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Development or decline?
Determination of human development
at subregional level with
the estimation of HDI¹

This study examines the development of human resources and quantifies it for the subregions of Hungary. This is done with the help of the much debated Human Development Index (HDI). Theories say that this multidimensional alternative measure expresses best the development of the human elements of a given area. In case of the employment of an area, the development level of those living there plays an important role. That is why this study focuses on this measure. This study is original in a sense that it estimates HDI for the subregions of Hungary for the year 2007.

1. INTRODUCTION

Several other studies have introduced similar estimation processes [1], [2], [5], [11]. The most recent available estimations for subregions are the one made by the Hungarian Central Statistical Office (HCSO) in 2002 and the one of OBÁDOVICS and KULCSÁR for 2000. This study is trying to find out how human development has changed at subregional level taking into consideration trends of the last years.

„Measurement of human capital and human development is difficult either quantitatively or qualitatively. This problem is even more complicated if it is to do in regional view.” ([11], p. 1.) – In spite of this I think at least I should give it a try.

2. COMPONENTS OF HDI

The HDI combines three components, which makes this measure complex and reliable.

- Average life expectancy at birth as an index of health and longevity,
- knowledge gained in education as a measure of the individuals' knowledge,
- GDP per capita as a measure of income and living standard.

Before calculating HDI values, each component has to be converted to a percentage form. In order to make the comparison of the measures possible in time and among areas, the measures have to be normalized using their lowest and highest values ([7], p. 1091). *Figure 1* shows the composition of HDI.

The index of life expectancy at birth and per capita GDP consist of one measure each, while the education index is the average of two further measures. These are the adult literacy rate (with two-third weighting) and the enrollment ratio (with one third weighting). In case of HDI measures at lower than country-level, measures are modified and the ones for the given NUTS level are used in the following way (see *Table 1*).

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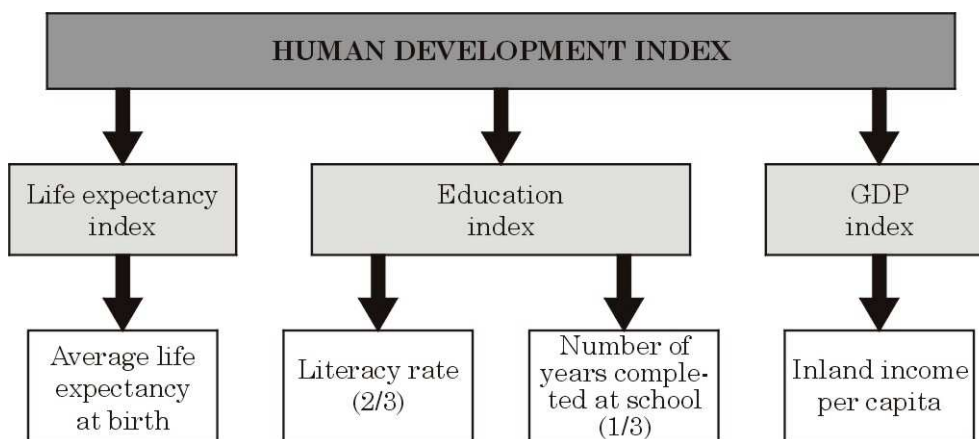


Figure 1
Components of Human Development Index¹

Table 1
Measures for different NUTS levels¹

HDI at NUTS0 level	HDI at NUTS2 and NUTS3 level
Average life expectancy at birth (year)	Average life expectancy at birth (year)
Adult literacy rate (%)	Literacy rate in the population older than 6 (%)
Gross enrollment ratio (%) ²	Number of years completed at school in the population older than 6 (number of classes)
GDP per capita (USD/capita or HUF/capita)	Inland income per capita (HUF/capita)

3. METHODOLOGY OF HDI CALCULATION

In the calculation of this index, a general formula is used, which is also applicable for each component of HDI. This formula is the following:

$$I_i = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}} \quad (1)$$

where X_i is the actual value,
 X_{\max} is the fixed highest value,

¹ Source: own compilation.

² Note: The gross enrollment ratio can be over 100% as students younger or older than the school-age can also participate in the education. ([7], p. 1091.)

X_{\min} is the fixed lowest value of the variable.

The international literature has fixed the lowest and highest values for the calculation in the following way:

- life expectancy at birth: 25 and 85 years,
- adult literacy rate: 0% and 100%,
- combined gross enrollment ratio: 0% and 100%,
- GDP per capita (PPP): 100 USD and 40,000 USD.

The HDI is calculated in the following steps ([3], p. 25):

- 1) First, the life expectancy rate is calculated (a),
- 2) Then the adult literacy rate (b) and the combined enrollment index (c) are calculated (b). Finally, the knowledge gained in the education is calculated from the latter indices in the following way:

$$d = \frac{2b + 1c}{3} \quad (2)$$

- 3) The next step is to calculate the modified GDP. In case of GDP, the logarithmic transformation, that maintains the differences in the order of size, is used (logarithmic calculation is used to represent the diminishing returns of the income growth in sub-index, and it also diminishes the differences in the absolute value of per capita GDP). Its formula is the following:

$$W(y) = \frac{\log y - \log y_{\min}}{\log y_{\max} - \log y_{\min}} \quad (3)$$

- 4) The last step is to calculate HDI using the following formula:

$$HDI = \frac{a + d + e}{3} \quad (4)$$

At global level, HDI is calculated for each country of the world every year and is published in Human Development Reports (HDR) by United Nations Development Programme (UNDP). The methodology of its calculation has been modified several times (refer to *Table 2*) since the first publication of HDR in 1990.

Table 2
Different calculation methods of the income component of HDI ([9], p. 254)

Reports	Formula	Remarks
HDR 1990	$W(y) = \log(y^*), 0 < y \leq y^*$ $W(y) = \log(y^*), y \geq y^*$	Logarithmic formulation which was truncated on the basis of the threshold income level.
HDR 1991–1998	$W(y) = y^* + 2(y^*)^{1/2} + 3(y^*)^{1/3}$ $+ (n + 1)(y - ny^*)^{1/n + 1}$, $ny^* < y \leq (n + 1)y^*$	Atkinson based multi-step formulation, which does not satisfy the principle of diminishing return of income.
HDR 1999– onwards	$W(y) = \log(y)$	Untruncated logarithmic formulation abandoning the concept of threshold income level.

HDI has been criticized several times stating that GDP and economic performance have a strong effect on its value, while human components slightly affect this measure.

4. HDI IN THE PAST AND IN THE PRESENT

UNDP gathers the components for HDI from the following sources:

- “In case of life expectancy, the United Nations World Population Division updates the global demographic database in every two years. Other values are estimated by interpolation.
- In case of education, UNESCO carries out surveys and publishes the data.
- For per capita GDP at purchasing power parity (PPP), the calculated values of the World Bank are used.” ([7], p. 1093.)

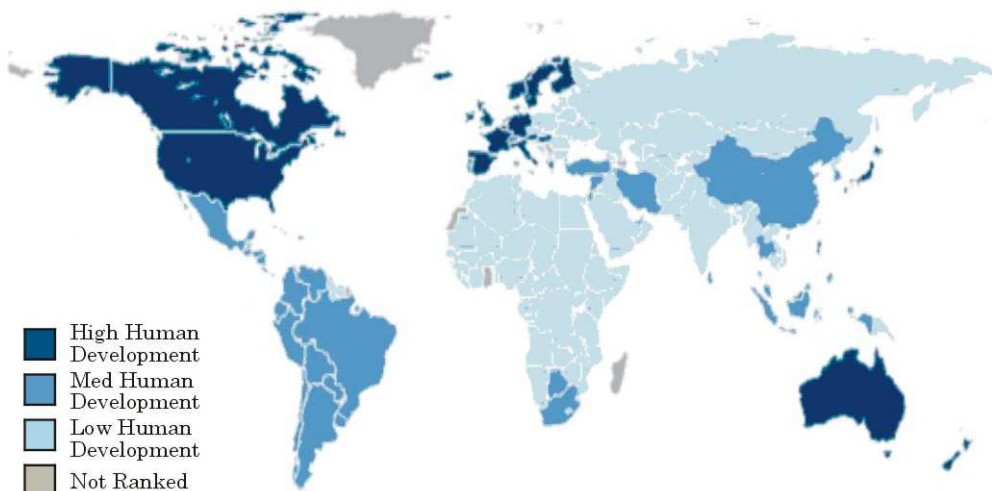


Figure 2
HDI in the world in 1980¹

Most Asian, African and European countries had low HDI values in 1980 (refer to *Figure 2*). (1–0.80: developed; 0.79–0.5: middle developed; 0.49–0: undeveloped). The highest value belonged to Norway (0.9), the lowest one to Mali (0.245), while the value for Hungary was 0.802.

By 2007, human development had completely changed. (See *Figure 3* on the next page.) Significant development could be seen, the highest value belonged to Canada (0.971), the lowest one to Niger (0.340). The value of Hungary was 0.879.

Table 3 shows the values of HDI for some European countries in certain years. Improvement can be seen in case of Hungary as well, but to a lower extent than in case of Slovakia or the Czech Republic. Norway was at the top in most of the years.

Table 4 shows the position of Hungary in the world with respect to HDI and its main components. HDI list is known as it is published in Human Development Report. For the further three components, the list had to be created. The first and the last countries are listed with their values and the countries next to Hungary are also indicated. According to the most recent HDI list (for the year 2007, published in 2009), Hungary has the 43rd position. The life expectancy at birth is 73.3 which can be considered high. Afghanistan can be found at the end of the list (43.6 years),

¹ Source: <http://hdr.undp.org>.

preceded by Swaziland, Zambia and Leshoto. Hungary reaches the best position in the education index. The elegant 30th position out of the 182 countries refers to high-quality education and to the high-level knowledge-base of the individuals. Variation of per capita GDP values can be described in a wide scale.



Figure 3
HDI in the world in 2007¹

Table 3
HDI values of some European countries²

	1985	1990	1995	2000	2005	2007
Czech Republic	-	0.847	0.857	0.868	0.894	0.903
Poland	-	0.806	0.823	0.853	0.871	0.880
Hungary	0.813	0.812	0.816	0.835	0.874	0.879
Germany	0.877	0.896	0.919	0.932	0.942	0.947
Norway	0.912	0.924	0.948	0.961	0.968	0.971
Slovakia	-	-	0.827	0.840	0.867	0.880

The rank of HDI in case of Hungary in the function of the years can be seen in *Figure 4*. The trend of the curve reflects the changes between years. Hungary reached the highest rank in 1990 (28th position), while the worst value was in 1992 (50th position). Between 2002 and 2004 it had the 35th position among all of the countries in the world. Since 2005 a decline has started again. HDI values for some years (*Figure 5*) show the development or the decline of the country better than the ranks.

¹ Source: <http://hdr.undp.org>.

² Source: <http://hdr.undp.org>.

Table 4
The position of Hungary among the countries of the world
based on the list of HDI and its components, 2007¹

HDI	Average life expectancy at birth (year)	Knowledge gained in education (%)	GDP per capita (PPP USD/capita)
1. Norway (0.971)	1. Japan (82.5)	1. Australia (114.2)	1. Lichtenstein (85,382)
41. Poland (0.880)	68. Saint Lucia (73.6)	28. Bahrain (90.4)	44. Bahamas (20,253)
42. Slovakia (0.880)	69. Palestinian (73.3)	29. Belarus (90.4)	45. Slovakia (20,076)
43. <i>Hungary</i> (0.879)	70. <i>Hungary</i> (73.3)	30. <i>Hungary</i> (90.2)	46. <i>Hungary</i> (18,755)
44. Chile (0.878)	71. Bahamas (73.2)	31. Latvia (90.2)	47. Antigua and Barbuda (18,691)
45. Croatia (0.871)	72. Bulgaria (73.1)	32. Ukraine (90.0)	48. Barbados (17,956)
182. Niger (0.340)	182. Afghanistan (43.6)	182. Niger (27.2)	182. Congo (298)

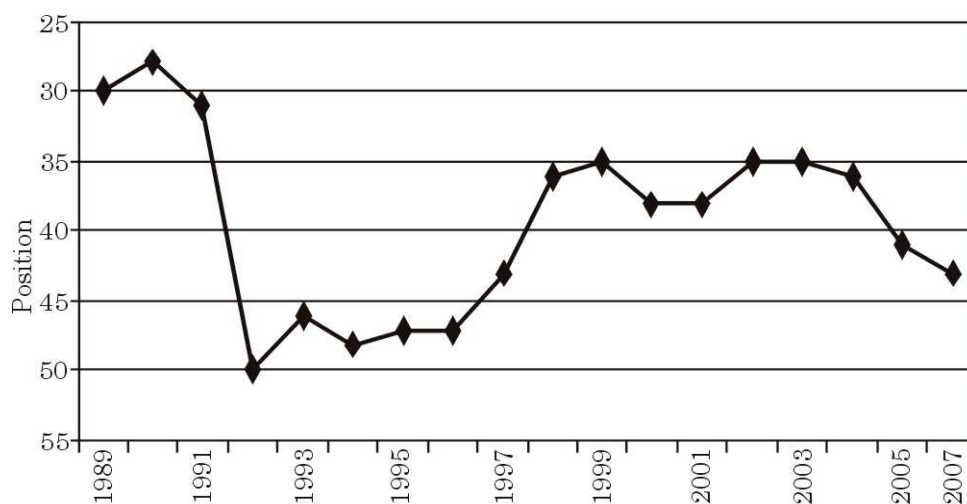


Figure 4
HDI rank of Hungary (1987-2007)²

HDI values are shown between 1997 and 2007 as a different methodology was used in the preceding period at international level, which would lead to bias in the comparison of the results in such a long time period. Since 1997 HDI values have steadily increased.

¹ Source: HDR 2009.

² Note: No HDI list was created for 1996. Source: own compilation based on HDR.

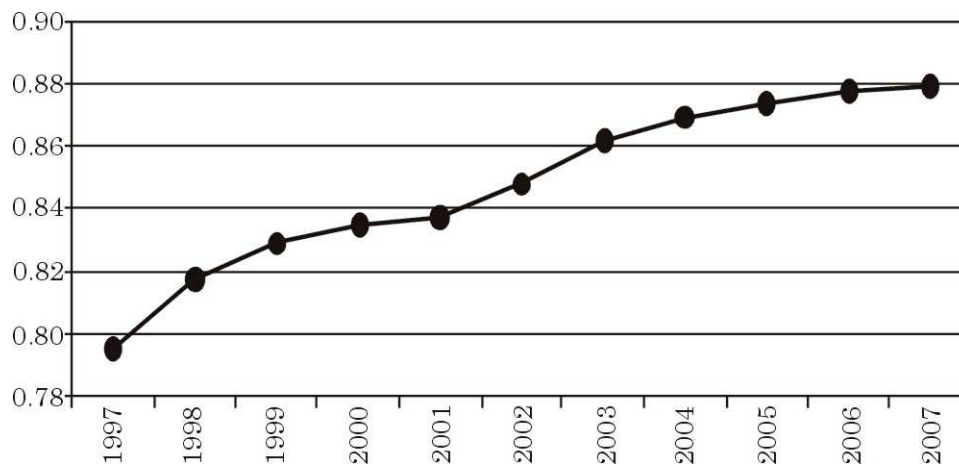


Figure 5
HDI values of Hungary (1997-2007)¹

Before presenting HDI estimation at subregional level and its critical points, a forecast was carried out for HDI values of Hungary until 2011. The methodology applied in the study of TAMÁS KRISTÓF [7] was used for making the forecast.² The method of scenario was used, which, in contradiction to the traditional methods of forecast, does not project the trends of the past and the present to the future, but forecasts the possible future events by taking into consideration possible alternative scenarios (Figure 6).

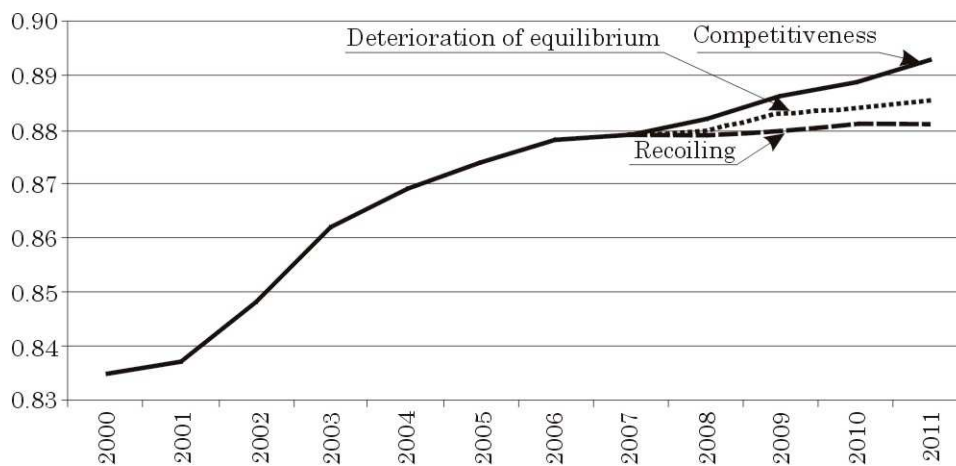


Figure 6
Forecast of HDI values of Hungary³

¹ Source: HDR 1997–2007.

² In case of the forecast carried out, many contested points have arisen. These will be compared to the former forecast of Kristóf and explained in a further study.

³ Source: own compilation.

Three scenarios can be created by taking into account the different growing paths. The most important development is expressed by competitiveness, lagging behind and slight decline are described by recoiling. Any positions between these two ones are reflected by the deterioration of equilibrium. Taking into consideration trends up till now, the scenario of competitiveness is the most likely in the future. KRISTÓF made his forecast in 2003 for the period of 2003–2006. Taking into account the time spent since then and the real values, it was interesting to see the trend and the justification of his forecast. Forecast of HDI at national level is also an exciting research field that I am going to study and analyse in the future.

5. ESTIMATION OF HDI FOR HUNGARIAN SUBREGIONS

After the above analysis and methodological introduction¹, the study focuses on its key issue, i.e. how HDI values can be estimated at subregional level. Several literatures are available about the researches and calculations for similar regional levels. The estimation at subregional level is based on the methodology of OBÁDOVICS and KULCSÁR, who first calculated Human Development Indices at rural, subregional level (they called the measure Human Index (HI) that time). They used database from 1990 census. Their methodology was different from that of UNDP and international literature in a way that lowest and highest values are national minimums and maximums and not predefined international level values (this study does the same in the computations). Calculations are going to be presented in detail.

Subregions of Hungary are enumerated on the basis of the 2007 subregional classification (Act CVII. of 2007 on the multipurpose subregional associations of municipalities being in effect actually, the modification of the Act CVII. of 2004). Thus there are 174 subregions in the country.

After enumerating the subregions, the data for the subindices of the index was collected and it was completed with further computations if necessary. In case of the literacy rate in the population older than 6, 2001 census data were used as a starting point. Further calculations were carried out as no data are collected for such an indicator in the census. The number of population that has not completed even the first grade of primary school is available at subregional level. It was proportionated to the number of the whole population to get illiteracy rate. By withdrawing this value out of 100%, the literacy rate can be calculated. Many literatures do not correct census data with any factors. They assume that the same data are valid for a further date as well.

In case of the literacy rate in the population older than 6, this study uses 2001 census data (no correction was done as no correction factor is used by the literature and OBÁDOVICS and KULCSÁR used also 1990 census data without correction for their calculation for 2000).

Per capita inland income data are available in the Resource map database elaborated by the Institute of Economics, Hungarian Academy of Sciences at subregional level.

To estimate the average life expectancy, CSITE and NÉMETH² has elaborated a procedure, which resulted in average life expectancy data at subregional level for 2005. As more recent data are not available, this study uses the results of their es-

¹ I think parts of the study till now are indispensable for the completeness of this topic.

² Detailed description of the procedure in [2].

timation as well. The ratio of the county level average life expectancy for 2005 and the county level average life expectancy for 2007 is used as a correction factor. Subregional level average life expectancy data for 2005 are multiplied by this factor to get subregional level average life expectancy data for 2007.

When all the necessary data are available, subindices can be calculated based on the methodology described above. Lowest and highest values are from national level (based on the methodology of OBÁDOVICS and KULCSÁR) and not the predefined values from international literature.

Table 5
The lowest and the highest values of the subindices¹

Indicators	Minimum	Maximum
Average life expectancy at birth (year)	96.61	99.02
Literacy rate in the population older than 6 (%)	7.94	10.89
Number of years completed at school in the population older than 6 (number of classes)	341,945	1,101,461
Inland income per capita (HUF/capita)	69.15	77.50

As a result of the calculations, HDI values were obtained, the trend of which is really meaningful. (The HDI values is on the Appendix 1.) The highest value belongs to the subregion of Budaörs (0.877), while the lowest one belongs to the subregion of Bodroghöz (0.035). Five class intervals were created in the function of HDI values. These are the following:

- *Subregions with high HDI values (0.877–0.707)*: subregions of Budaörs, Budapest, Balatonfüred, Szentendre, Veszprém, Balatonalmádi, Győr, Dunakeszi, Pilis-vörösvár, Székesfehérvár, Szeged, Dunaújváros, Szombathely, Pécs, Eger, Zalaegerszeg, Komárom, Siófok, Gárdony, Tata, Sárvár, Szolnok, Sopron-Fertőd, Csorna.
- *Subregions with upper middle HDI values (0.706–0.549)*: subregions of Gödöllő, Mór, Nyíregyháza, Esztergom, Körmend, Békéscsaba, Vác, Mosonmagyaróvár, Érd, Gyöngyös, Debrecen, Balatonföldvár, Nagykanizsa, Zirc, Oroszlány, Ráckeve, Kapuvár, Celldömölk, Tatabánya, Kecskemét, Szekszárd, Fonyód, Hajdúszoboszló, Paks, Lent, Csepreg, Hatvan, Aszód, Tét, Kaposvár, Hódmezővásárhely, Dorog, Gyál, Várpalota, Szentgotthárd, Ajka, Szarvas, Miskolc, Gyula, Keszthely-Hévíz, Pannonhalma, Tapolca, Balassagyarmat, Pápa, Veresegyháza, Monor, Orosháza, Pécsvárad, Salgótarján, Adony, Kőszeg, Vasvár, Zalakaros.
- *Subregions with middle HDI values (0.546–0.369)*: subregions of Bonyhád, Kiskunfélegyháza, Szentcsanak, Hajdúszörmény, Polgár, Tiszaújváros, Jászberény, Baja, Cegléd, Békés, Dombóvár, Rétság, Mezőtúr, Kalocsa, Kazincbarcika, Csongrád, Záhony, Ercs, Komló, Kisbér, Pásztó, Makó, Sátoraljaújhely, Mezőkövesd, Kiskőrös, Zalaszentgrót, Bátanytereny, Pétervására, Mohács, Kadarkút, Dabas, Kunszentmiklós, Kiskunhalas, Szob, Balmazújváros, Nagykáta, Enying, Kunszentmárton, Mórahalom, Tab, Sümeg, Püspökladány, Letenye, Sárbogárd, Bicske, Siklós, Füzesabony, Törökszentmiklós, Sárospatak, Mezőkovácsháza, Kiskun-

¹ Source: own compilation.

majsa, Bácsalmás, Jánoshalma, Aba, Tiszavasvár, Szeghalom, Szentlőrinc, Tamás, Hévíz, Kisvárd, Szerencs, Berettyóújfal.

- *Subregions with lower middle HDI values (0.362–0.202)*: subregions of Csurgó, Nagykálló, Óriszentpéter, Karcag, Sarkad, Nagyatád, Tiszafüred, Marcali, Kistelek, Szigetvár, Pacsa, Szécsény, Vásárosnamény, Sásd, Heves, Ózd, Ibrány-Nagyhalsz, Bélapátfalva, Barcs, Sellye, Baktalórántháza, Mezőcsát, Derecske-Létavértes, Tokaj, Fehérgyarmat, Csenger, Hajdúhadháza, Lengyeltót, Mátészalka, Encs, Nyírbátor, Szikszó.
- *Subregions with low HDI values (0.196–0.035)*: subregions of Edelény, Abaúj-Hegyköz, Bodroghöz.

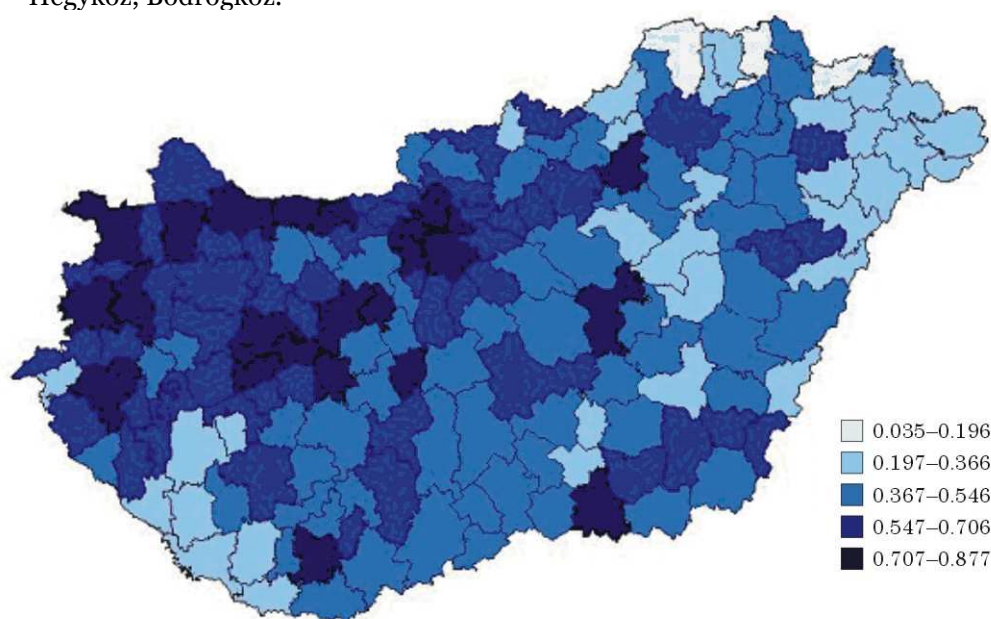


Figure 7
HDI values of Hungarian subregions in 2007¹

HDI values are represented in a map as well (*Figure 7*), for which five class intervals are used. The results of the estimation are acceptable as literature also says that Northern subregions are the least developed. In the Transdanubian region far more subregions can be found with high HDI values as in Central Hungary. Northern Hungary is clearly in the worst situation. Low level of human development is supplemented by high rate of unemployment, inadequate level of knowledge and poor economic performance. To make comparison possible, the estimation of HDI values for 2002 made by HCSO is also represented in a map, with equal class intervals (*Figure 8*). Regional trends of development can be seen well after five years.

¹ Source: own compilation.

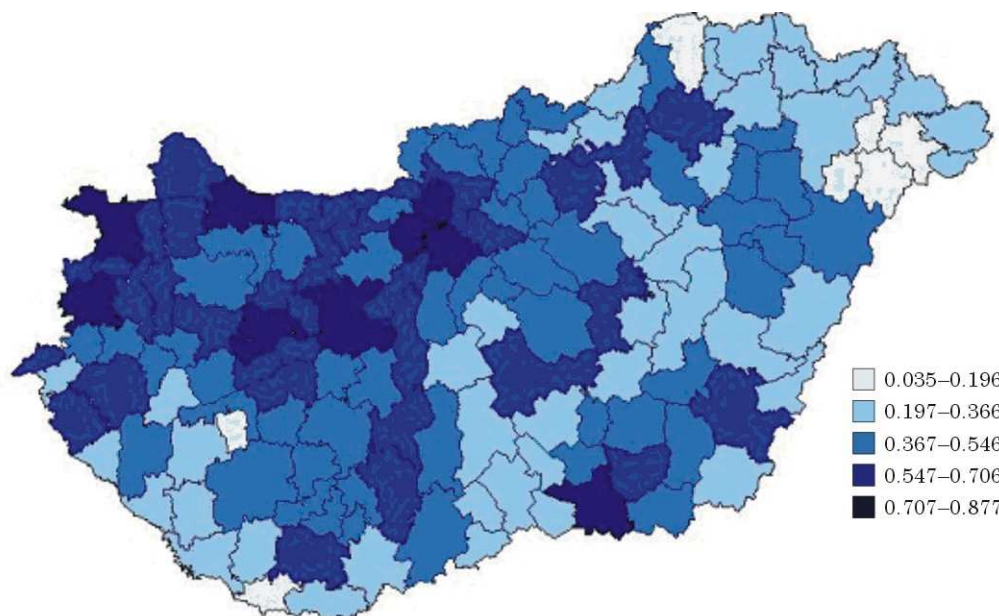


Figure 8
HDI values of Hungarian subregions in 2002¹

7. CONCLUSION

Estimation of HDI at subregional level had spectacular results. Note, however, that these cannot be accepted without reserve since they are only estimations. On the whole, results can be considered to be acceptable.

Calculation of HDI at subregional level can help experts of regional development in the more accurate determination of the subregional development. This alternative measure is considered to be useful and substantial because of its complexity. Subindices describe trends of development and the differences as well.

The answer to the question asked in the title of the study clearly points to development on the basis of the approach of HDI values. If, however, some subregions are picked out, decline can be observed in some single cases.

REFERENCES

- [1] CSITE, ANDRÁS – NÉMETH, NÁNDOR (2007): Az életminőség területi differenciái Magyarországon: a kistérségi szintű HDI becslés lehetőségei (Regional differences of life quality in Hungary: potentials of HDI estimation at subregional level, in Hungarian), MTA-KTI Budapesti Munkagazdaságtani Füzetek, 3. szám 1–67.
- [2] CSITE, ANDRÁS – NÉMETH, NÁNDOR (2007): A születéskor várható élettartam kistérségi egyenlőtlenségei az ezredforduló Magyarországon (Subregional differences of average life expectancy at the turn of the millennium in Hungary, in Hungarian), Kormányzás, Közpénzügyek, Szabályozás, 2. évfolyam, 2. szám 257–289.

¹ Source: own compilation.

- [3] FÓTI, KLÁRA (2003): A szegénység enyhítéséért – helyzetkép és javaslatok 2000–2002, (A Human Development Report Hungary 2000–2002 magyar nyelvű változata) Magyar Tudományos Akadémia Világgazdasági Kutatóintézet, Budapest.
- [4] G. FEKETE, ÉVA (2006): Hátrányos helyzetből előnyök? Elmaradott kistérségek felzárkózási lehetőségei az Észak-magyarországi régióban, Észak-magyarországi Stratégiai Füzetek, 3. évfolyam, 1. szám 54–68.
- [5] HUSZ, ILDIKÓ (2001): Az emberi fejlődés indexe (Human Development Index, in Hungarian), Szociológiai Szemle, 2. szám 72–83.
- [6] KOCZISZKY, GYÖRGY (2006): Adalékok a térségi gazdaságfejlesztés módszertanához, Miskolc.
- [7] KRISTÓF, TAMÁS (2003): Magyarország gazdasági fejlettségének lehetséges forgatókönyvei, Statisztikai Szemle, 81. évfolyam, 12. szám 1090–1104.
- [8] OBÁDOVICS, CSILLA – KULCSÁR, LÁSZLÓ (2003): A vidéki népesség humánindexének alakulása Magyarországon, Területi Statisztika, 43. évfolyam, 4. szám 303–322.
- [9] BHATNAGAR, RAVI KANT (2002): Constructing the Human Development Index: Effect of the adaptive multi-step formulation of utility function—a research note, Suoth Asia Economic Journal, Number 3. 253–263.
- [10] RECHNITZER, JÁNOS – SMAHÓ, MELINDA (2005): A humán erőforrások regionális sajátosságai az átmenetben. MTA Közgazdaságtudományi Intézet, Budapest.
- [11] SMAHÓ, MELINDA (2005): A humán fejlettség regionális dimenziói (Regional dimensions of human development, in Hungarian). Előadásanyag.

Appendix 1
HDI values of Hungarian subregions in 2007¹

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Budaörsi	98.69	10.42	1 101 461	75.61	0.857	1.000	0.773	0.877
2	Budapesti	98.72	10.89	1 086 800	74.85	0.918	0.989	0.682	0.863
3	Balatonfüredi	99.02	9.95	760 973	77.50	0.894	0.684	1.000	0.859
4	Szentendrei	98.54	10.28	978 227	76.49	0.798	0.899	0.878	0.858
5	Veszprémi	98.79	10.24	946 994	75.07	0.864	0.871	0.709	0.815
6	Balatonalmádi	98.95	9.81	776 666	76.51	0.859	0.701	0.882	0.814
7	Győri	98.82	10.15	952 984	74.92	0.862	0.876	0.691	0.810
8	Dunakeszi	98.35	10.07	989 876	75.68	0.723	0.909	0.782	0.804
9	Pilisvörösvári	98.36	10.03	960 862	75.83	0.720	0.883	0.800	0.801
10	Székesfehérvári	98.69	10.15	994 743	74.60	0.827	0.913	0.652	0.797

¹ Note for the data of the table:

- Literacy rate in the population older than 6, 2001 (%), source: calculated from illiteracy rate data of 2001 census
- Number of years completed at school in the population older than 6, 2001, source: www.eroforrasterkep.hu, MTA-KTI database
- Per capita inland income 2007 (HUF per capita), source: www.eroforrasterkep.hu MTA-KTI database
- Average life expectancy 2007 (year), source: calculated from Csire-Németh HCSO data

11	Szegedi	98.81	10.35	792 745	74.86	0.881	0.719	0.684	0.761
12	Dunaújvárosi	98.72	9.64	982 625	74.20	0.775	0.902	0.605	0.761
13	Szombathelyi	98.84	10.05	914 589	74.00	0.857	0.841	0.581	0.760
14	Pécsi	98.72	10.27	801 499	74.87	0.848	0.728	0.685	0.754
15	Egri	98.62	10.12	854 774	74.69	0.803	0.783	0.664	0.750
16	Zalaegerszegi	98.54	9.80	837 843	75.22	0.743	0.766	0.727	0.745
17	Komáromi	98.71	9.45	899 111	74.38	0.753	0.826	0.626	0.735
18	Siófoki	98.69	9.70	710 504	75.79	0.774	0.625	0.796	0.732
19	Gárdonyi	98.84	9.51	816 275	74.43	0.795	0.744	0.632	0.724
20	Tatai	98.57	9.77	880 714	74.05	0.750	0.809	0.587	0.715
21	Sárvári	98.91	9.34	791 464	74.44	0.793	0.717	0.633	0.715
22	Szolnoki	98.67	9.78	816 071	74.16	0.779	0.744	0.600	0.707
23	Sopron-Fertódi	98.60	9.77	746 232	74.97	0.757	0.667	0.697	0.707
24	Csornai	98.67	9.17	697 176	75.84	0.711	0.609	0.800	0.707
25	Gödöllői	98.35	9.86	889 102	74.19	0.698	0.817	0.603	0.706
26	Móri	98.78	9.19	876 840	73.80	0.742	0.805	0.557	0.701
27	Nyíregyházai	98.49	9.90	752 693	74.85	0.743	0.675	0.683	0.700
28	Esztergomi	98.47	9.72	868 575	74.01	0.717	0.797	0.582	0.699
29	Körmendi	98.73	9.32	810 923	74.23	0.742	0.738	0.608	0.696
30	Békéscsabai	98.55	9.86	753 084	74.47	0.755	0.675	0.638	0.689
31	Váci	98.47	9.79	831 032	74.01	0.724	0.759	0.582	0.688
32	Mosonmagyaróvári	98.79	9.46	733 062	74.18	0.776	0.652	0.602	0.677
33	Érdi	97.54	9.94	960 351	74.68	0.484	0.883	0.662	0.676
34	Gyöngyösi	98.53	9.46	766 027	74.40	0.703	0.690	0.629	0.674
35	Debreceni	98.35	10.32	818 857	73.53	0.751	0.747	0.524	0.674
36	Balatonföldvári	98.73	9.32	600 710	75.66	0.743	0.482	0.780	0.668
37	Nagykanizsai	98.51	9.52	772 148	74.11	0.705	0.696	0.595	0.665
38	Zirci	98.71	8.98	706 614	74.69	0.698	0.621	0.663	0.661
39	Oroszlányi	98.65	9.22	843 917	73.21	0.710	0.772	0.486	0.656
40	Ráckevei	98.61	9.46	759 750	73.82	0.726	0.682	0.560	0.656
41	Kapuvári	98.82	9.19	669 069	74.38	0.754	0.574	0.626	0.651
42	Celldömölki	98.69	9.12	686 122	74.57	0.708	0.595	0.648	0.651
43	Tatabányai	98.73	9.58	853 247	72.45	0.773	0.782	0.396	0.650
44	Kecskeméti	98.34	9.47	741 578	74.43	0.651	0.662	0.633	0.648
45	Szekszárdi	98.31	9.38	727 606	74.68	0.634	0.646	0.663	0.647
46	Fonyódi	98.83	9.50	587 065	74.88	0.792	0.462	0.686	0.646
47	Hajdúszoboszlói	98.51	9.12	656 823	75.08	0.660	0.558	0.710	0.643
48	Paksi	97.88	9.11	881 947	74.41	0.485	0.810	0.630	0.642

49	Lenti	98.55	9.00	635 418	75.28	0.657	0.530	0.735	0.640
50	Csepregi	98.52	9.10	687 741	74.52	0.662	0.597	0.643	0.634
51	Hatvani	98.78	9.19	717 020	73.43	0.741	0.633	0.512	0.629
52	Aszódi	98.52	8.99	683 323	74.49	0.646	0.592	0.639	0.626
53	Téti	98.51	8.88	710 519	74.31	0.632	0.625	0.617	0.625
54	Kaposvári	98.21	9.70	693 114	74.39	0.643	0.604	0.627	0.625
55	Hódmezővá- sárhelyi	98.72	9.42	634 450	74.11	0.750	0.528	0.594	0.624
56	Dorogi	98.61	9.18	784 980	73.03	0.693	0.710	0.465	0.623
57	Gyáli	98.61	9.03	699 940	73.77	0.677	0.612	0.553	0.614
58	Várpalotai	98.74	9.33	759 376	72.57	0.748	0.682	0.409	0.613
59	Szentgott- hárdi	98.95	9.26	740 179	72.32	0.796	0.660	0.379	0.612
60	Ajkai	98.52	9.10	692 236	73.92	0.659	0.603	0.571	0.611
61	Szarvasi	98.80	9.17	599 136	74.10	0.746	0.479	0.592	0.606
62	Miskolci	98.56	9.88	714 457	72.61	0.760	0.630	0.415	0.601
63	Gyulai	98.51	9.49	671 026	73.53	0.701	0.576	0.524	0.601
64	Keszthely- Hévízi	97.63	9.79	679 617	74.96	0.491	0.587	0.696	0.591
65	Pannonhal- mai	98.61	9.02	706 922	73.12	0.675	0.621	0.475	0.590
66	Tapolcai	98.43	9.34	629 043	74.00	0.662	0.521	0.581	0.588
67	Balassagyar- mati	98.29	9.20	688 479	73.80	0.608	0.598	0.557	0.588
68	Pápai	98.35	9.19	656 585	73.89	0.624	0.558	0.568	0.583
69	Veresegyházi	97.72	9.43	845 743	73.25	0.474	0.774	0.492	0.580
70	Monori	98.46	9.21	728 710	72.71	0.655	0.647	0.426	0.576
71	Orosházai	98.77	9.11	606 778	73.30	0.730	0.490	0.497	0.572
72	Pécsvárad	98.62	8.92	566 419	74.25	0.667	0.431	0.611	0.570
73	Salgótarjáni	98.36	9.38	652 891	73.14	0.647	0.553	0.478	0.559
74	Adonyi	98.43	8.75	715 879	72.88	0.595	0.632	0.447	0.558
75	Kőszegi	97.46	9.44	716 208	74.43	0.405	0.632	0.632	0.556
76	Vasvári	98.69	8.74	589 913	73.56	0.667	0.466	0.528	0.554
77	Zalakarosi	98.76	9.55	642 404	71.90	0.777	0.539	0.330	0.549
78	Bonyhádi	98.22	9.03	583 234	74.28	0.568	0.456	0.614	0.546
79	Kiskunfé- legyházai	98.58	9.05	596 887	73.22	0.671	0.476	0.487	0.545
80	Szentesi	98.38	9.17	634 472	73.11	0.628	0.528	0.474	0.544
81	Hajdúbö- szörményi	98.11	8.83	544 131	75.05	0.517	0.397	0.706	0.540
82	Polgári	98.13	8.55	579 438	74.77	0.490	0.451	0.673	0.538
83	Tiszaújvárosi	98.09	9.40	868 215	71.16	0.575	0.797	0.241	0.537
84	Jászberényi	98.24	8.92	632 495	73.42	0.560	0.526	0.512	0.533

85	Bajai	98.23	9.23	545 089	74.17	0.594	0.399	0.601	0.531
86	Ceglédi	98.21	9.00	599 052	73.64	0.564	0.479	0.538	0.527
87	Békési	98.57	8.85	532 435	73.77	0.647	0.379	0.553	0.526
88	Dombóvári	98.42	9.07	556 933	73.58	0.630	0.417	0.531	0.526
89	Rétsági	98.09	8.95	695 537	72.86	0.524	0.607	0.444	0.525
90	Mezőtúri	98.73	8.97	542 921	73.08	0.703	0.395	0.471	0.523
91	Kalocsai	98.44	9.00	546 135	73.62	0.626	0.400	0.536	0.521
92	Kazincbarcikai	98.42	9.14	656 137	72.18	0.637	0.557	0.363	0.519
93	Csongrádi	98.70	9.12	557 963	72.62	0.712	0.419	0.415	0.515
94	Záhonyi	98.65	8.54	529 666	73.64	0.632	0.374	0.537	0.515
95	Ercsi	97.91	9.03	751 717	72.30	0.484	0.673	0.377	0.511
96	Komlói	98.29	9.16	560 574	73.31	0.604	0.423	0.498	0.508
97	Kisbéri	98.53	8.83	734 766	71.10	0.633	0.654	0.234	0.507
98	Pásztói	98.48	8.77	591 957	72.79	0.611	0.469	0.436	0.505
99	Makói	98.73	8.95	533 706	72.76	0.702	0.381	0.432	0.505
100	Sátoraljaúj- helyi	98.48	9.35	612 955	71.95	0.676	0.499	0.335	0.503
101	Mezőkövesdi	98.52	8.99	606 918	72.20	0.646	0.490	0.365	0.501
102	Kiskőrösi	98.40	8.76	464 068	74.33	0.590	0.261	0.620	0.490
103	Zalaszentgróti	98.44	8.86	555 898	72.83	0.611	0.415	0.441	0.489
104	Bátonyte- renyei	98.42	8.81	548 395	72.75	0.601	0.404	0.432	0.479
105	Pétervásárai	98.61	8.67	486 973	73.30	0.635	0.302	0.497	0.478
106	Mohácsi	98.05	9.02	565 815	73.14	0.520	0.431	0.477	0.476
107	Kadarkúti	98.43	8.50	457 397	74.13	0.567	0.249	0.596	0.471
108	Dabasi	98.10	8.69	613 690	72.43	0.498	0.500	0.393	0.464
109	Kunszent- miklósi	98.28	8.60	553 711	72.81	0.538	0.412	0.439	0.463
110	Kiskunhalasi	97.88	8.98	597 968	72.79	0.470	0.478	0.436	0.461
111	Szobi	97.84	9.01	667 036	72.09	0.460	0.571	0.352	0.461
112	Balmazújvá- rosi	98.12	8.35	471 035	74.46	0.465	0.274	0.636	0.458
113	Nagykátai	98.34	8.72	588 454	72.00	0.566	0.464	0.341	0.457
114	Enyingi	98.39	8.47	568 579	72.20	0.551	0.435	0.365	0.450
115	Kunszent- mártoni	98.47	8.58	482 866	72.90	0.587	0.295	0.450	0.444
116	Mórahalmi	98.53	8.67	453 775	72.97	0.615	0.242	0.457	0.438
117	Tabi	98.01	8.69	530 393	72.81	0.471	0.375	0.438	0.428
118	Sütemegi	98.01	8.76	563 816	72.28	0.480	0.428	0.375	0.428
119	Püspökladá- nyi	97.65	8.48	515 681	73.82	0.347	0.351	0.559	0.419
120	Letenyei	97.95	8.46	547 836	72.64	0.431	0.403	0.418	0.417

121	Sárbogárdi	98.20	8.57	588 775	71.41	0.512	0.465	0.270	0.416
122	Bicskei	96.90	8.89	729 374	72.51	0.189	0.648	0.402	0.413
123	Siklói	97.99	8.77	508 205	72.58	0.476	0.339	0.411	0.409
124	Füzesabonyi	97.95	8.71	524 888	72.49	0.458	0.366	0.401	0.408
125	Törökszent- miklósi	98.16	8.62	514 788	72.17	0.504	0.350	0.361	0.405
126	Sárospataki	98.03	9.04	575 729	71.11	0.519	0.445	0.235	0.400
127	Mezőkovács- házai	98.47	8.55	461 598	72.12	0.585	0.257	0.355	0.399
128	Kiskunmajsai	98.11	8.58	513 492	72.12	0.488	0.348	0.356	0.397
129	Bácsalmási	98.12	8.46	431 563	73.46	0.477	0.199	0.516	0.397
130	Jánoshalmi	98.39	8.52	442 885	72.57	0.559	0.221	0.410	0.397
131	Abai	98.11	8.42	606 489	70.90	0.470	0.490	0.210	0.390
132	Tiszavasvári	97.71	8.52	491 704	73.17	0.369	0.311	0.482	0.387
133	Szeghalomi	97.90	8.42	524 306	72.35	0.412	0.365	0.384	0.387
134	Szentlőrinci	97.70	8.76	566 099	71.93	0.396	0.431	0.333	0.387
135	Tamási	97.93	8.58	492 013	72.44	0.438	0.311	0.394	0.381
136	Hévízi	97.65	8.23	473 099	73.58	0.321	0.278	0.531	0.376
137	Kisvárdai	97.83	8.78	538 792	71.67	0.434	0.389	0.302	0.375
138	Szerencsi	97.74	8.61	495 571	72.52	0.389	0.317	0.403	0.370
139	Berettyóúj- falui	97.75	8.47	467 136	73.03	0.374	0.267	0.464	0.369
140	Csurgói	97.95	8.63	483 633	71.99	0.449	0.296	0.340	0.362
141	Nagykállói	97.95	8.35	428 260	72.88	0.418	0.192	0.446	0.352
142	Őriszentpéteri	97.99	8.75	588 224	70.08	0.473	0.464	0.112	0.350
143	Karcagi	97.28	8.69	534 378	72.43	0.271	0.382	0.393	0.349
144	Sarkadi	97.90	8.31	391 979	73.47	0.398	0.117	0.517	0.344
145	Nagyatádi	97.58	8.77	523 107	71.57	0.363	0.363	0.290	0.339
146	Tiszafüredi	97.62	8.43	490 213	72.25	0.336	0.308	0.372	0.338
147	Marcali	97.22	8.69	522 463	72.40	0.253	0.362	0.390	0.335
148	Kisteleki	98.27	8.49	419 369	71.60	0.522	0.174	0.293	0.330
149	Szigetvári	97.59	8.74	488 973	71.78	0.363	0.306	0.315	0.328
150	Pacsai	97.66	8.43	524 917	70.94	0.346	0.366	0.214	0.309
151	Szécsényi	97.22	8.43	479 289	72.54	0.223	0.289	0.406	0.306
152	Vásárosna- ményi	97.56	8.52	431 799	72.35	0.329	0.199	0.383	0.304
153	Sásdi	97.46	8.50	446 939	72.30	0.298	0.229	0.377	0.301
154	Hevesi	97.59	8.20	454 274	72.14	0.300	0.243	0.359	0.300
155	Ózdi	97.88	8.69	463 257	70.70	0.437	0.260	0.186	0.294
156	Ibrány- Nagyhalászi	97.71	8.20	420 375	72.07	0.333	0.177	0.350	0.286
157	Bélapátfalvai	96.86	8.50	507 430	72.34	0.131	0.337	0.382	0.284

158	Barcsi	97.23	8.67	500 259	71.29	0.255	0.325	0.256	0.279
159	Sellyei	97.38	8.22	442 379	71.97	0.244	0.220	0.338	0.268
160	Baktalóránt- házai	97.84	8.23	392 939	71.70	0.373	0.119	0.306	0.266
161	Mezőcsáti	97.89	8.16	443 233	70.54	0.378	0.222	0.166	0.255
162	Derecske- Létavértesi	97.56	8.25	419 292	71.58	0.297	0.174	0.291	0.254
163	Tokaji	97.73	8.79	512 892	69.17	0.405	0.347	0.002	0.251
164	Fehérgyar- mati	97.13	8.35	394 383	72.71	0.190	0.122	0.427	0.246
165	Csengeri	97.37	8.27	377 002	72.43	0.246	0.083	0.392	0.241
166	Hajdúhadházi	97.10	8.11	417 982	72.34	0.154	0.172	0.382	0.236
167	Lengyeltóti	97.08	8.31	422 613	71.52	0.171	0.181	0.285	0.212
168	Mátészalkai	97.02	8.48	446 299	71.05	0.173	0.228	0.228	0.210
169	Encsi	96.97	8.23	417 338	71.82	0.132	0.170	0.319	0.207
170	Nyírbátori	96.65	8.23	433 090	72.18	0.043	0.202	0.363	0.203
171	Szikszói	96.89	8.27	445 282	71.37	0.115	0.226	0.266	0.202
172	Edelényi	96.61	8.21	446 075	71.90	0.030	0.227	0.330	0.196
173	Abaúj- Hegyközi	96.92	8.15	403 040	71.22	0.108	0.141	0.248	0.166
174	Bodrogközi	96.99	7.94	341 946	69.15	0.105	0.000	0.000	0.035

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| (1) HDI rank, 2007 | (5) Inland income per capita, 2007
(HUF/capita) |
| (2) Subregions, 2007 | (6) Average life expectancy at birth, 2007
(year) |
| (3) Literacy rate in the population older
than 6 years, 2001 (%) | (7) Education index |
| (4) Number of years completed at school
in the population older than 6, 2001
(number of classes) | (8) Inland income index |
| | (9) Life expectancy index |
| | (10) HDI 2007 |