

Innovative economy: new opportunities for useful human capital

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Abstract. This scientific article examines human capital and its importance for sustainable economic development. The purpose of covering the topic was to use the Human Capital Index data. In the scientific community, a holistic vision of the forms and types of human capital has not yet been formed. There is an abundance of different approaches, methods and tools for influencing the object under study.

Keywords: human capital, development, sustainable development, school education, health, The Human Capital Index

Introduction

Improving skills, improving health, expanding knowledge, and increasing resilience – that is, improving the quality of human capital – can increase human productivity, make them more flexible and ready to innovate. Investing in human capital is becoming increasingly important as the nature of work is changing under the influence of rapid technological change.

Human capital is one of the most important drivers of sustainable economic growth and poverty reduction, but even so, it is sometimes difficult for policy makers to make a compelling case for investing in it. Ultimately, the benefits of investing in people may take a long time to materialize, while building roads and bridges can bring quick economic - as well as political - benefits. And investments in the human capital of children will only give economic returns when these children grow up and start their labor activity [1].

The New Uzbekistan Development Strategy for 2022-2026 also aims to increase GDP per capita by 1.6 times over the next five years and per capita income by \$ 4,000 by 2030 by ensuring stable high growth rates in all sectors of the economy. One of the main goals is to create a basis for joining the ranks of "above-average countries" [2]. However, in order to achieve this goal, it is necessary to

increase the life expectancy of the population, increase the duration of school education, and ensure the healthy growth of children.

There is an opportunity to develop an innovative economy through the training of healthy and educated personnel.

Literature review

The term “human capital” itself first appeared in the works of the economist Theodor Schulz (1902-1998), who received the Nobel Prize in 1979, proposing the definition: “All human abilities are either innate or acquired. Each person is born with an individual complex of genes that determines his innate abilities. Valuable qualities acquired by a person, which can be enhanced by appropriate investments, we call human capital” [3]. In his writings, he was interested in the difficult situation in underdeveloped countries and put forward the version that improving the welfare of poor people depended more on knowledge.

MM. Kritsky characterizes human capital as a special form of human life, assimilating two specific forms (consumer and production) [4].

The next scientist G. Becker, after T. Schulz, translated the concept of “human capital” at the micro level, in which he determined that human capital in an enterprise is a set of human skills [5].

The concept of human capital can be considered both in a narrow and in a broad sense.

In a narrow sense, one of the forms of human capital is education. It was called human because this form becomes part of a person, and it is capital because it is a source for future earnings and satisfactions, or all together.

In a broad sense, human capital is formed with the help of investments (long-term capital investments) in one specific person in the form of costs for education and training of a worker for an enterprise, for health care, migration, and also for searching for information about prices and incomes.

As part of total capital, human capital can be represented as a combination of its elements, that is, it has its own internal structure. Many scientists and economists

form the structure of human capital according to the cost principle, based on the variety of types of investments in human capital.

So, I.V. Ilyinsky singled out the following components - this is the capital of health, culture and education.

F. Neumann, in turn, attributed the combination of the following elements to the main components of human capital: cultural and ethnic characteristics, qualifications, general and vocational education [6].

E.V. Vankevich singled out such components as education and training, health status, driving needs, motivation, and values [7].

Research methodology

In addition to the theoretical and methodological research method, this scientific article uses the method of analysis and synthesis in the study of the main indicators, ratings of The Human Capital Index and the position of Uzbekistan in this ranking.

Analysis and results

Researchers classify investment in the human capital of a creative worker into three key forms:

1. Expenditure on education (a set of costs for obtaining general and specialized education, for internships, advanced training, etc.).

2. Health care costs (the total cost of maintaining a healthy lifestyle, maintaining health and longevity, recreation, organizing a comfortable life, high quality of life, etc.).

3. Mobility costs (a set of migration costs associated with the territorial movement of a labor resource to a new place of employment).

In the modern economic world, the indices of a nation's longevity, the degree of its education, and the level of income of life are considered basic. These three elements are included in the structure of the combined indicator of the Human Development Index, which makes it possible to annually measure and compare the level and quality of life of the population in different countries of the world.

The Human Capital Index is a composite indicator that characterizes the level of development of human capital in countries and regions of the world, which is issued by the World Bank Group and used as part of the Human Capital Project.

The main strategic tool of the project is the Human Capital Index, which allows you to get an idea of the level of human capital development in each country based on a single general indicator. The index measures the level of next generation human capital development, which is defined as the amount of human capital that a child born in a country can expect to accumulate by adulthood, adjusted for the risk associated with inadequate health care and educational levels in that country. The index includes three components:

Survival. This component reflects the fact that a child born today needs to live to see the beginning of the accumulation of human capital in the formal education system. The survival rate is measured by mortality data for children under 5 years of age.

Expected years of schooling adjusted for learning outcomes. Information about the amount of education a child can expect to receive by age 18 is used in conjunction with data on quality, that is, what a child can learn in school, as measured by a country's performance in international student achievement tests. These data combined allow us to calculate the expected years of schooling adjusted for quality. By adjusting for learning quality, this component reflects the fact that children in some countries receive much less knowledge than children in other countries, although they are in school for about the same amount of time.

Health status. To assess the overall health situation of the country's inhabitants, this component uses two indicators: 1) the prevalence of stunting among children under 5 years of age; 2) adult survival rate, defined as the proportion of 15-year-olds who survive to their 60th birthday. The first indicator reflects the state of health of a child of primary preschool age; the second indicator is used as a measure of the state of health that a child born today may have as an adult.

Table 1. Ranking of countries on The Human Capital Index[8]

REYTING	COUNTRY	INDEX
1	Singapore	0.88
2	Hong Kong	0.81
3	Japan	0.80
4	South Korea	0.80
5	Canada	0.80
6	Finland	0.80
7	Macau	0.80
8	Sweden	0.80
9	Ireland	0.79
10	Netherlands	0.79
55	Kazakhstan	0.63
57	Uzbekistan	0.62
72	Kyrgyzstan	0.60
111	Tajikistan	0.50

The analysis of Table 1 shows that the Human Capital Index of 174 countries ranked Singapore first with a score of 0.88 in 2020, while Uzbekistan ranked second among Central Asian countries after Kazakhstan and ranked 57th. In this ranking, the results of Uzbekistan are not evaluated until 2020.

Human capital index. Today, the labor productivity of a child born in Uzbekistan at the age of majority is 62%, provided that they have fully mastered the established educational programs and are completely healthy. This figure is lower

than the average in Europe and Central Asia, but much higher than the average in countries with lower incomes [9].

Survival rate up to 5 years. 98 out of 100 children born in Uzbekistan will live to 5 years.

Expected duration of training. According to the forecast, for a child studying in Uzbekistan from the age of 4 to preschool, by the age of 18, the period of education will be 12 years.

Generalized test results. The educational results of students in Uzbekistan amounted to 474 points, where the highest educational results are 625 points, and the lowest educational results are 300 points.

Duration of education depending on the quality of education. Considering the amount of knowledge actually acquired by the students, the expected duration of education at the school is only 9.1 years.

Living capacity of the adult population. In Uzbekistan, 87% of these 15-year-olds live to 60 years. This statistical unit is an indirect indicator that takes into account a number of health risks that may arise in the current context of a child born today as an adult.

Healthy growth (proportion of children developing without defects). 89 out of 100 children do not lag behind in development. Eleven out of 100 children are at risk for developmental delays and lifelong cognitive and physical limitations.

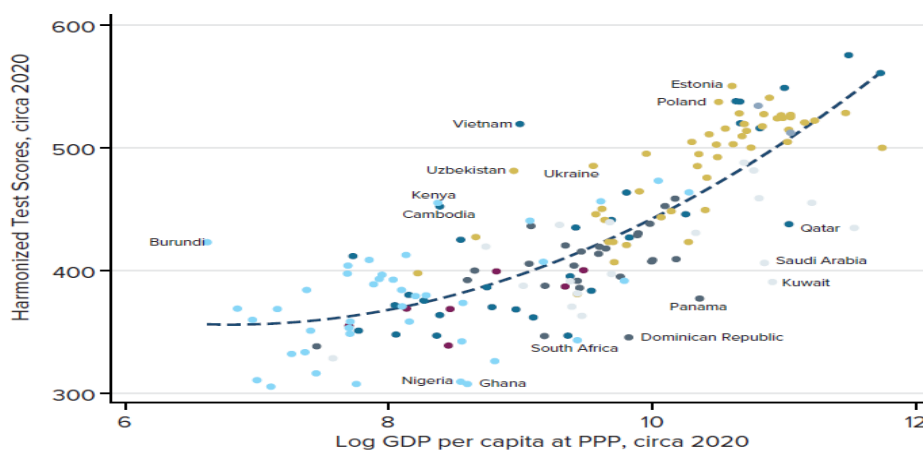


Figure 1. Uzbekistan's Indicators Among Low-Income Countries [10]

In order to provide reliable information on the quality of education in the country, in November 2019 the Education Inspectorate in collaboration with the World Bank studied the knowledge of schoolchildren in mathematics on the basis of TIMSS international research questions. The results recorded by schoolchildren in these tests also served as important information in determining the human capital in our country (Figure 1).

The World Bank report on the quality of education in Europe and Central Asia states:

“While the region's results in basic education vary, in general, the region's performance by world standards is not bad. In the last 10 years, school attendance has increased. Significantly, the most significant increase was observed in Azerbaijan, Albania, Montenegro, Poland and Russia - mainly due to an increase in the number of children admitted to secondary and preschool education. At the same time, in a number of countries (Bulgaria, Moldova, Romania, Ukraine) the expected attendance at school has decreased.

The quality of education in countries has not improved on average over the last decade. Bulgaria and Ukraine are among the countries where the quality of education has deteriorated. Albania, Moldova and Montenegro were among the countries that improved the quality of education.

The Human Capital Index report calls on all countries in the world to improve their data measurements. This lays the groundwork for providing assistance to those responsible for policy-making to those who need it most.

The World Bank's Human Capital Index assesses a child's development trajectory (from birth to adulthood) on a number of important indicators:

probability of survival (from birth to 5 years);

duration of study focused on the expected quality of education in primary and secondary school;

percentage of children with developmental delays;

survival of the older generation [11].

Conclusion and recommendations

In conclusion, we note the following. In the scientific community, a holistic vision of the forms and types of human capital has not yet been formed. There is an abundance of different approaches, methods and tools for influencing the object under study. The situation is such that each scientist in the course of research, using the principle of methodological pluralism, seeks to give his own “unique recipe” for understanding the phenomenon under study. We believe that an unreasonable expansion of the terminology and boundaries of the methodology for studying human capital can provoke a number of additional problems (for example, in terms of introducing terminological ambiguity, excessive complexity, and disputability of the system), violating the harmony of the structure and the integrity of understanding the human capital of a creative worker.

The investment method seems to contain the fundamental idea that there is a relationship between the types of human capital and the costs spent on their reproduction and development.

The essence of the subject of creative labor is revealed in the unity of its exceptional qualification features, therefore, in the modern process of management, they are appropriately involved. The voiced idea finds a completely understandable explanation, since if funds are not properly received for the reproduction of one of the types of human capital, then there is a simultaneous loss of not only the qualitative characteristics of this element, but also the qualitative component of the entire system as a whole.

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