Human capital, sustainable development and human development

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Abstract: The concept of sustainable development is founded on the idea that any development process must be focused on human purpose and must allow the expanding of the range of choices that any individual can make in order to satisfy ones many necessities. There fore, starting from the main factors which condition the development - population, resources and environment, agricultural production, industrial production and pollution - the strategic vision of sustainable development aims to find, in each country and worldwide, the most appropriate criteria for optimizing the ratio between the needs, the resources, the goals to achieve, the necessary means, based on their mutual compatibility.

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Placing the human being in the center of the priorities, sustainable development is not a purpose within itself but the means to humanize economic and social progress, to distribute as evenly as possible the effects on both all coexisting generations and on those who succeed in life. The concept of sustainable development is founded on the idea that any development process must be focused on human purpose and must allow the expanding of the range of choices that any individual can make in order to satisfy ones many necessities. [68]

Conceived as a reconciliation way between economy and environment, as support for human progress not only in a few places in the world and for a few years, but on the entire planet and for the long-term future, the sustainable development is based on compatibility and interaction of four systems: economic, human, environmental and technological, from which will result a new civilization, which provides needs of the present without compromising the ability of future generations to meet their own needs.

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68 M.Băbeanu, E.Marin, Considerations upon concept of human development, in ***Management and administration in open market economy,*** Craiova University, 1993, p.88-92.

resources, the goals to achieve, the necessary means, based on their mutual compatibility.

In essence, sustainable development is defined by the following major elements:

- Permanent and safe compatibility between the environment created by human and the natural environment;
- Equal chances for generations that coexist and that succeed in time;
- Interpretation of the present through the future, introducing as aim of the sustainable development the ecological security instead of maximizing the profit;
- Introducing compatibility of strategies of national development, as a result of increasingly powerful interdependencies, in geo-economic and environmental dimensions;
- Shifting the center of gravity regarding the general welfare from the quantity and intensity of the economic growth to the quality of it;
- Organic integration of the ecological capital with the man-made anthropogenic capital and the human capital within a global strategy that redefines its economic and social objectives and expands its horizon coverage in time and space;
- Switching to a new strategy of natural-human essence, where the economic and social development objectives are subordinated both to man and rural area healing, human development, human capital development, without endangering the ecological balance.

Sustainable development aims to change the type of economic growth, to ensure pollution control, to create an appropriate and efficient legal and institutional framework, to create a more flexible education system that is able to anticipate and to deepen their knowledge, to create a system of economic instruments in order to prevent, to protect and to ensure scarce resources, to enhance people's lives.

Sustainable development subsumes and correlate the economic development and human development.[69] As ***human development,*** sustainable development maintained that, firstly, ***the development is made for men*** and implies men participation in order to obtain economic results and to distribute the income equitably. Income means the individual access to the resources needed to ensure a fair standard of living; it guarantees personal satisfaction of decent needs, normal consumption of goods and services, as well as individual social mobility. A second essential feature of human development is the fact that economic and social development is done by people and, therefore, the ***human potential has to be created and strengthened***, based

69 UN issues annual reports on human development (Raport mondial sur le development humain). The first report (1990) has argued for focusing on individual development as a process of enlarging the possibilities offered to the individual. The second report (1991) stressed the role of governments in financing human development, by restructuring national budgets, in the way of redistribution the military budgets to the core areas of human affirmation (health, education, culture and so on). The third report (1992) noted the international dimension of human development focusing on restructuring the international markets and the need for massive investment in developing countries, to meet human needs. The 1993 report, based on the experience gained, made more nuanced concept of human development. Reports in the following years were devoted to human development globally by geographical area, groups of countries and countries.

on the investments in human capital, namely in education area, culture, vocational training, life-long learning and human health. Education level and health status reflects the ability of individuals to acquire knowledge, to communicate and participate in the social life of the community, to fulfill social roles.

Equitable distribution of income and investments in human capital creates material and socio-cultural framework for ***life expectancy of man,*** so that longevity or individual's ability to live a long and healthy life is another fundamental feature of human development.

Developing through the people and for the people outlines the fourth dimensions of human development: ***participation*** or chances which people have to participate in social life, to be its protagonists. The deepest and effective method of people participation is the access to employment and remuneration, which means that a key objective of human development strategies has to be the engender of new jobs, improving the condition of the existing jobs, reviewing the concept of labor and labor duration, extending the concept of capital which, in addition to physical capital, financial capital etc., should contain itself the human and natural capital.

Human development is based on three aggregate components of the concept: natural capital (ecological), anthropic capital and social capital.

Human development is simultaneously national and international. ***National and global (worldwide) vision on human development*** represents the fifth feature of the concept of human development; it proves that at both national and international level, new models of development have to be created which will be focused upon population's needs in order not to marginalize countries, groups or individuals and to create the framework required for investing in human potential.

The meaning of sustainable development and the information society is the improving of the people living standards, their material and social welfare; the economic and social development are humanizing. The main components of human development are: longevity, degree of education and living standards, materialized in income per capita. The first two reflect factors of "stock", mainly the accumulations reached in health and education, while the income is a "flow" variable characterizing the degree to which the individuals access the resources for a decent life. By detailing the three variables, we get to an impressive number of groups of indicators that characterize human development, which include: indicators of demographic profile, of fertility and natural increase of the population, of people participation in economic activity, of employment, of unemployment, of education and health, indicators of education and communication, indicators of human capital developing and so on, which demonstrates that cumulative growing of human capital is not possible without sustainable human development. The human capital, labor resources and thus the population form the prerequisite and the main motive of sustainable economic development and so the results of such growth model provide human development.

By analyzing trends in human development (HD) in Romania, we are interested to track, in the first place, the national performance starting with the indicators figures on HDI components and the size of the latter. Secondly, we consider comparisons with the average HDI of the highly advanced countries in terms of human development, and also, in certain cases, with the global maximum. We will hereby describe the work methodology used in 2011 in order to analyze afterwards the results of demarche.

Thus, the calculation of *life expectancy at birth index*, 0-1 space standardization was achieved by considering the global maximum value recorded in the period 1980-2011 (83.4 years, Japan, 2011), the minimum was set to 20 years (for a long while the works where done with a maximum target considered of 85 years and a minimum of 25 years, but the real minimum was 47.8 years - Sierra Leone). The adjustments of this type are part of a general intention to reduce the differences between countries. [70]+

For the *average years of school (AYS)* and *expected years of school (EYS)* the global maximum was 13.1 years (Czech Republic, 2005) for the first indicator and the second indicator maximum was limited to 18 years, considering the number of years of school from the first grade class to graduating from College (in 2010 the works where done with the real maximum, meaning 20.6 years, Australia, 2010). The minimum was decided for value of 0 for both indicators, considering that one can live without school. In reality, the global minimum for AYS was not too far from 0, respectively 1.2 years (Mozambique), nor for EYS (4.8 years, Eritrea), which can be a good sign for the future, although the value itself is still extremely low. Among countries with low HD, however, there are records of levels of EYS of 11 years (Liberia, Kenya, Timor).

As for the index for economic standard, the determination of its value requires a more complicated methodology. As was previously done for GDP, it begins by the operation of getting the values of GNP per capita from currencies to a common comparison basis. This is done, not by the exchange rate, but by calculating the so-called Purchasing Power Parity (PPP) based on the prices of products and services in a country relative to the U.S. (constant prices, 2005) and expressed in U.S. dollars (in 2010 the prices of 2008 were used). Obviously, in countries where prices match those in the U.S., the values GNI / capita PPP remains at the nominal level. In countries where prices are lower GNI / real PPP is higher than the nominal value and, as opposite, higher prices reduce the nominal GNI. Note that by updating the calculation of PPP in 2005 (the old computing time was 1990), Romania's situation was better reflected, the GDP per capita reported to PPP increased, because prices in our country have been and are lower than in the country of Reference (USA).

If previously they have also adopted adjustments of the incomes of those countries exceeding a certain threshold, either by means of a successive limitation algorithm depending on their size, or as capping, considering that, over a certain limit, the income does no longer influence the human development, they have subsequently stopped adjusting the incomes, so that since 2010 they have been working with the real values at PPP. These amounts are not included in the GNI index calculation formula; they have been using their logarithmic transformation as far back as 1990. Thus, the ratio between the incomes of the countries is extremely abruptly reduced (so the adjustments were not even necessary): the ratios type 1 to tens, hundreds and even one thousand are reduced to the value 1 to 2, or 1 to 2.5 at most. For year 2011, the GNI/inhabitant to maximum PPP at world level was 107 721 $ (Qatar), and the minimum was established at 100 $ (although the real minimum of the reference period was 163 $ – Zimbabwe, 2008 – and this value was used in HDR 2010). The next year however, they considered that it would be well-grounded to adopt the minimum of 100

70 Mărginean I., Romanian Performance within human development field, Quality of life magazine, p. 276-284

$ inhabitant to PPP, because unmeasured subsistence income is left anyway, and at world level, in the case of women, the respective minimum had this value. For the afore-mentioned maximum and minimum amounts of GNI, the values of the logarithms are 5.03; 2.21 and 2.0, so that the ratios of 1 to 660 and 1 to 1077 have been reduced to those of 1 to 2.2 and 1 to 2.5.

HDI components were the *Life expectancy at birth* (LEB), *Mean years of schooling* (MYS) (adult population of 25 years old and more), *Expected years of schooling* (EYS), *Gross national income* (GNI) per inhabitant at PPP. Among these four indicators, Romania's most favourable situation, for year 2011, refers to the *Average schooling years*, i.e. 10.4 years, a good value, which places our country on the 32nd position of 187 countries, together with other four states (Spain, Kazakhstan, Iceland and Andorra). As a size grade, the indicator value is the 18th at world level (the highest value is 12.6 years in Norway, followed by New Zealand – 12.5 years, and USA – 12.4 years). In no other human development classification has Romania had a better position than in the case of this indicator (centile 84). The difference as compared to the world maximum is however 2.4 years, which is a lot. Please note that in 2010, this indicator was 10.6 years for Romania but has subsequently been revised.

The indicator with a better value is *Expected years of schooling* (EYS). The size of this indicator is 14.9 years, the 19th value at world level (together with Slovakia), being preceded by 37 countries (centile 80). In 2010, the indicator value was slightly higher (14.8 years). So, Romania's classification was also good from this perspective. This time, the first position in the world hierarchy is held by several countries which have reached the imposed limit of 18 years (Australia, New Zealand, Ireland, Iceland). Surprisingly, Cuba is on the second position (17.5 years). Cuba also follows Romania regarding the HDI size in 2011, due to the expansion of education lately and also due to the higher life expectancy at birth; the GNP is however extremely low.

The indicator where Romania is on the third position of the analysed four is the *Life expectancy at birth* (LEB), with a much lower performance, i.e. the 48th country at world level (centile 75), and is preceded by 71 countries, while the indicator value is 74 years (73.2 years in 2010). Japan is on the first position, with 83.4 years, followed by Hong Kong (82.8 years) and Switzerland (82.3 years). In the first edition of HDR (1990), the life expectancy at birth in Romania (year 1987) was 71 years, while the world maximum is 78 years (Japan). As one can see, the gap between the two countries increases from 7 years to 9.4 years. The increase of lifetime in Romania, as achieved in the 24 years, is to a certain extent, related to the decrease of infantile mortality from 27 per mille to 10 per mille, a value which is however three times higher than in the well-developed countries (NIS, 2011).

Finally, the fourth place regarding the country's performance refers to the Gross National Product (GNP). With 11 046 $ /inhabitant, the GNP to the Purchasing Power Parity (PPP), Romania occupies position 70 (only to centile 63, this is also the rank of the respective value). In 2010, the GNP/inhabitant PPP was 12 844 $, and in 2009 it was 14 460 $, by 8% under the level of year 2008 (World Bank, 2011). In this context, we must mention the fact that the updating of the calculations for year 2008 has meant a significant increase of GDP/GNP, i.e. inside the country the prices remained low. It is expected that, when the number of the Romanian population is

published, approx. 20 million according to the Census of 2011 as compared to 21.4 in the official statistics, the resulting GNI per inhabitant shall be higher by at least 700 $.

The maximum size of GNP/inhabitant to PPP is an exception, of 107 721 $ (Qatar). The following positions are occupied, at a great distance, by Liechtenstein (83 717 $) and the United Arab Emirates (59 993 $). So, on top of the world hierarchy, we can find countries with large resources of oil and gas. As a curiosity, we note the increase by 27% of the GNP in the case of Qatar, in 2011, as compared to 2010, when it had 79 426 $, and occupied the second position after Liechtenstein (81 011 $).

In the reference period, the indicator of the economic standard expressed in GDP followed a sinuous evolution in Romania, with decreases in the first part, which has also affected the HDI size. Thus, the value of 3 000 $ inhabitant to the Purchasing Power Parity (at the level of 1985–'88) has decreased to 2 800 in 1990, and started to re-establish since 1993, and register increases during 2000–2009, and then it decreased again. Regarding this indicator, the differentiation as compared to the world maximum and also to the following values is irrelevant. However, we will show that in Germany the respective value is three times higher, in France, 2.7 times, in Italy, 2.5 times, in Slovenia, 2.1 times. In fact, the GNI in Romania is the lowest as compared to all the EU countries. It is also lower than those of Serbia and Ukraine.

As for the HDI size, Romania occupied, in the classification of the countries for year 2011, position 50 (centile 74) and the 42nd value globally, with 0.781 (84% of the maximum of 0.943, Norway), at a distance of 0.162. The position held by Romania regarding the HDI value is in the immediate vicinity of the countries considered to have a very high HD (the first quarter of the total countries, i.e. 47 of 187). The distance from the last country in this category is 0.012 (Barbados), while as compared to the average of the countries with a very high HD is 0.108. If we refer to the average value of HDI for the countries with a high HD (still 47 countries), to which Romania also belongs, the level of the country is 0.040 higher.

In the world classification of the group of countries with a high HD, Romania is immediately preceded by a small state in the Pacific, Palau (included in 2011, with 21 thousand inhabitants) and Uruguay, while three positions after Romania are held by Cuba, Seychelles and Bahamas.

Further to the analyses, most of them based on comparisons, we find that Romania's human development is close to the group at the top of the world hierarchy (the first quarter). It is not a performance matching up to the potential of the country's human development, and what is dragging it down is, first of all, the GNP value. The first transition years resulted in HD costs, not only because of the economic restructuring, but also further to wrong decisions, such as reducing the mandatory education to 8 years, although the 14-15 year old graduates could not enter the labour market. It must also be mentioned that also in Romania, as in many other countries, the increase of the middle school graduation population has occurred in at least two ways, namely: the increase of the schooling coverage, but also the exchange of generations (as the elderly people have a lower schooling level). In the educational field, the main issue consists in maintaining the current level of participation, and possibly its increase in the future together with the improvement of competence.

The relation between the state of health, labour resources of a country and its human capital is involved in each of the components of the human potential.

Firstly, if we direct the analysis from general to particular, the conclusion is that the state of health is one of the indispensable conditions of the functionality of the occupied population and manifestation of the potentially active population. No occupied person, no matter how instructed and irrespective of the living conditions he/she enjoys, cannot completely and effectively fulfill his/her working role, as well as the other social roles – in one field of activity or another, in one form of his/her life or another – if he/she is not healthy. Health becomes thus not only a component and a feature of the human capital, but also of an ampler entity of the people's natural and social existence called the quality of life. In the absence of the occupied persons' health, the social activities (economic, technical and scientific, cultural, etc.) would either not take place, or would defectively take place, with interruptions and qualitative and quantitative diminution of the results. As not all occupied persons are ill/healthy at the same time, the improvement of their state of health is the human support of stability and increase of the social activities.

Secondly, the state of health/illness amplifies/reduces, restricts/increases the degree of freedom of the unemployed persons and of those who turn the legal age for work, in their actions to occupy a workplace. The fluidization of the workforce offer, the professional, territorial and social mobility of the workforce carriers depend, to a significant extent, on the state of health/illness.

Thirdly, the natural movement of the population, with its specific phenomena, depends on the state of health and vigour of the population: birth rate, mortality, natural growth, average lifetime, etc., while the demographic phenomena greatly condition the total population and the weight of its two components: the active population and the economically inactive population. In their turn, the active population and inactive population components become variables on which the sizes of the labour resources depend.

Fourthly, the human capital-society relation must be regarded from the perspective of the middle human capital or social instruments of development. In this social context, the development is manifested as a means used for improving the quality of people's lives, which, among numerous parameters characterizing it, also include the human capital, where the state of health is included. The effective attracting and capitalization of the human resources available in the economic and social activities amplify the national wealth, diversification of goods and services required by the population, improve their quality, and increase the incomes of persons and families. Motivating people by means of the increasing incomes obtained from the performed activity, together with the distribution of goods and incomes based on the social equity are premises which contribute to the improvement of the quality of life: people spend more for their personal and social welfare, invest more in the human capital, in their living and dwelling conditions, in education and qualification, in culture and health. As soon as the human capital is enriched, a new social basis is formed for the economic growth and achievement of the progress in the field of the quality of people's lives.

The progressive impact of the human capital on the growth and development processes, specific to the IT society and new economy, cannot completely be understood outside the sustainable development, in its relatively recent sense of human development.

The humanization of the economic and social development, a long-term process in each country and globally, implies the fact that the population, i.e. the

human, is the main axle around which all the components of the social life gravitate. The development in each field and the general social progress must directly serve the individual, and satisfy their generally human prosperity and social peace needs and interests. The interest to cash in economic private profit, to obtain personal economic and social advantages beyond and to the detriment of others' prosperity, are moved to a secondary position, as compared to the social effectiveness, social benefit, ecologic gain, and general welfare. The development, as a whole and through its every component, shall not only be the resultant of spontaneity and hazard, of the blind struggle for imposing the selfish interests of each individual towards the others, of everybody's struggle against everybody, but a strategy projected and grounded on the prosperity of all people, it is true, in different proportions and in a long historic perspective.

Selfless and visionary, based on the realities in progress of the mankind's movement towards the IT society, but also on desires whose fulfilment cannot clearly be glimpsed, the human sustainable development intends to be:

1. a reconciliation, compatibilization and non-aggressive cooperation between the individual and his natural environment;
2. a reconciliation and compatibilization of the interests of any kind of all people and all social groups who live simultaneously, at a certain time, by providing the individual and general welfare;
3. the harmonization of the economic and social progress interests of all populations living at the same time on our planet, so that the world progress in any field would form into a universal asset by which all people would openly benefit;
4. a reconciliation and harmonization of the interests of the current generations with the development interests of all the generations that will live on Earth.

It goes without saying that, by becoming a reality which is self-reproducing, the human development generates a new quality of life, and contributes to an actual explosion of the social importance of the human capital, within which the education, science, culture and health appear as number-one components. On a larger scale, the factors related to the sustainable human growth and development are familiar with two trends which are only apparently opposite: the specialization and consequently autonomization of a large number of factors, on the one hand, and the association, i.e. progressive aggregation a certain factors, which have one or several mutual features, in the functional process of their use, in order to create wealth, on the other hand.

The scientific reflection of the interrelation between the diversification and aggregation of the development factors capitalizes a relatively simple idea of the economic science, expressed by Irving Fisher in the third decade of the 20th century, according to which any stock of resources which has the capacity to create flows of future incomes or future utilities is turned into a capital. And, as all the resources underlying the contemporary development are capable of bringing useful effects or future incomes, they have become capital, so that in the sustainable human development strategies, they use three sociological concepts of maximum aggregation: ***natural capital, anthropic capital and social capital,*** whose scientific content has not completely been defined yet.

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