

## THE HUMAN DEVELOPMENT INDEX - A MODERN MEASURE OF PEOPLE'S WELFARE

**Abstract:** The Human Development Index is the main indicator used in the last 30 years to measure the quality of life of the population. Its methodology has changed in recent years and is enriched with many additional indicators due to its importance.

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*"People are the true wealth of a nation. The most basic purpose of development is to create an environment conducive to long, healthy and fulfilling life. "*

*The UNDP Human Development Report.*

In recent decades, the concept of human development has been steadily expanding, focusing in several major areas - improving living conditions, developing human potential, overcoming poverty, ensuring a high standard of living for the majority of the population, ensuring a decent life and law. The basic ideas for human development are related to the erasure of the big differences between countries in the world and the harmonization of the standard of living. The discussion about the state and perspective of social development, born in the early 1960s and 1970s, created the idea of quality of life as one of the most significant social problems. The emergence of quality-of-life issues is an element of economic well-being theory. In 1963 the thesis that "quality of life is directly related to the goods produced" was developed. However, according to other statements, the well-being of a society cannot be related to material goods or bank proceeds, but must reflect the true state of the population and that which is not related to cash.

In 1990, the Human Development Index (HDI) was introduced as the main measure of human development, and to this day it is the main, most preferred and to some extent the most objective way to track the well-being of people in the world. Human Development Index is a tool for comparing the level of development of different countries.

In chronological terms, human development has been considered purely economic, with human being valued primarily through material production and monetary units. Gross national income for a long period was the most objective and representative indicator of measuring the well-being of an individual - first, it assessed the income of each individual individually, although it was a reflection of national income, second, it was able to differentiate people well - poor and rich, and developing and developing countries, and third, gross national income is a measure that has existed since the banking

system, that is, available and widely available statistical information. It is no accident that it has been repeatedly used in the scientific geographical literature for comparisons between countries.

In 1990 Development Program of the United Nations (UNDP) converted entirely theory of human development with the publication of its first annual report ( Human Development Report - HDR ) and the introduction of the Human Development Index (Human Development Index - HDI ) . The 1990 report has become the foundation of human development as a whole, as it contains a number of fundamental characteristics for its concept.

From the beginning, it focuses on which subsequently will build not only the basic statistical model for the welfare of people but the basic strategy for improving the quality of life of people worldwide. Asserting that "the main and most important goal of the idea of development is to increase people's choices " by placing the individual at the center, the 1990 report predetermines the course for further programs and ideas for human development aimed at advancing the well-being of human life. This definition of human development, though fundamental, is insufficient at the beginning of the new millennium. Human development presupposes both preserving the achievements of future generations and counteracting the processes of economic inequality and social injustice. Since 2000 UNDP has supplemented the definition of human development by including the opportunity for creative development, for active participation in ensuring justice and sustainable social development. The concept of human development is constantly expanding, focusing on the impact of freedom in the modern world, combating climate change, expanding human mobility, overcoming inequality. So is the essence of modern geographical science changing. Improving living conditions, developing human potential, overcoming poverty, securing a high standard of living for the majority of the population, guaranteeing a decent life and the right to work are among the main goals set by all national and global strategies. for human development. Ensuring all these factors guarantee a high standard of living. Human Development Index does not, by itself, provide any of them, but it is the primary measure of these and other aspects of human life. The social significance of any statistical survey of the standard of living and the development of human potential reflected in its ability to obtain a comprehensive assessment of its level and to predict its development among the population. Statistical analyzes and international comparisons based on the Human Development Index (HDI) and its individual components make it possible to determine the place of the country concerned according to the level of development. And this is one of the main vectors of any socio-economic geography.

Human Development Index was developed and published by Pakistani economist Mahbub-ul-Haq and is used by the United Nations as an indicator of social development, but it actually embodies the approach introduced by Amartya Sen in the 1980s and 1990s to understand human well-being. The Nobel laureate Sen emphasizes the importance of the abilities and goals that a person possesses (as a decent standard of living) instead of means (as per capita income)<sup>1</sup>. According to Sen, human development cannot be limited to the growth of gross national product (GNI), gross domestic product (GDP), increased incomes or increased levels of industrialization and technological progress. He argues that income, services, resources and wealth act as a means to an end, and should not be on their own. Sen (2000) affirms that "the usefulness of wealth lies in the things it allows us to do"<sup>2</sup> and cites individual freedom as the primary goal of achievement. In the context of human development, "freedom", according to Seine, can be cited as an opportunity for an equal, devoid of injustice and poverty. The key competencies he emphasizes are being implemented in the HDI by incorporating benchmarks for three important aspects of development: *health, education and access to and goods* . With the introduction of the HDI, an attempt has been made, and quite successfully, to replace the traditional measure of GDP,

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<sup>1</sup> Sen, A. (1993). Capability and well-being. In Martha Nussbaum & Amartya Sen (Eds.), *Quality of Life* (pp. 30-53).

<sup>2</sup> Sen, A. (2000). *Development as freedom*. New Delhi: Oxford University Press.

in terms of human well-being. Defining health and longevity, the opportunity for education and a dignified lifestyle, has succeeded in broadening the worldview in terms of human development. This concept has for many years influenced the assessment of social progress by government officials, economists, sociologists and others, but not to the extent of research in socio-economic geography.

The Human Development Index has been at the heart of UNDP's annual report for the last 28 years, and while not the only measure, it is identified as the most important. In the human development index, individual components such as life expectancy, literacy, access to education and income are combined into a single index that can be used to compare human well-being across countries and to monitor the progress of individual country in time.

HDI measures achievement in three aspects of human well-being: **health, education and standard of living**. On a global scale, it is measured in several directions: a long and healthy life (using health data), access to knowledge (using education data), and a standard of living (using per capita income). Since its adoption, its methodology and method of calculation has changed several times.

Although almost all countries in the world are growing in their development relative to the HDI, global differences have not yet been neutralized. Moreover, even in countries with medium or high population development, gender, race, territorial and ethnic inequalities are still observed. The introduction of the Human Development Index as a benchmark and the annual publication of UNDP reports emphasize public and, above all, political attention to the imbalance between countries' development. This provokes the creation of programs and strategies for future development and improvement of the situation in the world. One of them is the The 2030 Agenda for Sustainable Development, adopted in 2015, which has several vital goals - equality, peace and prosperity for the population and the world at large. The program consists of 17 major goals and 169 smaller ones. They all embody and balance the three dimensions of sustainable development - economy, social and natural environment. The preamble to the program states that all the goals that have been set are of great importance to humanity. The HDI structure is a general summary index. To consolidate it, a single statistic is created to serve as a reference framework for both social and economic development. The HDI determines the minimum and maximum values for each dimension and then shows the location of each side relative to these values, expressed as a number between 0 and 1. This process is known as *the linear scaling method*, which is expressed in the transformation of indicators expressed in different units, to quantities that take values between 0 and 1. The main purpose of this calculation is to present dynamically measurable indicators. The higher the HDI result, the higher the level of human development is. Indicators and functional form of HDI evolve over time, with the most significant change occurring in 2010 and 2014. HDI is the oldest and most important present in the first Report on Quality of Life (1990 g.) Measure. Its fundamentality is rooted in transparency and in its simplicity of measurement. Human Development Index does not cover many aspects and the life of the individual as an economic, social and political freedom, protection against violence, insecurity and discrimination. That is why additional indicators have been introduced, which, in addition to quantitative ones, add the possibility of qualitative measurement of people's well-being.

Initially, HDI has three dimensions: a long and healthy life, knowledge and a decent standard of living. The indicators used to inform each dimension have changed over time. Four indicators are currently used to determine the three dimensions: life expectancy at birth (long and healthy life); years of education for the population of 25 and over (mean years of schooling of population of ages 25 and over), the expected years of education (expected years of schooling for children), the two indicators that form the component of education, and the gross national income (GNI) per capita calculated on purchasing power parity (PPP).

• **Average life expectancy (long and healthy life)**

Public health is perceived as a multidimensional dimension made up of numerous single components. It is a productive variable of many factors and at the same time it is a factor affecting the whole social sphere. Its multilayered character makes it difficult to study and model<sup>3</sup>. (Simeonov, 2014)

Long and healthy lifestyles use life expectancy at birth as an indicator, such as “the number of years a newborn is expected to live if the prevailing age-specific mortality rates remained the same throughout life at birth. the child. ” The life expectancy index is calculated using a minimum value of 20 years and a maximum value of 85 years. These maximum and minimum values are fixed and adopted in the 2014 development measurement report. Earlier this year, the data used to summarize the previous four indicators were the observed values from individual countries in the 1980-2012 time interval. This time tracking (1980-2012) is used to determine the maximum values for all HDI indicators as well as the minimum value for the standard of living standard. The minimum life expectancy (20 years) is based on long-term historical evidence from Madison (2010) and Riley (2005), which show that if a society or subgroup has a life span below the typical reproductive age, then society will not be able to reproduce. Lower values may occur in some military crises or epidemics, but note that these are exceptional cases, with unstable duration over time. Therefore, the minimum level of 20 years is the life span required for the purpose of society, and the maximum value is fixed at 85 years. On the one hand, this is directly correlated with the steady increase in the global average life expectancy, and on the other hand, this value directly correlates with the 2010-2030 targets related to the overall improvement of the quality of life of the population. . From the above, the following formula is used to calculate the average life expectancy index.

$$Le = \frac{Le_1 - 20}{85 - 20}$$

• **Educational index**

Modern education has become a socially oriented, highly differentiated, highly developed and multi-level system, constantly improving knowledge, skills and competences. High level and continuous modernization is a guarantee for stability, integrity and improvement of public relations (Simeonov, 2012)<sup>4</sup> .

The educational component of HDI is measured by two indicators: the average number of years of education for adults aged 25 and over and the expected years of education for children of the age group. In the 2010 report. the two indicators are formulated as follows: "Average number of years of education received by people over their lifetime, based on the levels of education of the population converted into years of education, based on the theoretical duration at each level of education". Estimates of average years of education are based on the length of training at each level of education: "Number of years of education that a school-age child can expect to receive if the prevalent enrollment rates remain the same throughout life the child. " The estimated annual evaluations of education is based on two factors: enrollment by age at all levels of education and number of children in school age population for each level of education. It is important to note that the duration of each level of education may vary from country to country and this is taken into account when calculating the average and expected years of education. In calculating the educational component, the two indicators are first averaged using a minimum value of 0 and a maximum value of 15 for the average years of study and 18 for the expected years of study. Since society can presumably exist without formal education, the minimum value of 0 years is used for both educational variables. The average (expected) index of

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<sup>3</sup> Simeonov, D. (2014) Geografiya na obshtestvenoto zdrave v Bulgaria. Sotsialni aspekti

<sup>4</sup> Simeonov, D. (2012) Sotsialno-geografski izmereniya na suvremennoto vishe obrazovanie v Bulgaria

school years is limited to 1 if the observed value of average (expected) years of education is greater than the fixed value of 15 (18). The two indicators are then combined to produce an educational index that is the arithmetic mean of the two (equally represented and equally weighted) sub-indices of education.

- MYSI (Mean years of schooling index) - an index of the average number of years of education for the population aged 25 and over, which is equal to:

$$IMYS = \frac{MYS - 0}{15 - 0} = \frac{MYS}{15}$$

- EYSI (Expected years of schooling index) is an index of expected years of study that is equal to:

$$IEYS = \frac{EYS - 0}{18 - 0} = \frac{EYS}{18}$$

Until 2010, indicators are aggregated into a combined indicator by means of arithmetic averaging (weighted), and over the next few years by geometric averaging and comparison with the maximum value of the combined index. In the 2014 and 2015 annual reports, geometric averaging was replaced by arithmetic:

$$EI = \frac{IMYS + IEYS}{2}$$

- **Income index (decent standard of living)**

The standard of living is calculated using income-based measurement tools. Of course, income is not a measure that directly reflects a person's abilities or human development in general, but it is an important tool that, to a certain extent, shows the standard of living. The “income” component is measured using the natural (natural) GNI log per capita adjusted for PPP. For this component, the minimum value is \$ 100, and this low value is justified by the significant amount of unmeasured livelihoods and non-market economy production close to the minimum, which is not reflected in the official data. The maximum value is set at \$75,000, such as Kahneman and Deaton (2010)<sup>5</sup> show that there is almost no profit for human development and welfare from annual income over \$75,000. Assuming an annual growth rate of 5%, only three countries are expected to exceed the \$75,000 ceiling over the next five years, after which the income index will be limited to 1. The HDI adopts the natural logarithm of income to it reflected the declining importance of income among the richer countries (an extra dollar of income costs a lot more to the poor than to the rich - meaning that the opportunity to transform additional income into equivalent prices diminishes as income rises). Thus, the index is calculated by averaging the natural logarithm of GNI with respect to the natural logarithm of the minimum and maximum values.

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<sup>5</sup> Kahneman, D., Deaton, A., High income improves evaluation of life but not emotional well-being

$$I = \frac{\ln(GNIpc) - \ln(100)}{\ln(75000) - \ln(100)}$$

After calculating the indices of the three dimensions, the results are summarized in a combined index using the geometric mean, which is the cubic root of the product of the three indices. The HDI places equal weight on the three indicators as introduced in the first UN report of 1990. The two educational sub-indices are also calculated equally. The choice of equal meters is based on the assumption that all three dimensions are equally important. This is only a trend after 2010, with a disproportion in the education index before - literacy is estimated at 1/3 and attendance at an educational institution at 2/3. The new 'average years of study' indicator better describes the educational attainment of people over the age of 25, thus better dividing countries by this indicator.

The human development index of a country can mask large differences in levels of human development between different people and social groups. The disaggregation of HDIs allows for sometimes significant differences - between regions, between genders, between urban and rural areas and between ethnic groups - to be overcome. To create a similar index, the data for each dimension is used for each group, treating it as a separate country. Such groups may be defined according to income, geographical or administrative regions, urban or rural location, gender and ethnicity.

The analysis of all manifestations allows to formulate a definition of quality of life for the population in a certain territory: a socio-geographical category, formed as a set of vital values, needs and activities necessary for a person (satisfaction of people from life, society and environment), which provide an opportunity for individual development of the individual, taking into account the influence of the processes related to the balanced socio-economic development in the defined territory (Simeonov, 2010)<sup>6</sup>. The Human Development Index gives clear idea of what the division of the world development of the countries is. It must be made clear that, although it is the leading measure, it is not the only one. Debates and discussions on quality of life and human development provoke the search for other ways of measuring more objectively. Considering the huge difference between the leading and least-favored countries according to the HDI, national policies, governments and organizations are facing several serious challenges - how poverty will be reduced in the world; how more and more people will have access to quality education and healthcare; how gender inequality will be neutralized. According to United Nations Development Programme next 15 years will be crucial for solving or deepening problems in the world.

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<sup>6</sup> Simeonov, D. (2010) Sotsiogeografska otsenka na kachestvoto na zhivot vav Velikotarnovska oblast

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