHORT HISTORY

The University of Miskolc (Hungary) was founded by the Empress Maria Teresia in Selmecbánya in 1735. After the first World War the university moved to Sopron, where in 1929, it started the series of university publications with the title Publications of the Mining and Metallurgical Division of the Hungarian Academy of Mining and Forestry Engineering (Volumes I.-VI.). From 1934 to 1947 the Institution became the Faculty of Mining, Metallurgical and Forestry Engineering of the József Nádor University of Technology and Economical Sciences at Sopron. The publications got the title Publications of the Mining and Metallurgical Engineering Division (Volumes VII.-XVI.). For the last volume before 1950 - due to a further change in the name of the Institution - Technical University, Faculties of Mining, Metallurgical and Forestry Engineering, Publications of the Mining and Metallurgical Divisions was the title. For some years after 1950 the Publications were temporarily suspended. After the foundation of the Mechanical Engineering Faculty in Miskolc in 1949 and the movement of the Sopron Mining and Metallurgical Faculties to Miskolc the Publications restarted with the general title Publications of the Technical University of Heavy Industry in 1955. Four new series - Series A (Mining), Series B (Metallurgy), Series C (Machinery) and Series D (Natural Sciences) - were founded in 1976. These came out both in foreign languages (English, German and Russian) and in Hungarian. In 1990, right after the foundation of some new faculties, the university was renamed to University of Miskolc. At the same time the structure of the Publications was reorganized so that it could follow the faculty structure. Accordingly three new series were established: Series E (Legal Sciences), Series F (Economical Sciences) and Series G (Humanities and Social Sciences). The latest series, i.e., the series H (European Integration Studies) was founded in 2002. The eight series are formed by some periodicals and such publications which come out with various frequencies.

In 1998, the European Studies Centre was established at the University of Miskolc. Its operation is based on the academic staff of seven faculties of the university, focused on the theoretical and practical issues of the European integration and on the accession of Hungary to the EU, primarily in relation with themes of legal harmonisation, economic and political integration, as well as the history and operation of the different institutions of the EU.
The four main themes are dealt with in the frame of the following activities: education (undergraduate EU-modules and postgraduate courses), research (legal harmonisation and economic catching-up), training for target groups (for civil servants, secondary school teachers and for the representatives of the business life) and networking (co-operation with Hungarian and foreign partner institutions).
In spring 2001, it was decided that in co-operation with the foreign partners the results of the research work carried out in the frame of the ESC shall be published in foreign language regularly. This led to the launching of a periodical entitled:

European Integration Studies - Series "H"

We believe that the philosophy of the Editorial Board - competence, openness, tolerance and equal treatment - of which members are outstanding foreign and Hungarian experts shall guarantee the high professional level and the up-to-dateness of the publication. We kindly encourage our readers and all interested to contact the authors as well as the Editorial Board with their comments and suggestions. We also hope that this new periodical will contribute to the international reputation of the University of Miskolc.

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