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*Anton Michálek**

REGIONAL ASPECTS OF HUMAN DEVELOPMENT IN SLOVAKIA

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In spite of its small size and relatively low population, Slovakia is characterized by considerable differentiation of socio-economic potential, which determines also the different levels of human development in its regions. Measurement of regional differences in the level of human development is an important condition for the choice and implementation of an appropriate developmental strategy in the regions. The aim of the paper is to assess the different level of human development in regions by means of the human development index, and to identify problem regions where the level of this index is low. Social, demographic and economic statistical data were applied in calculation of the index. The results clearly show (in terms of the three index components, as well as the index itself) striking disparity between the regions of the north-western and south-eastern parts of the Republic. Favourable index rates, that is human development, were recorded above all in the urbanized centres of western Slovakia, while considerably lower rates were found in the majority of rural districts of south-eastern Slovakia.

Key words: human development, index of human development, partial indices, regional disparities, Slovakia

REGIONAL ASPECTS OF HUMAN DEVELOPMENT IN SLOVAKIA

The often discussed term of human development is most frequently interpreted as the possibility to live a long, healthy and high quality life. This definition suggests that there are many forms of human development and it is deter-

* Institute of Geography, Slovak Academy of Sciences, Štefánikova 49, 814 73 Bratislava

mined by numerous factors. High quality human development can be identified by satisfaction of people with their life (length and quality) and satisfaction in the economic and social spheres. Pursuing the methodology of the United Nations Development Programme (UNDP), the Slovak Republic has qualified among the countries with a high degree of human development for many years now. According to the most recent UNDP report from 2001, based on the human development index, Slovakia is in the group of the world countries with the highest human development (the limit value for qualification is 0.8). By overall evaluation Slovakia ranks in 35th place in the scale evaluating 162 countries of the world. Slovakia has even surpassed Hungary (36) and Poland (38). In the company of the former East Block countries better positions were reached only by Slovenia and Czechia. This, undoubtedly favourable, position of Slovakia is partially deformed by the fact that human development in Slovakia is unevenly spatially distributed. The fact that the economic centres are vehicles of human development generally applies to Slovakia, while a considerable part of population in many regions is in an undesirable situation with regards to the level of development and life quality. In order to improve the situation in these, from the point of view of human development, marginal regions, it is necessary to recognize the level of regional disparities. In this way regional policy would acquire an important database for such management or interventions in these regions, which might eventually be beneficial for human development. The aim and content of this paper is assessment of the level of human development or its differentiation in the regions (districts) of the SR by means of modified (because of absence of necessary data of analysed territories) Human Development Index (HDI).

THE HUMAN DEVELOPMENT INDEX

The HDI is one of the most important synthesizing index which characterizes socio-economic advancement of the individual countries. Its author is the Nobel Prize winner for economics, Professor Amartya Sen from India. The basic idea behind the HDI is to measure the reached degree of human development by a single index and to facilitate international or regional comparisons of the studied territorial units (Sen 1992). In spite of the continuous development and perfection of the HDI computation methodology (improved conceptualization followed by more precise technical and mathematical construction of calculations), its simple composition remains unchanged. It comparatively precisely reflects the most important aspects of human development although it is impossible, of course, to cover such a huge category as human development by a single index even it is constructed from the most detailed sets of statistical data (Anand and Sen 1999). However, it is a so far unexcelled simple tool for the purpose of human development monitoring, which measures the basic dimensions of human development or the level of absence of such dimensions. HDI is based on combination of indicators of three basic dimensions of human life: length of life measured by mean life expectancy at birth, level of education reached measured by combination of literacy rate and combined rate of attendance at the elementary, secondary schools and universities and the standard of living measured by real GDP per inhabitant calculated by means of purchase power parity (PPP) in USD.

Tab. 1. Composition of human development index

Dimension of human development	Indicators and variables
To live a long life	Length of life
To acquire education	1. Rate of literacy of adult population 2. Combined rate of attendance of schools
To enjoy an adequate standard of living	GDP per inhabitant adapted to PPP

Source: Human Development Report. UNDP (1998-2000 edition)

The index establishes the minimum and maximum values of each partial indicator and shows the position of a particular country (region) at the scale. In order to construct the index fixed minimum and maximum values were defined. It was then possible to compute the corresponding indices for each HDI component according to the general equation (Sen 1992):

$$Index = \frac{real\ \ x_i\ value - \min\ \ x_i\ value}{\max\ \ x_i\ value - \min\ \ x_i\ value}$$

Resulting index value always moves between 0 and 1. The corresponding indicator value shows the difference between the indexes of particular countries (regions) from the maximum value 1 and also facilitates comparison between the individual countries from the point of view of partial indicators. The difference between the reached value and maximum value represents the retardation of country and points to the rate of dissatisfaction (deprivation) and it is also a challenge for the particular country (region) to seek ways to reduce retardation (Tab. 2).

Tab. 2. Values of HDI

Range	Degree of human development
0-0.5	Low level of human development
0.501-0.8	Medium level of human development
0.801-1.0	High level of human development

Source: Human Development Report. UNDP (1998-2000 edition)

The HDI is, then, a simple average of mean live expectancy, index of education reached, and index of GDP per inhabitant adapted to PPP. Comparison of indices provides a picture of the individual regions and indicates that the linkage between economic prosperity and HDI is not automatic and that, for example, two regions with identical HDI values can have a very different economic force and two regions with similar economic force can have very different HDI values (Vagač et al. 1999).

CONSTRUCTION OF MODIFIED HDI FOR THE SR

The HDI was constructed in order to compare the state of human development in different countries of the world and it is a certain compromise in choice of indicators with regard to the varied nature of values and interpretation of human development in the wide spectrum of countries. It also means that it is not possible to apply it automatically to observation of human development in regions or to observation of regional disparities in Slovakia. It is above all a consequence of the absence of necessary data, which might make possible the computation of the HDI for the individual regions. However, for the purpose of monitoring human development in regions, the methodology of the HDI (modified by replacement of partial indicators) is suitable for comparison of human development in the individual regions. Appropriate selection and change of two indices made possible the creation of a new composition of the index for the regions of Slovakia (Tab. 3). The level of reached education was substituted by the employment rate, and GDP per inhabitant which measures life standard was substituted by indicator of economic force of region expressed by its industrial potential.

Tab. 3. Basic indices for computation of the HDI for the regions of the SR (1999)

To live a long life	Mean life expectancy at birth (1996-2000)
To be employed	Employment rate of adult population
To exploit economic force of regions	Share of important industrial firms from the points of view of: 1. receipts 2. profits

BASIC INDICATORS FOR COMPUTATION OF THE HDI FOR THE SR

Part of the index is the mean life expectancy at birth for both sexes, which covers a wide spectrum of life conditions starting with economic, social and health factors and ending with the environment and represents the sum of interactions of determined and casual phenomena. Mean life expectancy in all the EU countries varies around 75 years, while in the majority of the post-communist countries it is around 70 years. Retardation in life expectancy in the countries of Eastern Europe became manifest at the beginning of the 1970's above all due to stopping of the life expectancy increase of men. Like the differences between countries, there are also significant differences in life expectancy between the regions of the SR. Life expectancy in the regions of Slovakia was observed by means of the index of mean life expectancy at birth for the 1996-2000 period.

Education observed by the index is not utilizable in relation to the present situation in the regional context. This is caused by outdated data, that is the impossibility of using the older data (the most recent data are from the 1991 census of inhabitants, houses and flats) and striking changes in the educational level in regions in the last decade, as well as the consequence of the fact, that

they were related to different administrative units (a new territorial-administrative division has applied since 1996). This was the reason why an other indicator which should substitute as truly as possible for education and simultaneously represent a basic dimension of human life, was sought. After long search and reflexions, employment was included in the index composition. The choice relied on the fact that employment like education reflects and influences a wide spectre of human life. Employment, above all through the income and social areas distinctly forms the life situation and strategy of population in the regions and it is an important indicator of way of life and level of human development. Choice of employment was also motivated by the fact that a direct and significant correlation between education and employment was confirmed in Slovakia. The factor of education influences (increases) employment and it is the driving force of economy and impetus of development of every region. From the geographical point of view, it means that employment almost perfectly coincides with the education of the population in regions (the highest employment has been observed in the regions with the highest educational level of the population). This situation in Slovakia is connected with transformation of economy, with highly educated and qualified people finding the best opportunities in the labour market. On the other side, changes in employment structure (in the consequence of restructuring and introduction of new technologies) often lead to decline of jobs for persons with low level of education and skills. This fact has a strikingly negative effect and impact on people living in regions characterized by a low educational level of the population.

In the contemporary civilized world, industry still plays an important role in national economies. It is equally important for the Slovak economy and it remains the principal sector of national economy especially in the transformation recession. Although the share of industry in GDP has continuously decreased in favour of services since 1990, when the transition to a market economy started, from the regional point of view it is still the determining factor of the economic and social development of regions. In 1995 its share in the gross production of Slovakia was 47.3 %. In some districts, for instance Liptovský Mikuláš, Rožňava, Rimavská Sobota it represented more than 70 % (Karasz et al. 1996). Pursuing the data from 1999, the receipts from industrial activity represented 81.3 % from the total sum of receipts, while it was as much as 91.3 %, 91.6 % and 90,4 % in the districts of Prešov, Banská Bystrica, and Trnava respectively (Statistical Office of the SR 2000b).

Assessment of the economic strength of regions is a complex and demanding task, while many ways of measuring the economic development of regions exist. One of the possible approaches is evaluation of the relevant indicators of industry, which is still the decisive economic sector and generator of GDP[1]. Receipts[2] and profits were such relevant indicators and they were assessed in 300

[1] Here it is desirable also to assess other productive and non-productive industries as they should provide more details on the economic power of regions which could not be included in the analysis because of the extent of this paper.

[2] Receipts of industrial activities cover the receipts from sale of proper industrial products, works and services of an industrial nature realized in 1999 destined to inland and foreign clients (without VAT and consumer tax). The receipts of industrial activity were recorded for industrial firms with 20 and more employees.

industrial firms with the highest turn-over of receipts and profits. Both data were then integrated by observation of their representation in regions (share per inhabitant in the individual districts).

Naturally, it is possible, even necessary, to argue about the choice of indicators from the point of view of perfection of the index (like the author of Reports on human development, Haq (1995) himself did this with regard to the construction and meaning of the index). However, in any case, the selected indicators reveal great regional disparities in human development in Slovakia. Apart from substitution of some indicators by other relevant indicators, interval division of GDP was partially modified in order to achieve better monitoring of regional disparities in Slovakia. It is a small modification which relies on the division of regions with a low degree of development into two intervals (Tab. 4). This minor adjustment ensuing from the irregular size of regions classified into the individual groups (numerical prevalence of regions with a low degree of human development) make it possible to identify distinct problematic (risk) regions in the framework of the group where the maximum value of GDP is 0.3. This interval adjustment partially eliminates the striking disproportionate division of districts in intervals. The rule that more detailed division of group intervals reduces the irregular number of regions in groups and also provides better characterization of the individual groups, was applied.

Tab. 4. Values and adjusted interval range of GDP for the SR

Range	Degree of human development
0-0.3	Very low degree of human development
0.301-0.5	Low degree of human development
0.501-0.8	Medium degree of human development
0.801-1.0	High degree of human development

BRIEF ANALYSIS OF PARTIAL INDEXES

Although our comparison of regions has some flaws resulting from modification of indicators and their significance for human development (all indicators were attributed the same weight), it also brings several interesting pieces of knowledge and in comparison with other studies with a similar subject using different methodology, for instance in monitoring of standards of living in regions, the results agree. Taking into account the above-mentioned facts the following conclusions were drawn:

Interesting knowledge concerning regions was obtained in observation of mean life expectancy at birth which reflects, as mentioned above, several factors or their different levels (economic and social conditions, health care, life style, pollution of the environment and work environment, etc.). In Slovakia, the difference between the best (71.43 Bratislava) and the worst region (64.57 Krupina) in mean life expectancy of men and women at birth is as much as 6.9 years and only 4.3 respectively, while the highest and lowest ages, 79.23 and 74.94 years, were recorded in Liptovský Mikuláš and Krupina respectively.

From the point of view of age index computed from the mean life expectancy at birth for both sexes, the best situation, that is the highest age was observed in 9 districts of Slovakia where the index exceeded the value of 0.8 (Fig. 1).

The highest age was observed in the districts of Trenčín and Tvrdošín (0.93), while 33 districts are characterized by medium high age with index values 0.501-0.8. On the other side, 26 districts are characterized by low value of index (0.301-0.5) and the worst situation was observed in 4 districts where the index did not even reach the limit value 0.3. The lowest index value (zero) was found in the district Krupina which also has the lowest mean life expectancy at birth for both men and women. The districts with low index values have high infant mortality or high specific mortality of men in certain age groups which contribute to shorter mean life expectancy of the population. Especially significant is the effect of ethnic factors (higher share of Roma ethnicity) in some southern and eastern district of Slovakia characterized by mean life expectancy lower by 8-10 years than that of the majority population. The low age of the population in these districts is also connected with poor economic and social conditions which affect their living standard. As a result of low purchasing power and education accompanied by other unfavourable economic and social conditions, a large portion of the population adopted unhealthy habits (high consumption of alcohol, above all distilates, cigarettes, animal fats, low consumption of fruit and vegetables, and the like) which distinctly lower their life expectancy. A whole spectrum of additional factors, the effect of which is still not sufficiently researched, also influence life expectancy in these regions.

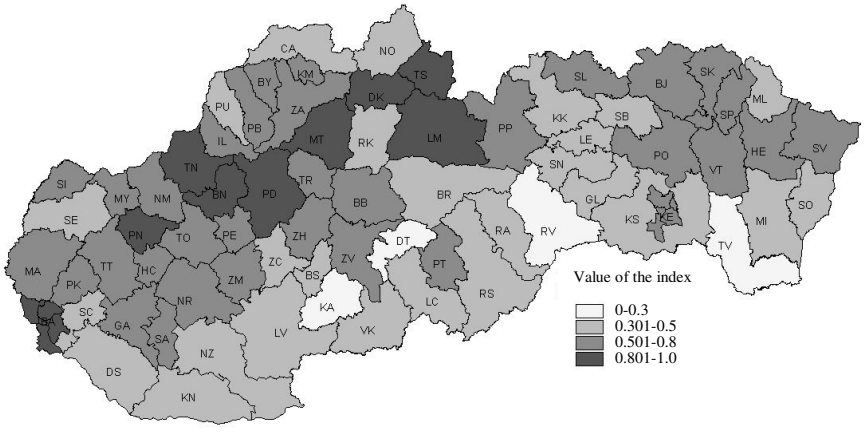

Fig. 1. Mean life expectancy at birth in region of Slovakia

The situation is similar if the employment index is studied in the districts. Table 5 shows that the rates of this index gradually decrease, with the highest index value reached by Bratislava. The category of districts with a high employment level also includes an other 6 districts, which indicates that these districts have no major problems with unemployment (Fig. 2). Relatively favourable situation in employment exists in 30 districts where the values of employment

moved between 0.501 and 0.8. The values of the employment index in an other 19 districts were between 0.301 and 0.5, which suggests certain problems with unemployment. However, the worst situation occurred in 16 districts where the index value did not exceed 0.3, the sign that these districts are severely affected by unemployment. Seen from the geographical point of view, the prevailing majority of these districts are situated in eastern Slovakia (except for Rimavská Sobota, Revúca, Veľký Krtíš, and Poltár). Generally said, it is the territory with an underdeveloped and unbalanced labour market where the offer prevails over demand. Low employment and an unemployment problem are also observable in the classical areas of unemployment such as the districts in the regions of Orava and Kysuce. Increase of unemployment in the above-mentioned districts is caused by failure to restructure or by closing of several important firms. The origin and increase of unemployment in the south-Slovakian districts, almost exclusively focused on agriculture, are different. Competition with cheaper and state subsidized agricultural products imported from the West led to the fall of domestic production, which also manifested by a distinct fall of overall employment in this sector. This comparatively large and mostly unskilled labour which did not find work opportunities in other scarcely represented industries or in self-employment, was joined by another group in the later stage of partial modernization, making agricultural production more effective, redundancy of which was connected with the above-mentioned facts.

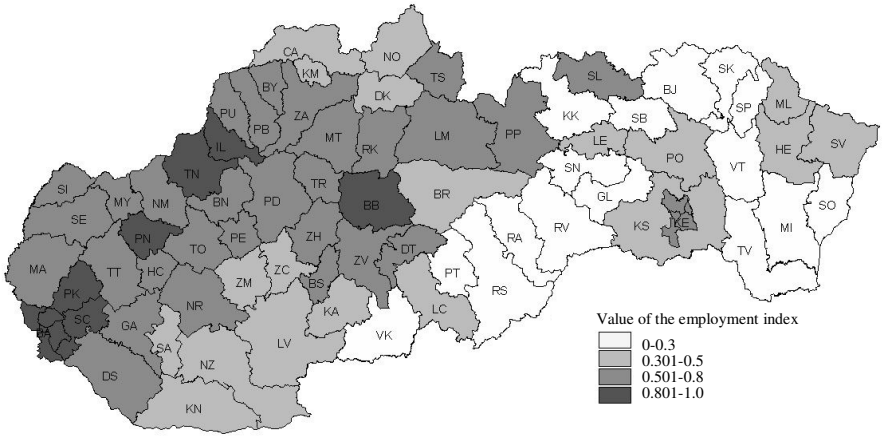

Fig. 2. Employment level in the regions of Slovakia

The computed index of industrial potential for each districts clearly shows that there is a great degree of disparity between the regions (Tab. 5). From the point of view of representation of important firms in terms of receipts and profits per population number, the industrial potential of Slovakia is concentrated in the urban districts of Bratislava, which means that Bratislava occupies the dominant positions and its firms represent a significant economic/industrial potential of Slovakia (Fig. 3). Generally speaking, Bratislava is characterized by a high degree of development while apart from it none of the remaining districts

exceed 0.8, the limit value of economic potential. It should be noted though that the industrial power of Bratislava is also influenced by the results of enterprises of national importance (for instance, natural monopolies such as Slovenský plynárenský priemysel – the Slovak Gas Company, etc.), which appear in the centre. The second ranking the district of Košice hardly exceeded the limit value of 0.5 (exactly 0.51), which indicates the medium degree of industrial potential in terms of the studied indicators. An other 20 districts reached values of industrial potential varying between 0.301 and 0.5, which reveals that the industrial firms of greater importance and with good economic results and employment in relation to population number are scarcely represented in these districts. The industrial potential index of 0-3 or below, found in the remaining 50 districts, means that they are industrially poor regions with minimal or no important and prospering industrial firms and with population either employed in other sectors (above all agriculture), in smaller firms or unemployed.

Tab. 5. Partial HDI values in districts

	Life expectancy index		Employment index		Industrial index	
1	Trenčín (TN)	0.93	Bratislava (BA)	1.00	Bratislava (BA)	1.00
2	Tvrdošín (TS)	0.93	Senec (SC)	0.94	Košice (KE)	0.51
3	Bratislava (BA)	0.91	Trenčín (TN)	0.94	Dolný Kubín (DK)	0.49
4	Liptovský Mikuláš (LM)	0.88	Ilava (IL)	0.93	Skalica (SI)	0.49
5	Piešťany (PN)	0.84	Pezinok (PK)	0.90	Ilava (IL)	0.48
6	Bánovce nad Bebravou (BN)	0.83	Banská Bystrica (BB)	0.89	Liptovský Mikuláš (LM)	0.38
7	Prievidza (PD)	0.83	Piešťany (PN)	0.84	Banská Bystrica (BB)	0.37
8	Dolný Kubín (DK)	0.81	Liptovský Mikuláš (LM)	0.78	Malacky (MA)	0.36
9	Martin (MT)	0.81	Púchov (PU)	0.77	Žiar nad Hronom (ZH)	0.35
10	Žilina (ZA)	0.78	Zvolen (ZV)	0.76	Nové Mesto n. V. (NM)	0.34
11	Bardejov (BJ)	0.77	Nové Mesto n. V. (NM)	0.75	Prievidza (PD)	0.34
12	Partizánske (PE)	0.74	Trnava (TT)	0.74	Púchov (PU)	0.34
13	Banská Bystrica (BB)	0.74	Prievidza (PD)	0.72	Humenné (HE)	0.34
14	Poprad (PP)	0.72	Hlohovec (HC)	0.71	Tvrdošín (TS)	0.33
15	Prešov (PO)	0.72	Malacky (MA)	0.70	Trnava (TT)	0.32
16	Nitra (NR)	0.70	Žilina (ZA)	0.70	Trenčín (TN)	0.32
17	Svidník (SK)	0.70	Považská Bystrica (PB)	0.68	Žilina (ZA)	0.32
18	Nové Mesto n. Váhom (NM)	0.67	Nitra (NR)	0.68	Revúca (RA)	0.32
19	Hlohovec (HC)	0.64	Ružomberok (RK)	0.67	Nitra (NR)	0.31
20	Považská Bystrica (PB)	0.64	Senica (SE)	0.66	Poprad (PP)	0.31
21	Humenné (HE)	0.64	Bytča (BY)	0.65	Svidník (SK)	0.31
22	Stropkov (SP)	0.64	Martin (MT)	0.65	Michalovce (MI)	0.31
23	Košice (KE)	0.64	Skalica (SI)	0.64	Krupina (KA)	0.30
24	Bytča (BY)	0.63	Myjava (MY)	0.64	Stropkov (SP)	0.30
25	Kysucké Nové Mesto (KM)	0.63	Košice (KE)	0.64	Senica (SE)	0.29
26	Zvolen (ZV)	0.63	Topoľčany (TO)	0.62	Myjava (MY)	0.29
27	Skalica (SI)	0.62	Turčianske Teplice (TR)	0.60	Hlohovec (HC)	0.29
28	Stará Ľubovňa (SL)	0.62	Detva (DT)	0.59	Považská Bystrica (PB)	0.29
29	Zlaté Moravce (ZM)	0.60	Tvrdošín (TS)	0.58	Šaľa (SA)	0.29
30	Trnava (TT)	0.59	Dunajská Streda (DS)	0.57	Topoľčany (TO)	0.29
31	Topoľčany (TO)	0.59	Bánovce n. Bebr. (BN)	0.57	Banská Štiavnica (BS)	0.29

(continuation of Tab. 5)

32	Vranov nad Topľou (VT)	0.59	Galanta (GA)	0.56	Levice (LV)	0.28
33	Pezinok (PK)	0.57	Partizánske (PE)	0.56	Bytča (BY)	0.28
34	Malacky (MA)	0.56	Žiar nad Hronom (ZH)	056	Martin (MT)	0.28
35	Žiar nad Hronom (ZH)	0.56	Stará Ľubovňa (SL)	0.54	Ružomberok (RK)	0.28
36	Ilava (IL)	0.55	Banská Štiavnica (BS)	0.53	Dunajská Streda (DS)	0.27
37	Snina (SV)	0.55	Poprad (PP)	0.53	Bánovce nad B. (BN)	0.27
38	Šaľa (SA)	0.54	Šaľa (SA)	0.49	Kysuc. N. Mesto (KM)	0.27
39	Poltár (PT)	0.54	Čadca (CA)	0.49	Zvolen (ZV)	0.27
40	Galanta (GA)	0.53	Dolný Kubín (DK)	0.48	Bardejov (BJ)	0.27
41	Myjava (MY)	0.51	Námestovo (NO)	0.48	Čadca (CA)	0.26
42	Turčianske Teplice (TR)	0.51	Zlaté Moravce (ZM)	0.46	Lučenec (LC)	0.26
43	Ružomberok (RK)	0.50	Prešov (PO)	0.46	Prešov (PO)	0.26
44	Spišská Nová Ves (SN)	0.49	Krupina (KA)	0.44	Rožňava (RV)	0.26
45	Senec (SC)	0.48	Komárno (KN)	0.43	Partizánske (PE)	0.25
46	Púchov (PU)	0.46	Nové Zámky (NZ)	0.43	Komárno (KN)	0.25
47	Žarnovica (ZC)	0.46	Brezno (BR)	0.43	Zlaté Moravce (ZM)	0.25
48	Nové Zámky (NZ)	0.45	Kysucké N. Mesto (KM)	0.42	Námestovo (NO)	0.25
49	Námestovo (NO)	0.45	Žarnovica (ZC)	0.42	Brezno (BR)	0.25
50	Brezno (BR)	0.45	Snina (SV)	0.39	Žarnovica (ZC)	0.25
51	Senica (SE)	0.44	Levice (LV)	0.38	Nové Zámky (NZ)	0.24
52	Sabinov (SB)	0.44	Medzilaborce (ML)	0.37	Detva (DT)	0.24
53	Komárno (KN)	0.43	Humenné (HE)	0.35	Rimavská Sobota (RS)	0.24
54	Dunajská Streda (DS)	0.41	Lučenec (LC)	0.34	Kežmarok (KK)	0.24
55	Levice (LV)	0.41	Levoča (LE)	0.31	Sabinov (SB)	0.24
56	Levoča (LE)	0.40	Košice – okres (KS)	0.31	Stará Ľubovňa (SL)	0.24
57	Košice – okolie (KS)	0.39	Poltár (PT)	0.30	Spišská Nová Ves (SN)	0.24
58	Michalovce (MI)	0.39	Svidník (SK)	0.29	Pezinok (PK)	0.23
59	Kežmarok (KK)	0.38	Spišská Nová Ves (SN)	0.27	Senec (SC)	0.23
60	Medzilaborce (ML)	0.38	Bardejov (BJ)	0.25	Turčian. Teplice (TR)	0.23
61	Banská Štiavnica (BS)	0.34	Sabinov (SB)	0.25	Veľký Krtíš (VK)	0.23
62	Veľký Krtíš (VK)	0.34	Kežmarok (KK)	0.24	Snina (SV)	0.23
63	Gelnica (GL)	0.34	Michalovce (MI)	0.24	Vranov nad Top (VT)	0.22
64	Sobrance (SO)	0.34	Vranov nad Topľou (VT)	0.21	Galanta (GA)	0.21
65	Čadca (CA)	0.33	Stropkov (SP)	0.20	Piešťany (PN)	0.21
66	Lučenec (LC)	0.32	Gelnica (GL)	0.20	Poltár (PT)	0.21
67	Rimavská Sobota (RS)	0.31	Rožňava (RV)	0.14	Medzilaborce (ML)	0.21
68	Revúca (RA)	0.31	Sobrance (SB)	0.14	Trebišov (TV)	0.21
69	Detva (DT)	0.28	Revúca (RA)	0.12	Levoča (LE)	0.00
70	Rožňava (RV)	0.28	Veľký Krtíš (VK)	0.12	Gelnica (GL)	0.00
71	Trebišov (TV)	0.16	Trebišov (TV)	0.11	Košice – okolie (KS)	0.00
72	Krupina (KA)	0.00	Rimavská Sobota (RS)	0.00	Sobrance (SB)	0.00

REGIONAL DIFFERENTIATION OF HUMAN DEVELOPMENT

Human development, as the comparison of the regions showed, is different in the individual districts as a result of different conditions. The rates of the indexes (Tab. 6) show that Bratislava is the most developed region of Slovakia with important industrial potential, high employment and favourable life expectancy of its population. This high level of human development, beside other things is also reflected in the purchasing power of its population and mostly

positively influences its life style satisfying high demands on housing quality or healthy diet and so on. Bratislava with HDI 0.97 represents the most developed region of Slovakia where 8.3 % of total population lived in 1999 (Fig. 4). The second group with a medium degree of human development comprises 26 districts where HDI reached values within the interval 0.501-0.8. They are the regions with relatively good conditions for a long and healthy life. They rank in the first positions regarding mean life expectancy, relatively favourable level of employment and industrial potential. In 1999 almost 40 % of the population of the SR lived in such districts (together with Bratislava they represented almost half the population of the SR). A low degree of human development characterizes 34 regions where the HDI rates are within the interval 0.301-0.5 and which constitute a highly heterogeneous group (from the point of view of the reached values of the individual indexes). This largest group contained 40.4 % of population of the SR. The worst situation, as far as the HDI values are concerned, was observed in 11 districts where the maximum HDI values reached the limit of 0.3. The population of these risk regions represented 11.3 % of total population of Slovakia in 1999.

CONDITIONS OF HUMAN DEVELOPMENT IN THE RISK REGIONS

The marginality and retardation of regions of the two latter groups had their historical context (beside other factors, they were considerably influenced by the deformed processes of socialist industrialization and urbanization), and now they are connected with transformation processes which deepen their problems. The most important effects and phenomena causing their distinct retardation in human development also include demographic potential. The identified districts are mostly smaller districts with a high share of Gypsy population. The high natality of the Gypsy rejuvenates these districts, but their low education and reluctance to work contributes to unemployment, social dependency, low production, low mean wages, low purchasing power and so on. This unfavourable situation is the cause of departure of part of the younger and more educated population from the districts which in turn causes the overall decrease of population (Rimavská Sobota, Humenné, Sabinov, Gelnica, Spišská Nová Ves) or its ageing (for instance, in the district of Sobrance the old population is about a quarter of the total population). A similar situation was found in the districts of Veľký Krtíš, Rimavská Sobota, Rožňava, Gelnica, and Trebišov. A specific problem of the identified districts is the fact that they contain settlements with a low population. The average population of settlements exceeds 2,000 only in some of them. This type of settlement, small village with population around 1,000, is problematic in Slovakia and the functioning of districts containing small settlements which lack developmental potential is very difficult. The mean size of settlement (except for the district town) in the majority of these districts is below the national average, while in some of them it is even below 1,000 inhabitants. The fact that these districts contain only one town, normally the seat of the district administration, is also unfavourable. Although in some districts there are also other towns they are mostly small with negligible function and their character is rural.

These districts are also characterized by low growth or stagnation of population in district towns in the last decade (some district towns, such as Rimavská

Sobota, Veľký Krtíš, Spišská Nová Ves, Kysucké Nové Mesto, Revúca, Kežmarok even recorded decrease of population).

Tab. 6. HDI values in districts

Human development index (HDI)			
Bratislava (BA)	0.97	Šaľa (SA)	0.44
Trenčín (TN)	0.73	Zlaté Moravce (ZM)	0.44
Tvrdošín (TS)	0.69	Humenné (HE)	0.44
Liptovský Mikuláš (LM)	0.68	Galanta (GA)	0.43
Banská Bystrica (BB)	0.67	Svidník (SK)	0.43
Ilava (IL)	0.65	Bardejov (BJ)	0.43
Martin (MT)	0.64	Dunajská Streda (DS)	0.42
Piešťany (PN)	0.63	Námestovo (NO)	0.39
Prievidza (PD)	0.63	Snina (SV)	0.39
Žilina (ZA)	0.60	Banská Štiavnica (BS)	0.39
Košice (KE)	0.60	Stropkov (SP)	0.38
Nové Mesto nad Váhom (NM)	0.59	Žarnovica (ZC)	0.38
Dolný Kubín (DK)	0.59	Brezno (BR)	0.38
Skalica (SI)	0.58	Nové Zámky (NZ)	0.37
Pezinok (PK)	0.57	Komárno (KN)	0.37
Nitra (NR)	0.56	Detva (DT)	0.37
Bánovce nad Bebravou (BN)	0.56	Poltár (PT)	0.37
Hlohovec (HC)	0.55	Levice (LV)	0.36
Trnava (TT)	0.55	Čadca (CA)	0.36
Zvolen (ZV)	0.55	Vranov nad Topľou (VT)	0.34
Senec (SC)	0.55	Spišská Nová Ves (SN)	0.33
Malacky (MA)	0.54	Medzilaborce (ML)	0.32
Považská Bystrica (PB)	0.54	Sabinov (SB)	0.31
Partizánske (PE)	0.52	Michalovce (MI)	0.31
Bytča (BY)	0.52	Lučenec (LC)	0.31
Poprad (PP)	0.52	Kežmarok (KK)	0.29
Púchov (PU)	0.52	Revúca (RA)	0.25
Topoľčany (TO)	0.50	Levoča (LE)	0.24
Žiar nad Hronom (ZH)	0.49	Košice – okolie (KS)	0.23
Myjava (MY)	0.48	Veľký Krtíš (VK)	0.23
Prešov (PO)	0.48	Rožňava (RV)	0.23
Ružomberok (RK)	0.47	Gelnica (GL)	0.22
Stará Ľubovňa (SL)	0.47	Rimavská Sobota (RS)	0.18
Senica (SE)	0.46	Krupina (KA)	0.18
Turčianske Teplice (TR)	0.45	Sobrance (SO)	0.16
Kysucké Nové Mesto (KM)	0.44	Trebišov (TV)	0.09

The identified districts are also distinguished for their poor economic situation. Their economic base is monofunctional and lacking larger industrial or agricultural companies. This means a risk position and economic vulnerability at the present time. The majority of districts simultaneously suffer from high unemployment and a low number of vacant jobs. The unfavourable economic situation is also manifested in low mean monthly wages and a high share of socially dependent population greatly exceeding the national average. The unfavourable economic base includes a low share of profitable and foreign firms and also the lowest production. Scarce demographic, social, and infrastructure potential, retardation, poor transport accessibility (in terms of modern and fast transport communications), atomization and prevailing agricultural activity are reflected in the low share of foreign, as well as domestic capital in these regions. As a result of the high rate of long-term unemployment, inadequate industrial structure, poor infrastructure, social dependency, poverty and so on, social problems cumulate in the above-mentioned districts. Intensive decrease of population (proceeding since the 1970's) has caused a distinct ageing process (southern districts) accompanied, beside other phenomena, by low economic activity, stagnation or even decrease, low levels of education and activity in social and settlement processes. The nature of the unfavourable socio-demographic situation in the studied eastern Slovakian districts is different and it is connected with a high share of the Gypsy ethnic group. This minority causes striking retardation of the whole region in socio-economic development and with its way of life it complicates the life quality of the rest of the inhabitants. An especially critical situation exists in the Gypsy settlements or villages where Gypsy constitute the majority. Pathological behaviour connected with property crime and violence, blackmailing or usury, damage to the environment (illegal structures, waste dumps, logging, fires, and the like) is ever more frequent. Specific problems of the studied regions are also connected with the new administrative-territorial division. Many of the districts were formed by separation from the retarded parts of the former districts with low economic-demographic-social potential, which has distorted the physical and functional relationships between microregions and settlements. This separation, which did not respect the basic principles of spatial organization (spatial efficiency and equity), is now causing disfunction and problems in many areas (resources, civilization, institutional, administrative, economic, socio-cultural) of the life of the inhabitants. Accessible data and obtained results show that the majority of districts constitute neither internally integrated nor externally closed regional units which reduces the efficiency of the state administration and local government. Evaluation of situation (spatial position of district or the primary territorial potential) also shows that these districts are without centralizing regions and lack the prerequisites necessary for concentration of population, settlement and development of economic activities. Their marginality is also based on the fact they are either boundary regions (outer peripheral position) or they are characterized by an inner periphery position, that is in relation to the metropolitan centres. This, whether outer or inner, position has significantly influenced their retardation, which in turn causes low mobility of labour (as a result of poor, time-demanding and expensive transport, lack of housing options in centres) as support for commuting is missing. Lack of jobs in places of residence and low mobility of labour is also reflected in the low purchasing power of the population

(the lowest income of population, by 20-30 % lower than the average of the SR in the districts), in share of socially dependent population which in these districts highly exceeds the average of the country, as well as in other unfavourable social and economic indicators.

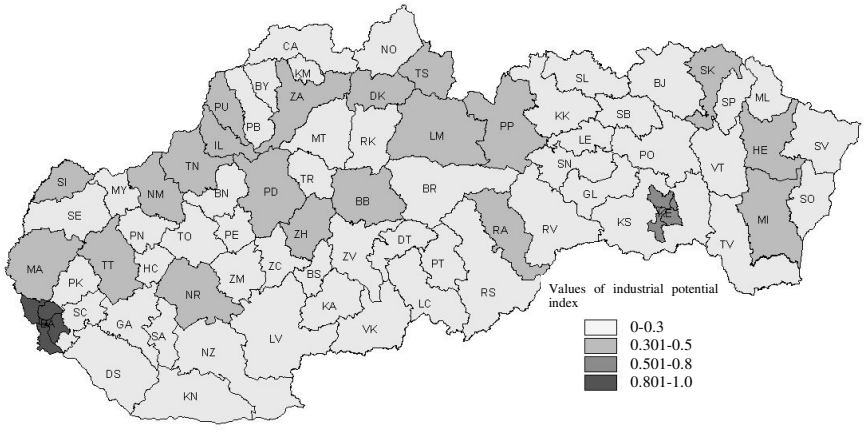

Fig. 3. Industrial potential of regions of Slovakia

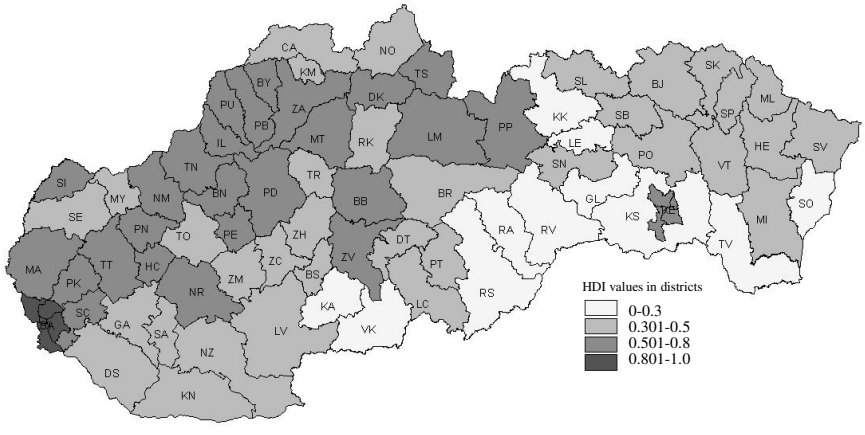

Fig. 4. Human development in the regions of Slovakia

CONCLUSION

The period of transformation in the macro- and microeconomic areas caused by transition to a market economy brought about deepening of the existing regional disparities in the countries of the former Eastern Block (Milanovic 1998, Ruminska 1997). Different economic conditions, discriminating opportunities in the labour market, increasing differences in income accompanied by concentra-

tion of poverty and other different conditions is causing irregular human development in the regions. It was demonstrated in this paper that human development expressed by three basic dimensions is considerably differentiated in the regions of Slovakia. There are regions with favourable conditions for human development on the one side, and regions where people must struggle with the basic problems of existence on the other. The HDI rates calculated and presented here facilitate identification of the two groups of the regions. The resulting map shows that the regions in the north-western part of the Republic enjoy a higher level of human development. The anti-pole of these regions are those situated in south-eastern Slovakia with low potential for human development. It must be said though, that these different conditions in regions are generally caused by considerable differences in demographic, economic, civilization, infrastructural and other conditions. The establishment of 79 districts (as the result of joining the urban districts of Bratislava and Košice only 72 districts were analyzed) from the original 38 has highlighted interregional disparities confirming the generally known statement of Williams that interregional disparities increase if the country is divided into smaller territorial units. Efforts were made to provide a brief analysis of the basic conditions determining human development regions of the SR. It is presumed that measurement of regional disparities in the reached level of human development (by means of various concepts and methods) is the necessary and important prerequisite for a proper regional development strategy. The HDI can be a suitable means of measuring as it leads to the identification of priorities of regional policy and reliable grounds for efficient decision-making.

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REFERENCES

ANAND, S., SEN, A. (1999). *The income component in the HDI – alternative formulations.* New York (UNDP Human Development Report Office).

HAQ, M. U. (1995). *Reflections of human development*. New York (Oxford University Press).

KARASZ, P., RENČKO, J., PAUHOFOVÁ, I. (1996). *Economic potential of the regions of Slovakia from the viewpoint of their development possibilities*. Bratislava (Institute for Forecasting, Slovak Academy of Sciences).

MILANOVIC, B. (1998). *Income, inequality and poverty during the transition from planned to marked economy*. Washington (World Bank).

RUMINSKA, Z. E. (1997). *Human poverty in transition economies: regional overview for the human development report 1997*. New York (UNDP Human Development Report Office).

SEN, A. (1992). *Inequality reexamined*. Cambridge (Harvard University Press).

ŠTATISTICKÝ ÚRAD SLOVENSKEJ REPUBLIKY (2000a). *Stav a pohyb obyvateľstva v SR.* Bratislava (ŠÚ SR).

ŠTATISTICKÝ ÚRAD SLOVENSKEJ REPUBLIKY (2000b). *Vybrané údaje o regiónoch v SR*. Bratislava (ŠÚ SR).

TRENDTOP (2000). Ukazovatele vývoja priemyslu za rok 1999. *Ročenka Trendu. Trend,* 10 (Príloha).

UNITED NATIONS DEVELOPMENT PROGRAMME (2001). *Human development report*. New York (Oxford University Press).
VAGAČ, L., ed. (1999). *National human development report – Slovak Republic*. Bratislava (UNDP – CHR).

Anton M i ch á l e k

REGIONÁLNE ASPEKTY ĽUDSKÉHO ROZVOJA NA SLOVENSKU

Podľa metodiky UNDP (United Nations Development Programme) je Slovenská republika už viacero rokov zaradená medzi krajiny s vysokým stupňom ľudského rozvoja. V najnovšej správe UNDP z roku 2001 patrí Slovensko na základe zistenej hodnoty indexu ľudského rozvoja do skupiny krajín sveta s najvyšším ľudským rozvojom. V celkovom hodnotení patrí Slovensku 35. miesto v hodnotení 162 krajín sveta. Túto nesporne výhodnú pozíciu Slovenska, ktoré sa vyznačuje značnou priestorovou diferenciáciou sociálno-ekonomického potenciálu, deformuje a čiastočne znehodnocuje skutočnosť, že ľudský rozvoj je, práve v dôsledku týchto veľkých disparít, priestorovo rozložený značne nerovnomerne. Cieľom príspevku je pomocou Indexu ľudského rozvoja zhodnotiť rozdielnu úroveň ľudského rozvoja v regiónoch, identifikovať rizikové regióny, v ktorých dosahuje nízku úroveň a stručne charakterizovať hlavné problémy a príčiny ich zaostávania. Východiskom pre analýzu ľudského rozvoja v regiónoch bolo sledovanie úrovne troch základných dimenzií (komponentov), ktoré z podstatnej časti determinujú ľudský rozvoj vyjadrený výsledným ukazovateľom, ktorým je Index ľudského rozvoja (HDI). Tento jednoducho a zreteľne zachytáva rozdielnu úroveň ľudského rozvoja v regiónoch Slovenska a zároveň identifikuje najrizikovejšie regióny. Výrazné rozdiely v hodnotách HDI v regiónoch SR ukázali na značne rozdielnu úroveň sledovaných komponentov indexu, ktoré v spolupôsobení s množstvom ďalších faktorov dokazujú, že na Slovensku medzi 72 regiónmi možno nájsť regióny s vysokým stupňom ľudského rozvoja (Bratislava), resp. regióny s relatívne priaznivým stupňom ľudského rozvoja, za ktoré možno považovať 26 regiónov. Výsledky však zároveň ukázali, že na Slovensku existujú aj regióny, v ktorých ľudský rozvoj dosahuje nízke (34 regiónov) a veľmi nízke hodnoty (11 regiónov), v ktorých obyvateľstvo má len minimum príležitostí na rozvoj plnohodnotného života. Pre potreby spravodlivého ľudského rozvoja vo všetkých regiónoch je potrebné exaktne zmerať úroveň týchto disparít a na ich základe prijať také opatrenia v regionálnej politike, ktoré by viedli k ich postupnému odstráneniu alebo aspoň znižovaniu. V tomto príspevku je prezentovaná jedna z metód merania regionálnych nerovností, ktorá využíva jednoduchý ukazovateľ – Index ľudského rozvoja. Pomocou neho sme zistili, že ľudský rozvoj, resp. priaznivejšie podmienky pre jeho rozvoj sú v regiónoch severozápadného Slovenska a ako protipól vystupujú takmer všetky regióny ležiace vo východnej a južnej časti republiky.