

BASIC DISPARITIES OF HUMAN DEVELOPMENT IN ROMANIA – REGIONAL LEVEL

Ph.D. Prof. Carmen Radu
 Ph.D. Assoc. Prof. Costel Ionascu
 University of Craiova
 Faculty of Economics and Business Administration

Abstract: *At the beginning of a new millennium, all major inequalities of the planet remain to defend and to conquer: between man and nature; between rich countries and poor countries; between new generations and old generations; between women and men.* Starting from this idea, our scientific research intends to realize, gradually, the subsequent objectives: the defining of the complex concept of sustainable human development and the evidencing of the pronounced dynamics, the diversity and the detailing of this concept at all levels; the classification, the methodology and the long-term trend analysis of the main national and regional human development indicators; the measuring of the main regional disparities in human sustainable development in our country.

JEL classification: C82, O11

Key words: sustained regional human development, inter-regional disparities, intra-regional disparities, coefficient of variation.

The beginning of the third millennium from this epoch worsens the chronicle lack of balance of our planet – between man and nature, between regions, generations and sexes – and provokes the humanity to assume them and explain for being able to resolve them. Fully accepting this idea, in our study we propose a statistical analysis model of the main regional disparities in the human development from our country – one from the *key themes* of all the national conferences and plans of actions at which our country has participated or adhered, starting with 1992. Although our country has adhered to the criteria and principles of the *Local Agenda 21*, in the Millennium Development Goal Report still reflect two major concerns regarding Romania: the growing disparities and inequality in our society and persistent poverty¹.

Since the beginning of the 1980s, the *economic growth paradigm* neglected important aspects of the development, such as income inequalities, unemployment and disparities in access to public goods and services, such as health and education².

Starting with 1990, United Nations Development Programme (UNDP) had introduced the concept of *Human Development*, as a paradigm of the development; this concept has evaluated year-by-year, today being considered as being part of the specialty

¹ **Local Governance for Human Development. 2003-2004 National Human development Report for Romania, UNDP, 2005.**

² **Measuring Human Development. A Primer. Guidelines and tools for statistical research, analysis and advocacy, UNDP, New York, 2007.**

language of the development problems at world wide, national and regional level. The apparition of the new concept was a unanimous agreement from the specialists, which have considered that the year 1990 was the year of the profound changes at worldwide level; the political changes, as a result of the falling of the communist block, imposed the apparition of an alternative approach of the development, which should first promote the human condition and which should give a bigger attention to the individual.

We find the first definition of the new concept in the opening now-famous words of the 1990 Human Development Report (HDR): *People are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to live long, healthy and creative lives*³. Another paragraph of the report detailed the concept: *Human Development is a process of enlarging people's choices. The most critical ones are to lead a long and healthy life, to be educated and to enjoy a decent standard of living*⁴.

The next HDR, from 1991, refined this concept in a simple sentence⁵: *The real objective of development is to increase people's choices. The human development paradigm emphasizes two simultaneous processes: the formation of human capabilities and the use to which people put them.* The term *human development* denotes both the process of widening people's choices and the level of their achieved well-being⁶.

Even if people-centred development dates back to at least Aristotle, the 2006 global HDR state and advance the idea that the *human development is about the realization of human potential: it is about what people can do and become – their capabilities – and about the freedom they have to exercise real choices in their lives.* This frame work is based on what the economist and Nobel laureate, Amartya Kumar Sen calls *the capabilities and functioning approach: not only it is important to achieve more "functioning", but it is essential for people to have the "capabilities" or the freedom to achieve these*⁷.

The sustained local or regional development, a more recent concept, starts from the idea that the sustained development begins with and into the local communities; in this prospective, the local and regional sustained development is based upon the local resources and upon the adaptation of the elaborated and advanced strategies through the local communities. The major goal of the sustainable local and regional human development is constituted by the eradication of poverty through the local resources, which can be structured in four categories: *the human capital* – knowledge, abilities, capacities, creativity, the adaptation of the strategies; *the physical capital* – buildings, roads; *the natural capital* – sol, air, water, forests; *the social capital* – governmental structures and possibilities for making decisions, community, culture and communications.

The 2010 HDR, *Rethinking Human Development*, reaffirms the relevance of the human development paradigm in several ways: measurements of various dimensions of human development for 20 years suggest that the causal links between economic

³ **Beyond transition. Towards inclusive societies, UNDP, Regional Bureau for Europe and CIS, Bratislava, 2011.**

⁴ **Alkire Sabina, Human Development: definitions, critiques and related concepts, HD Research Paper 2010/1, UNDP.**

⁵ **Beyond transition. Towards inclusive societies, UNDP, Regional Bureau for Europe and CIS, Bratislava, 2011.**

⁶ **Alkire Sabina, Human Development: definitions, critiques and related concepts, HD Research Paper 2010/1, UNDP.**

⁷ **Measuring Human Development. A Primer. Guidelines and tools for statistical research, analysis and advocacy, UNDP, New York, 2007.**

development, democracy and human development are complex and not necessarily linear; the increasing uncertainty within the global financial system and the growing challenges posed by climate change reinforce the need for a broader concept of human development; the new Human Development Index has been adjusted to take into account inequality – both within and across countries⁸. *Indeed, human development is an evolving idea – not a fixed, static set of precepts – and as the world changes, analytical tools and concept evolve*⁹.

Human Development Index (HDI) is a synthesis of human development through three indicators of three major dimensions¹⁰: *longevity*, measured by life expectancy at birth; *education level*, measured by weighted mean between population literacy rate (with a share of two thirds) and gross enrolment ratio (one third); *living standard*, measured by GDP per capita at PPS US\$.

Taking into account the real values of the indicators and the extreme values (established by UNDP), the specific index (I_s) for every one of the three dimensions of human development are calculated as follows:

$$I_s = \frac{V_{real} - V_{min}}{V_{max} - V_{min}}$$

The GDP index is calculated as the difference between logarithmic values. The extreme values used in the calculation of HDI are: 25 years, respectively 85 years for the life expectancy at birth; 0%, respectively 100% for the adult literacy rate and the gross enrolment ratio; 100 US\$, respectively 40000 US\$ at PPP for The GDP per capita.

Human development Index is calculated as an arithmetic mean of specific indices.

Since 2010, the methodology used by UNDP was changed. The Human Development Index measures the average achievements in a country in the same three dimensions, but for two of them the indicators for measuring are different¹¹: *long and healthy life*, measured by life expectancy at birth; *access to knowledge*, measured by mean years of schooling and expected years of schooling; *decent standard of living*, measured by Gross National Income (GNI) per capita. The maximum values are set to the actual observed maximum values of the indicators from the countries in the time series, that is, 1980-2010: 83.2 years for the life expectancy at birth (Japan, 2010), 13.2 years for the mean years of schooling (USA, 2000), 20.6 years (Australia, 2002), 0.951 for the combined education index (New Zealand, 2010), 108211 for the GNI per capita at PPP US\$ (United Arab Emirates, 1980). For the minimum are used values conceived of as subsistence values or *natural zero*; progress is thus measured against minimum levels that a society needs to survive over time: 20 years for life expectancy, 0 years for both education variables and 163 US\$ per capita GNI, observed in Zimbabwe, in 2008.

The HDI is calculated now as a geometric mean of normalized indices measuring achievements in each dimension.

⁸ **Beyond transition. Towards inclusive societies, UNDP, Regional Bureau for Europe and CIS, Bratislava, 2011.**

⁹ **The Real Wealth of Nations: Pathways to Human Development, Human Development Report 2010, UNDP, 2010.**

¹⁰ **NHDR Romania 2007 – Fostering Human Development by Strengthening the Inclusiveness of the Labor Market in Romania, UNDP, 2008.**

¹¹ **The Real Wealth of Nations: Pathways to Human Development, Human Development Report 2010, UNDP, 2010.**

The data from the last Human Development Reports¹² allow the evidencing of the national HDI evolution in the last 20 years and also the comparison at the continental and international level (table no. 1).

Table no. 1 Human Development Index trends

Year	Level		
	Romania	Europe and Cental Asia	World
1990	0.700	0.680	0.594
2000	0.704	0.695	0.634
2005	0.748	0.728	0.660
2009	0.778	0.744	0.676
2010	0.779	0.748	0.679
2011	0.781	0.751	0.682
Average annual HDI growth rate:			
1990-2011	0.52	0.47	0.66
2000-2011	0.95	0.71	0.66

Source: HD Report 2011¹³

In the last HD Report¹⁴ that used the old methodology for the HDI, Romania occupied the rank 63 and it was placed in the high HDI countries group. In the 2010 and 2011 HD Reports, Romania has the rank 50, in the same category of countries, with high HDI; Bulgaria is placed in the same group, but on a lower rank, 58. The other neighbouring countries, as geographical position in Europe and political history, are placed in the very high HDI group: Czech Republic with the rank 28, Hungary with the rank 36 and Poland with the rank 41. In the analysed period, even if Romania has doubled its average annual HDI growth rate, our national value of HDI was under the Central and Eastern Europe average.

Like any average country measure, the HDI does not account for variations in human development within the country; countries with the same HDI may be very different in how human development is distributed, either from region to region, or from social group to social group¹⁵. For that reason, it is necessary to detail the national reports on human development by focusing on sub-national areas, where participatory approaches are more revealing and human development analysis can be more directly linked to the policy process; the sub-national human development analysis can help at the understanding

¹² **Human Development Report 2011. Sustainability and Equity: A Better Future for All, UNDP, 2011.**

¹³ **Idem.**

¹⁴ **Human Development Report 2009. Overcoming barriers – Human mobility and development, UNDP, 2009.**

¹⁵ **Measuring Human Development. A Primer. Guidelines and tools for statistical research, analysis and advocacy, UNDP, New York, 2007.**

of the root causes and persistent patterns of deprivation beyond national average usually reported in international documents¹⁶.

The accomplishment of a statistical analysis of the regional disparities of human development indicators from Romania needs, in our vision, a few considerations regarding the concepts on which it is based: region, regional development. The defining of the *region* concept, as well as the interest given to the regional dimension in Romania has an interesting history: leaving from the natural region, defined by the geologist and geographer, we have progressively arrived to the geographical-economical-social region, which has a series of distinctive features.

The geographer Vintilă M. Mihăilescu, one of the creator of the Romanian human geography, delimited and defined four great geographical regions in Romania, to which correspond four great economical *domains*: the domain of the mountains (forestry, pastoral occupations, mining exploiting), the domain of the hills (mix cultures), the domain of the plains (food grains), the domain of the waters and flooding terrains; the reunion of these characteristics had as a result the concept of *agro-geographical* region, used in the agricultural statistics from the inter-war period. The medical investigations made after the Second World War used 11 territorial divisions depending on geographical (natural) characteristics: inter-Carpathian depressions, tablelands, plains, delta, etc.

The contemporaneous geography from Romania had diversified the traditional classification: in the physical geography it is used the notion of *physical-geographical unit* (17 regions); adding characteristics of economical and demographical order to the ones of geographical order, the geographic economy has created a regional typology that is more colorful, using 12 indicators grouped in three categories which vises the natural homogeneity, the demo-economical homogeneity, the correlation between the economical development, resources and population.

The historians, the ethnographers and the majority of demographers preferred in their studies the *historical regions (historical provinces)* of our country; starting with the inter-war period, the official statistic from Romania served itself with the historical provinces as a frame of the demographical and economical phenomena: *Moldova, Muntenia, Dobrogea, Oltenia, Banat, Transilvania, Crisana-Maramures, Bucharest*.

The regional development in Romania, in the modern European acceptance, is relatively recent. In the year 1998 the country's territory was organized in regions for being able to absorb the European funds and as instrument for the implementation of UE politics about regional development. Using a series of statistic indicators that belong to the infrastructure and communication and economical and social similar profiles, there have been constituted eight *development regions*, named by the geographical position in the national territory: Nord-Est (*North-East*): Bacău, Botoșani, Iași, Neamț, Suceava, Vaslui; Sud-Est (*South-East*): Brăila, Buzău, Constanța, Galați, Tulcea, Vrancea; Sud (*South*): Argeș, Călărași, Dâmbovița, Giurgiu, Ialomița, Prahova, Teleorman; Sud-Vest (South-West): Dolj, Gorj, Mehedinți, Olt, Vâlcea; Vest (*West*): Arad, Caraș-Severin, Hunedoara, Timiș; Nord-Vest (*North-West*): Bihor, Bistrița-Năsăud, Cluj, Maramureș, Sălaj, Satu-Mare; Centru (*Center*): Alba, Brașov, Covasna, Harghita, Mureș, Sibiu; București (*Bucharest*): the municipal of Bucharest, Ilfov. The eight development regions are not administrative units, but only territorial units that correspond with the EU NUTS II level;

¹⁶ **Pagliani Paola, Influence of regional, national and sub-national HDRs, HD Research Paper 2010/19, UNDP.**

these eight development regions were regrouped, for the same reasons, in four development macro-regions, corresponding with the EU NUTS I level.

The study of inter and intra-regional variation of the principal indicators of human development is important not only for the static or dynamic analysis of the phenomenon at national level, but also for a better European and international comparison.

If in traditional way the international comparisons are made considering each country a homogeneous entity, in reality it is known the fact that the differences within each country can be important. The limitation of comparisons between countries at the examination of a national index (HDI or specific indeces), neglecting all the information about the variation of the studied phenomenon within each country, does not allow the extraction and capitalization of comparison's whole informational riches. Therefore, it is manifested more frequent and more significant, within the international comparisons, the interest for the analysis of the regional variations, the privilege of the study of variation seeming more logical depending on the territorial units, because the division of a country in administrative units is registered in the prolongation of spatial division in nations; the decoupage of each European nation in a variable number of administrative units constitutes an obstacle of the variation's comparative analysis, this diversity being doubled by a dimension inequality of the units within the same country.

A part of the data referring to the human development's indicators, necessary for the analysis of the regional disparities have been taken over from the Human Development Reports (national or global), accomplished by UNDP; another part has been calculated on the basis of the official statistical data, taking into account the population's structure on regions and counties: the aggregation on regions of the human development's indicators for the year 1997, the detailing on counties of some indicators for the year 2002 and 2007. The statistical measuring of the interregional disparities, in the analysed periods, was made on the basis of these data, with the help of the variation's indicators; the results are presented in table 2.

It is noticed the increasing of inter-regional disparities in the analysed period, measured by two synthetical indicators of variation: standard deviation and coefficient of variation. The most important increasing in this period, of 85%, was achieved by education component, indicating a deeper discrepancy between regions regarding to the access to knowledge. From the three components of the human development, the one that registered constant the biggest variation at the level of the development regions, it was the economic component (GDP index), aspect that emphasizes serious inter-regional disparities regarding the economical development and the life standard.

In the same table, we are calculated, using the national and European available statistical data, for the year 2009, the coefficient of variation inter-regional for three indicators that correspond with the three dimensions of human development: life expectancy at birth, for longevity, number of students in all levels of education as a percentage of total population, for education and the GDP per capita (PPP US\$), for economic development. These values indicate an increasing and threatening inter-regional disparities regarding the access to knowledge and the decent standard of living in our country, in the last years. The dispersion of regional GDP per inhabitant, in percentage of the national GDP per inhabitant, calculated by EUROSTAT, at the NUTS II level, and measured by the sum of the absolute differences between regional and national GDP per inhabitant, weighted with the share of population and expressed in percent of the national GDP per inhabitant, also underlines the serious inter-regional disparities regarding

economic development in Romania in the last decades: 23,8% in 1998, 30,1% in 2002 and 37,7% in 2008.

Table no. 2 The measuring of the inter-regional disparities in the human development

Human development indicators	Year	Mean	Standard deviation	Coefficient of variation
Life expectancy index	1997	0,733	0,0090	1,224
	2002	0,771	0,0127	1,645
	2007	0,781	0,0124	1,583
Education index	1997	0,856	0,0285	3,330
	2002	0,877	0,0330	3,767
	2007	0,901	0,0554	6,153
GDP index	1997	0,611	0,0284	4,654
	2002	0,681	0,0492	7,232
	2007	0,750	0,0520	6,930
Human Development Index	1997	0,734	0,0192	2,615
	2002	0,776	0,0303	3,904
	2007	0,810	0,0385	4,752
Life expectancy at birth	2009	73,55	0,626	0,852
Number of students in all levels of education (percentage of total population)	2009	21,07	4,700	22,254
GDP per capita (PPP US\$)	2009	11697,42	5867,568	50,161

The graphics from the figures 1-12, made after the model of a polar diagram (the sectors correspond to the development regions), we consider them very useful instruments for the analysis: of evolution in time of human development's regional indexes, of the digression of these indicators in comparison with the national average, of their interregional variation and even of the regional hierarchy in human development in our country (each diagram allows the evidencing of the regions in which the level of the indicators is under the national average and of the ones in which the level of the indicators is superior to this one).

The regional diagrams have been created on the basis of the data decreasing arranged, under the circumstance from the main range (on which it is marked the representation scale) there can be read, in the sense of the clock indicators, the rank of the regions for each indicator and year.

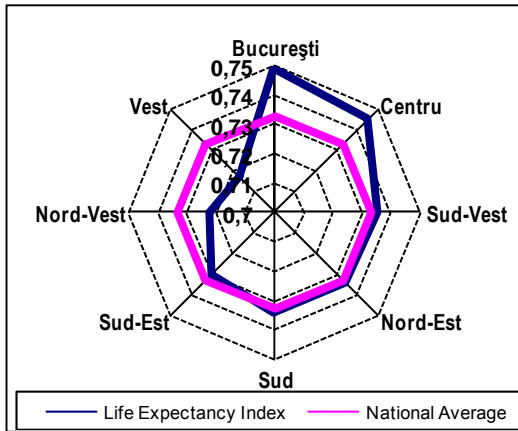


Figure no. 1. Year 1997

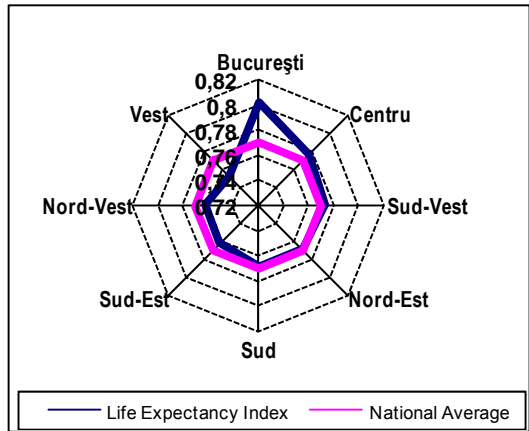


Figure no. 2. Year 2002

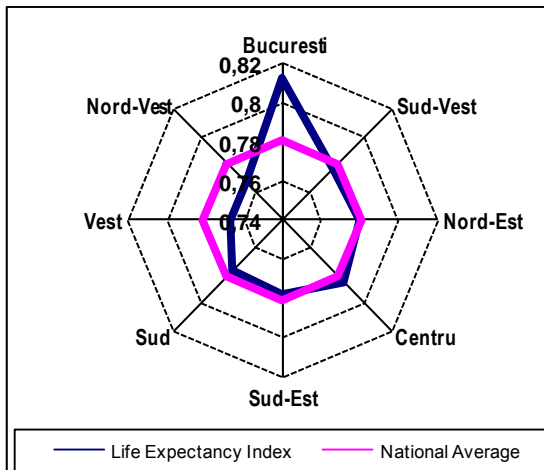


Figure no. 3. Year 2007

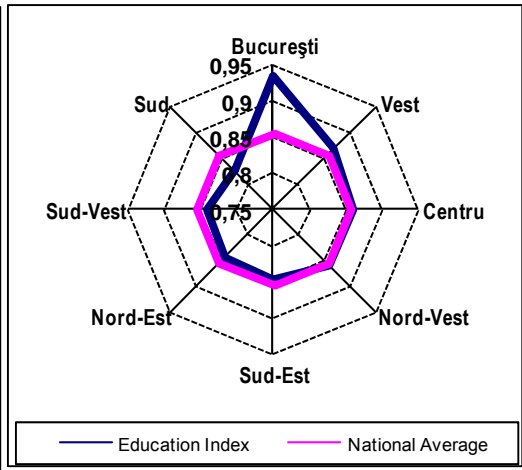


Figure no. 4. Year 1997

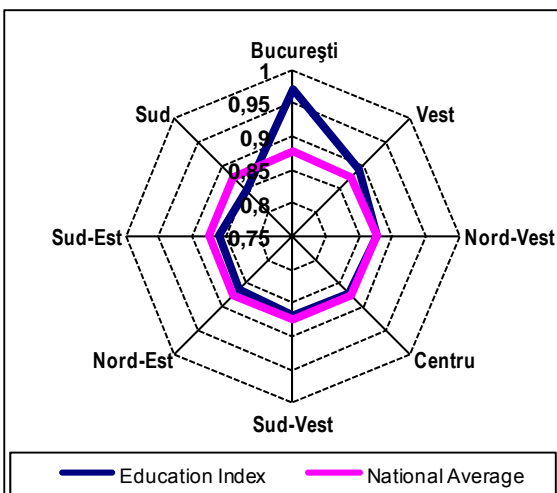


Figure no. 5. Year 2002

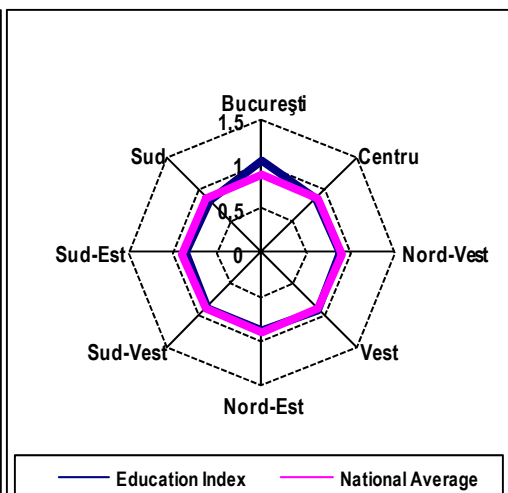


Figure no. 6. Year 2007

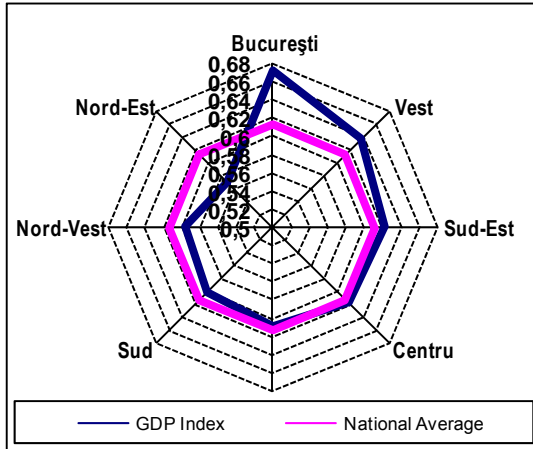


Figure no. 7. Year 1997

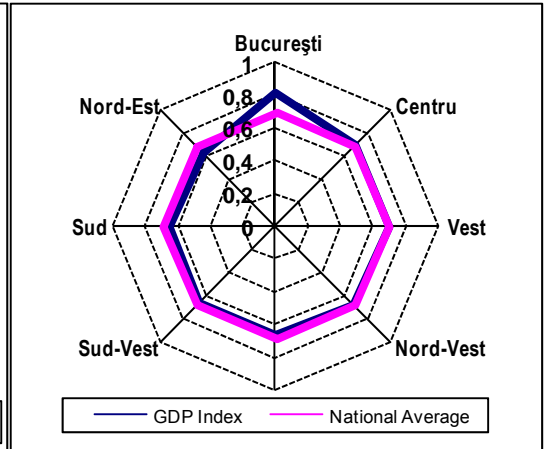


Figure no. 8. Year 2002

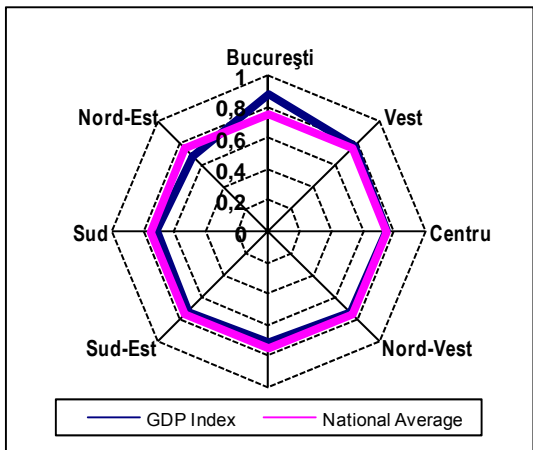


Figure no. 9. Year 2007

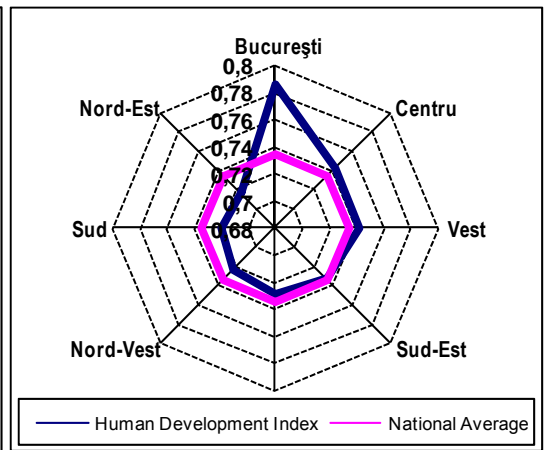


Figure no. 10. Year 1997

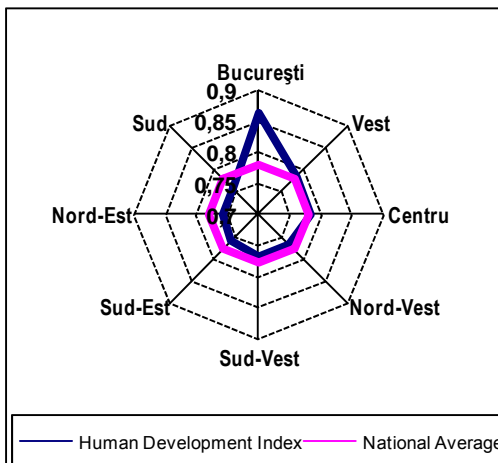


Figure no. 11. Year 2002

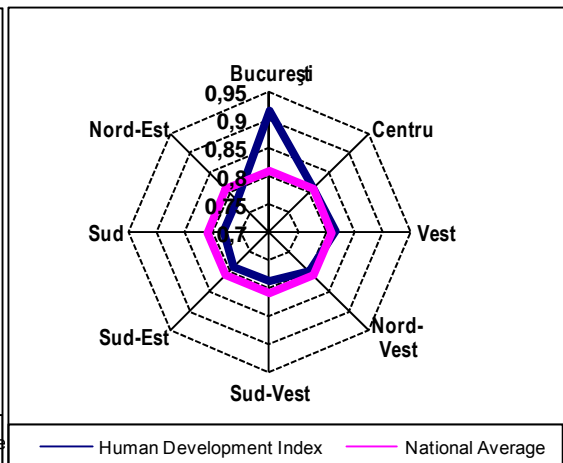


Figure no. 12. Year 2007

If we determinate an average rank (for the three years of analysis) of each region, corresponding to the four indicators of human development, there can be emphasized the following aspects: at three from the four indicators, the regions Center, West and North-West occupy ranks under five (HDI, the education index, the GDP index), while at the life expectancy index two of these regions (West and North-West) occupy the last places (the only region that occupies one of the first places at all the four indicators is Center); the regions South-West and South-East occupy average ranks, between five and six (only at the demographic component, the South-West region is in the first three regions); the regions South and North-East occupy the last places in the national hierarchy (an exception is the North-East region at the demographical component, where it is placed in the first four places). In the analysis of the regions' hierarchy we must take into consideration the fact that the Bucharest region occupies, invariable, first place.

For the first and last year from the analysed period, with the help of the same statistical indicators, we have measured the intra-regional disparities. In table 3 are presented only the results that make reference to the coefficient of variation.

We notice a modest decreasing of the intra-regional variation for the life expectancy index, from 1997 until 2007, in four of the seven analysed (the most significant decreasing, of 50%, was achieved in South-East region) and a slow increasing of the same indicator in the other three regions; a pronounced increasing of the coefficient of variation for the education index (over 200% in South-East region), signaling a deepness of the discrepancies between the component counties of the regions, regarding the access to knowledge (especially in the north side of the country); a significant decreasing in intra-regional variation for the GDP index (70% in South-West), reflected in decreasing (with only one exception, the North-East region) of intra-regional disparities at the level at synthetic indicator of human development, HDI.

Table no. 3 The measuring of the intra-regional disparities in the human development

Year	Region	Life expectancy index	Education index	GDP index	Human development index (HDI)
1997	North-East	1,2060	2,1827	6,4345	2,7462
	South-East	2,9776	1,5528	9,3099	2,8912
	South	1,4532	3,7025	15,4181	6,5196
	South-West	1,4224	2,3379	13,4330	4,7518
	West	0,6516	2,1103	8,0569	3,2043
	North-West	3,3959	3,0747	12,7713	5,5942
	Center	0,9098	1,9657	8,1358	3,3702
2007	North-East	1,445	4,1673	4,9250	2,7658
	South-East	1,5482	3,5979	6,1613	2,8580
	South	1,7456	3,9770	6,000	3,7655
	South-West	1,3940	2,6670	3,9150	2,0600
	West	0,6390	3,7330	4,0190	2,8100
	North-West	3,2732	5,6600	4,4370	4,1303
	Center	1,1560	3,0290	2,8780	2,2726

In our opinion, the most significant aspects evidenced by this study are:

- The persistence of some great disparities between the regions from the north and west of the country, on one hand, and the ones from the south and east of the country, on the other hand (evidently, favorable to the first); these are explicable only in part by the history of the last centuries, these being also the result of some conditions of the present. The economic component is the one that contributes in great part at the inter-regional variations of human development, but the educational component also has a negative considerable contribution.
- The intra-regional disparities are more accentuated in comparison with the interregional ones, the levels of variation of human development's indicators, especially for the economical and educational components, between the counties of the development regions, are bigger than the ones registered at national level between regions. At the explicative factors already mentioned at the interregional variation, there are added a series of specific factors that contribute at the accentuated heterogeneity of the regions from the point of view of the analysed complex concept of human development: the natural resources, the relief, the infrastructure, the traditions, etc.

Considering that the capabilities acquired by individuals – education, experience, competence and health – are the determinants of the economical progress, the problems of the population of our country do not have to be studied independently by the problems of society's ensemble, by its development and education policies, at national and regional level. The demographic spreading, the economical spreading and the rebirth of all the regions participate in equal measure at our society's future. If for the adhesion process at the European Union, the existence and dimension of these regional disparities could be one of the possible answers at the question: *why did our country need almost two decades for being admitted?*, for the facility of the effective process of European integration, the quantification and the correct analysis of these could constitute, in our opinion, one of the solutions.

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