SUMMARY

Agriculture is certainly not the most decisive element of the expansion of EU towards eastern central Europe. However, it is one of the most complex issues, if not the very most one, on the way of integrating the new members. Nevertheless, the implementation of the Common Agricultural Policy in the field of rural development might help to ease the present rural disparities and unfavourable spatial trends in Hungary, as well as in the other candidate countries. Rural economy is a complex and dynamic system (Allanson, P. – Withby, M. 1996), and agriculture should be treated as a part of it (Nijkamp, P. 1996).

Rural development includes a great number of issues and various aspects. The authors focus, in a spatial aspect, on income distribution and employment issues, and presents some significant indicators of regions (corresponding to the NUTS-2 level) established by means of aggregation of traditional administrative units, e. g. counties (NUTS-3). The regional disparities observed in Hungary are discussed in a European context. Finally, some of the authors’ results deriving from an analysis of statistical sub-regions (NUTS-4) are summarised. Policy aspects, SAPARD, and related crucial documents, e. g. the National Development Programme and the National Rural Development Programme, are not discussed here.

1. INCOME DISTRIBUTION AND SPATIAL DIFFERENCES

Since the political transformation of Hungary differences in income have significantly increased in the country. Due to this, Hungary’s social cohesion index$^2$ (as used by EUROSTAT) does not show great differences in income between households in comparison with the present member states (Fig. 1). Hungary (3.6) just follows the Scandinavian states. This result is based on the household panel of the Hungarian Central Statistical Office (HCSO). The panel of TÁRKI (Social Research Institute of Hungary), however, shows a little more uneven income distribution (4.4), which places Hungary just after the Netherlands, and just before the levels of France and Germany. At the first glance, Hungary’s position is satisfactory, and it is in line with the EU range.

$^1$This paper was prepared in the Hungarian section of a Vth framework project of the EU Commission, IDARA [acronym for Integrated Agrarian and Rural Development Strategy], co-ordinated by the University of Bonn. A poster based on this paper was presented by the authors on the 25th Conference of the International Association of Agricultural Economists (IAAE), 16-23 August 2003, Durban, South Africa.

$^2$Ratio of the top and lowest 20 per cent of household incomes.
However, one should be aware that the social cohesion index is measured by quintiles. Calculating the same index for income deciles, however, it was 4-4.5 times higher in the top than in the lowest ten per cent of income groups during the mid-eighties, reaching the 1 to 5 ratio at the end of the decade. During the years of 1990 and 1991 the gap continued to widen (1 to 6.5). From 1992 to 1999 the per capita income differences continued again to rise, from 7.1 to 8.1 times between the top and lowest ten per cents of households (Fig. 2), having more or less stabilised on that level since then (TÁRKI, 2000). This phenomenon calls the attention to a further and more detailed analysis when comparing the present and future EU member states.

Contrary to income distribution among households, which can be readily applied, there is no generally used method of comparing countries by territorial income distribution. The obstacles of a fair comparison are originated from the inhomogeneous territorial units by member (and candidate) states. Often single capitals (like Brussels, London, Berlin, Vienna, Prague, etc.) or even big cities (like Manchester, Bremen, Hamburg, etc.) constitute NUTS-2 regions3, whereas in other countries even the capital belongs to a NUTS-2 region, thus reducing the deviation. Several countries constitute a single NUTS-2 region by themselves (e. g. Denmark and each of the Baltic countries). It follows from the above that spatial differences may differ depending on the way in which the boundaries of the regions have been established. Moreover, the NUTS-2 regions are usually large, wherefore internal differences are covered. Contrary to the previous trend, this situation makes the differences less obvious. This means that the spatial difference between the NUTS-2 regions should be considered carefully. However, income data by regions are fairly available, even converted to the EU mean, which is a key indicator of selecting the regions eligible for structural and rural fund allocation in the European Union.

It is worth attention that the NUTS-2 regions in Hungary consist of counties (NUTS-3), which are the actual centres of administration. The present division of functions between regions and counties may change in the future. Nevertheless, these spatial differences between the NUTS-2 regions are quite moderate in the European Union (Fig. 3). It is not surprising that the lowest standard deviations are found in Sweden and in the Netherlands (14-17 per cent), but it is more notable that Greece and Portugal follow them. The greatest differences take place in Italy and in the United Kingdom, though they still amount only to a moderate extent (24-28 per cent). Hungary has a similar spatial differentiation, still below 30 per cent.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figure3.png}
\caption{Standard deviations of GDP per person by NUTS-2 in EU member countries}
\end{figure}

\textit{Source:} EUROSTAT (2002)

\footnote{NUTS: nomenclature of territorial units for statistics.}
2. HUNGARY IN THE EUROPEAN REGIONAL STRUCTURE

The sub-national regions in the European countries significantly differ in administrative, economic and cultural respect.

In the Hungarian governance system, there is an intermediate (county) level between the central and local governments. The county system has been existing for about 1000 years. This county level corresponds to NUTS-3. In the course of Hungary's preparations to the entry into the European Union, seven new regional units corresponding to the NUTS-2 regions have been established, and some authorities from the central government are to be passed over to them.

The NUTS-2 regions in the candidate countries have generally a larger area and a greater population than in the present member states. However, Hungary belongs to those countries where the average area and population of a region are lower than the EU-15 average. The density of population in Hungary is also lower than the EU-15 average but higher than the CEEC-10 average. Unemployment rate, especially youth unemployment rate, is in most regions of the country much lower than in the present EU member states. As compared to the other candidate countries, where the employment statistics indicate a much more unfavourable performance than in most EU member states, the difference is even greater. Within the country, the worst employment situation is found in the Northern Hungary region, and in the Northern Great Plain it is also still worse than in the EU-15. In both regions the unemployment rate exceeds the EU-15 mean by 18 per cent, and that of youth unemployment by 5 to 25 per cent. Apart from Eastern and Northern parts of the country, however, in the rest, i.e. five NUTS-2 regions, the unemployment rate is much lower than in the European Union, down to 50 per cent (Fig. 4).

Figure 4.

Regional indicators in Hungary, EU-15=100

Source: HCSO (2002)
The income level in Hungary, as measured by GDP per capita in purchasing power parity (PPP), is almost half the EU value. This is the third highest level in CEEC-10. The average level of per capita income in CEEC amounts to 38 per cent of the present EU-15 level. If this ratio will be maintained, at the moment of the expansion of the European Union its overall average level of per capita income will drop to 72 per cent of the present level. At the same time, the growth rate in CEEC has been considerably higher during the last years than in the present member states. A trend of catching up has taken place in its regions, and a trend of possibly levelling incomes is taking place as well.

In the NUTS-2 regions of CEEC-10 the GDP per capita is notably below the EU-15 level. Among the EU member states only Greece has a singly NUTS-2 region exhibiting such a low level. Five out of the seven regions in Hungary fall into the 25-49 per cent class, whereas in Bulgaria all regions, and in Romania 2 out of 8 regions fall into the class below 25 per cent (Table 1 in Annex).

The conclusion can be drawn that the candidate countries ought to increase the income level in all their regions. In order to fulfil this requirement the plan of the European Commission strongly intends to emphasise the necessity of regional and rural development in the new members whose entry into the European Union is imminent.

The highest income level in Hungary can be observed in the Central region indicating that it exceeded 75 per cent of the EU level based on the latest year of comparative data (1998). The regions most lagging behind in this respect are North Eastern Hungary and the Northern Great Plain where the performance is only one third of that of EU.

3. AGRICULTURE IN THE REGIONS OF HUNGARY

The direct share of agriculture in the economy of Hungary has greatly decreased during the period of transition. Its share in GDP has dropped from 12.6 per cent in 1990 to 4.5 in 2001, and that in the overall technical investments from 8 to 3 percent. The unemployment rate at national level fell from 14 to 6 per cent. However, at the same time, the value of exported agricultural products and food has increased, whereas the net export earnings have slightly decreased due to the expansion of imports.

A regional breakdown of the agricultural employment figures shows different trends (Fig. 5). The most rapid decline of the percentage of agricultural employment (70 to 80 per cent) has taken place in Central and Northern Hungary regions. There was a less radical but still high decrease in Southern Transdanubia and on the Southern Great Plain (50 to 60 per cent). Apart from the above mentioned NUTS-2 and NUTS-3 region levels (including the counties for which traditional data sets in Hungary covering numerous long-time series are available), there is also a relatively new regional level, NUTS-4. It has been created by HCSO for 150 relatively homogenous regions. According to a principle of subsidiarity neighbouring municipalities are free to co-operate for the implementation of joint development projects irrespective of their boundaries. The statistical data set provides a background for characterising these regions, identifying their problems, considering their policy goals, and establishing development programs for them. Thus, in rural development programming a necessary statistical background is available for the local governments.
<table>
<thead>
<tr>
<th>Country</th>
<th>Number of NUTS-2 regions</th>
<th>Number of regions where the per capita GDP in 1998 was</th>
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<tr>
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</tr>
<tr>
<td>Slovenia</td>
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</tr>
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</table>

Source: HCSO (2002)
The NUTS-4 data set is compiled from municipality data. Thus, if boundaries are different from the administrative ones, the necessary statistical background is available for municipality level (NUTS-5) on a CD-ROM, which is published every year under the name ‘T STAR’. The statistical sub-regions of the NUTS-4 level were classed by HCSO into five groups by means of factor analysis and expert work. The following groups were identified:
1. dynamically progressing regions;
2. progressing regions;
3. catching-up regions;
4. stagnant regions;
5. lagging-behind regions.

For the purpose of analysing the specific role of agriculture the following further breakdowns have been introduced:
- rural–non-rural;
- agricultural–non-agricultural.

The rural–non-rural differentiation was taken from the OECD terminology, and on its basis 92 rural and 58 non-rural sub-regions were classed in 2000. On the other hand, the agricultural–non-agricultural classification was made according to the share of the agricultural sector in the country’s overall employment in 1990, which can be used as the basic indicator identifying the traditional agricultural or non-agricultural regions. The distinction was made on the basis of the statistical mean of the rural sub-regions. Sub-regions above the mean were classed into the category of agricultural ones, and sub-regions below the average into that of the non-agricultural ones. Among the non-rural sub-regions, 56 have a non-agricultural and 2 an agricultural profile. As for the rural sub-regions, 41 of them there were non-agricultural and 51 agricultural (Elek, S. et al. 2002).
In practical application the 150 sub-regions were classed into 16 groups, since there were 4 groups without a single sub-region. Practically only 10 groups were analysed (because 6 groups had very few sub-regions, only 1 to 4), namely:

- dynamically progressing, non-rural, non-agricultural (22);
- progressing, non-rural, non-agricultural (17);
- progressing, rural, non-agricultural (9);
- catching-up, non-rural, non-agricultural (11);
- catching up, rural, agricultural (9);
- catching-up, rural, non-agricultural (20);
- stagnant, rural, agricultural (13);
- stagnant, rural, non-agricultural (10);
- lagging-behind, rural, agricultural (17);
- lagging-behind, rural, non-agricultural (11).

The paper covers 139 sub-regions (out of 150), where a population necessary for statistical analysis is available in the above 10 classes. These sub-regions represent more than 94 per cent of the total area and population of the country. In the analyses, standard deviations of the groups were compared to each other and to the total population. The significance of differences that way was approved. In the following, only some of the outcomes are described.

Out of the sub-regions the rural ones amount to 61 per cent and are located in the eastern part of the country and in the Southern Transdanubian region, while most of the non-rural regions take place in Central Hungary, Central Transdanubia (having great industrial and service capacities) and Western Transdanubia. As far as the agricultural and non-agricultural aspect is concerned, almost two thirds of the sub-regions have a non-agricultural profile; their ratio is highest in Central Transdanubia, Western Transdanubia, and in Northern Hungary, the former centre of the Hungarian heavy industry. This is also significant in the Central region. More than one third of the sub-regions, including only two with an agricultural profile, belong to the progressing or dynamically progressing categories, and another 27 per cent of the sub-regions are in the catching-up category, where agricultural areas have already a higher percentage (some 25 per cent). The lagging-behind group covers 19 per cent and is mostly dominated by agricultural areas. The most dynamic Nuts-4 sub-regions have a non-rural profile, and only 6 per cent of them constitute agricultural areas.

Within a NUTS-2 region the programming of rural development is exercised at the local government level and connected to the National Development Plan of Hungary. In case of becoming involved in rural development programming, the first step is to make an analysis of the present situation, where two principal methods, the statistical analysis of a set of statistical indicators and the SWOT analysis, or both are generally used. The strategic programming defines the general objectives of the development plan, identifies the problems and priorities, establishes the programme, and provides for its measures. The operational programming includes the agreement with potential operators and the budget by sources. Hereafter the main problems in rural areas are listed in order to identify some priorities and to consider which measures applicable in Hungary ought to be taken.

4. ANALYSIS OF THE HUNGARIAN NUTS-4 TYPES

The above statistical analyses assist in detecting the main difficulties in rural areas and finding the most critical types
of sub-regions on the NUTS-4 level. The outcome assists in orienting the NUTS-2 regions in the course of identifying the most critical areas.

The population density of the sub-regions on the NUTS-4 level varies from 35-40 to over 500 persons per square km, 60-80 being the most typical figure. The reduction of the population is not significant: there are only a few sub-regions where it was greater than 10-15 per cent during the previous decade. Unemployment and long-term unemployment rate exhibited an increasing trend from dynamically progressing to lagging-behind sub-regions. However, the share of long-term unemployment in total unemployment (50-60 per cent) has no (or only a not significant) trend. Another important criterion of the rural development is connected with the employment in agriculture. It is worth mentioning that a high rate of agricultural employment occurs only in two types of sub-regions, the catching-up and stagnant ones (15.6 and 19 per cent, respectively), both types being rural and having an agricultural profile. On the other hand, the lagging-behind sub-regions have a similar share of employment in agriculture as the progressing ones. Similarly, the drop in the share of employment in agriculture was nearly as intense in the lagging-behind sub-regions as in the progressing ones. The most moderate decline took place in the catching-up and stagnant sub-regions but was still significant (50 to 60 per cent) also in them.

Income differentiation can be more precisely described in the sub-regions of lower level than in case of the NUTS-2 regions. It is notable that in the lagging-behind sub-regions the ratio of taxpayers related to the total population is lower by a third as compared to the dynamically progressing sub-regions, and the declared income per taxpayer is about half the latter. This results in a 5-15-time difference in the income producing capacities. Due to the progressive taxing system, the differences in contribution to the national budget are even greater. This phenomenon multiplies the requirements to regional policies: the income shortages in less developing sub-regions provide less contribution to the budget, but an effective public policy should transfer more income from the better progressing sub-regions to the less developing ones to enable them to start progress in the field of new investments. This would enable the lagging-behind sub-regions to improve their capacities for income generation in the future (Bernát, T. – Zoltán, Z. 2002).

Although the paper focuses on rural policy issues, some deficiencies of the infrastructure should also be stressed. There are relatively small differences in public water, power or gas supply, but there is a great difference in public sewerage, transport conditions (accessibility to motorways, railway network or water transport, which is not developed in the whole country). Medical services expressed both in the number of family doctors or paediatricians and the service hours of the medical centres vary modestly, but in terms of hospital accessibility they greatly vary by sub-regions. Child nursery, kindergarten, and primary school capacities do not show much differentiation, but in secondary schools and higher education there are significant differences between the sub-regions. Certainly an efficient regional policy should not aim at building hospitals and universities in some rural areas, but contributing to their accessibility ought to be a primary goal.

As far as the performance of the agricultural sector is concerned, there are some significant differences between the
different types of sub-regions. The ratio of family farms carrying out also non-farming activities is much higher in the dynamically developing and the developing sub-regions than in those of a lower level of development. In the lagging-behind regions only 2-3 per cent of the family farms carry out non-farming activities. The density of such farms is also greater in higher developed sub-regions. Farming companies exhibit a much lower differentiation in this respect. 7 per cent of them run feed producing plants, and 12 per cent offer transportation services. The distribution of 'diversified' farms clearly shows that the lack of development is accompanied by a lower density and accordance of non-farming activities in farms. It indicates that diversification should be an essential element of rural policy, not only in sub-regions with an agricultural profile but in rural areas per se.

At the same time, in sub-regions belonging to the lower grades of development, there is a higher share of agricultural enterprises, either family farms or farming companies, in the total number of enterprises. Furthermore, not only the density of all enterprises but also that of the agricultural ones (both family farms and farming companies) is lower. Therefore, in these stagnant and lagging-behind sub-regions, a significant attention should be paid to the development of entrepreneurship in general and to the training of local people.

Attention should be paid also to the fact that in sub-regions with a lower level of development the density of family farms operated by full-time farmers is significantly higher (up to 12-16 farms per 10 km²). In these sub-regions the ratio of full-time farmers is also much higher (up to 16 per cent), whereas in dynamically developing and developing sub-regions it is below 10 per cent, sometimes even far below this figure. This indicates that in sub-regions where people face serious limitations in obtaining income, and even unemployment is above the national level, people have to make greater efforts to run full-time farms.

Similarly to these trends, in sub-regions with an agricultural profile family farms have a greater size than in other sub-regions. In rural areas farm size is usually greater than in non-rural sub-regions, with the exception of the lagging-behind sub-regions. Contrary to family farms, farming companies usually have a smaller size (less land) in the sub-regions with an agricultural profile. In these sub-regions, certainly a more intensive struggle is taking place for the possibility of individual land use due to the more limited job opportunities. On the other hand, this shows the evidence that in case of land shortage the family farms offer more job opportunities for people than the farming companies. Nevertheless, in non-rural sub-regions and at higher levels of development farming companies could easier farm on greater areas to use than they really do.

5. SIGNIFICANT MEASURES OF RURAL DEVELOPMENT PROGRAMMING IN HUNGARY

Rural development programming has to support the coming of a more balanced economic growth into being in the NUTS-4 sub-regions. It is especially important that a higher growth rate has to be reached especially in the lagging-behind and the stagnant regions. Development programmes related to the establishment of purchasing, processing and servicing co-operatives should be initiated in Hungarian agriculture. This is particularly true for wine producing enterprises, where the fragmented land
structure along with the lack of assets is a basic hindrance to any type of development.

In the annual support programmes of MARD some support has already been granted for the establishment of the "new-type" co-operatives. Moreover, these co-operatives were offered preferential support rates for machinery purchase. Nevertheless, these incentives have proved insufficient, because hardly any new co-operative has been established until recently. The basic reason for the latter is that the small family farmers lack the necessary funds for their investments. It is suggested to support the new-type co-operatives in their starting phase to a far greater extent than any other organisational form of farming. It is also important to overcome the generally bad attitude of Hungarian farmers towards any collective arrangement (even in marketing, purchasing and pre-processing activities and farm services); they cannot exploit the advantage of collective efforts. What kinds of measures can be proposed?

- At the very start preferential loans for co-operatives have to be made available. The rate of preference has to exceed that of the conventional agricultural interest subsidy (which is normally half the prime rate).

- Besides, in respect of preferential interest rates, state guarantees for certain long-term loans are also needed. It is a typical problem of small-scale farmers that they cannot provide the required collateral for the banks to secure the loan with.

- Projects of investment into buildings or agricultural machinery and equipment should be supported _ex ante_ as opposed to the present practice of _ex post_ refunding. This is necessary because most farmers lack the funds required for a viable investment project, so they cannot make use of the investment support schemes.

- A comprehensive information campaign has to be launched with the aim of convincing farmers about the advantages of co-operation.

All the above measures, being primarily of agricultural character, could be launched on the national level as a part of the annual agricultural support scheme. The administration and monitoring of the running projects should be delegated to the county offices of MARD which have the appropriate experience and expertise for that purpose. The financial aspects of the scheme could be managed by the state treasury as usual.

These measures require an intensive co-operation between national, regional and local authorities for the sake of a more efficient spatial development. As regards the second pillar of CAP, Hungary has good chances due to the fact that here more attention was paid to rural development in agricultural policy. By now more than the half the total agricultural expenditures are spent for rural development (Figure 6).

6. CONCLUSIONS

In spite of the significant increase in differences of the per capita income in the 1990's, they seem to be still moderate in Hungary as compared to most EU-15 member states. These differences are also moderate at regional level. However, the huge income differences existing at local level are hidden by using quintiles and NUTS-2 for comparison.

The differences between regions are even higher if the analysis based on the 150 sub-regions (NUTS-4) established by HCSO. Rural development policy
should focus on providing help for the stagnant and lagging-behind sub-regions, especially in the rural areas with an agricultural profile, in order to promote their catching up. Diversification of rural economy will also be helpful in promoting economic development in the less developed sub-regions. Nevertheless, further research should be carried out in order to draw a more realistic picture on income differences at a lower level of territorial hierarchy.

The success of establishing a balanced sustainable regional development depends to a great extent on how the sub-regions will recognise the potential possibilities of getting EU grants, on the one hand, and on the ability of the national institutional system to absorb EU funds available for rural development, on the other.

**Figure 6.**

**Hungary: Rural Development in Total Support in Agriculture,**

\[\text{Mln } €\]

![Diagram showing rural development and other supports in Hungary from 2000 to 2002.](image)

*Source: Data based on Popp (2002)*

**REFERENCES**

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