



## HUMAN CAPITAL DEVELOPMENT AND ECONOMIC GROWTH IN UZBEKISTAN

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**Abstract.** Economic growth and human capital are highly correlated. The expansion of an economy's knowledge base, health, and welfare can be facilitated by human capital, which also has an impact on economic growth. The ability to alter a life is known as human capital. Ensuring socio-economic advancement is a global problem for human capital development, particularly in the areas of health, education, and living standards. This essay examines the connection between Uzbekistan's economic expansion and the development of its human capital. In the dynamic landscape of Uzbekistan's economic transformation, human capital development emerges as a pivotal determinant of sustained economic growth.

**Keywords:** Human, Capital, Economy, Growth, Investments, Education, Healthcare, Uzbekistan.

## O'ZBEKISTONDA INSON KAPITALINING RIVOJLANISHI VA IQTISODIY O'SISH

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**Annotatsiya.** Iqtisodiy o'sish va inson kapitali o'zaro bog'liqdir. Iqtisodiyotning bilim bazasini, sog'liqni saqlash va farovonlikni kengaytirishga inson kapitali yordam berishi mumkin, bu ham iqtisodiy o'sishga ta'sir qiladi. Hayotni o'zgartirish qobiliyati inson kapitali sifatida tanilgan. Ijtimoiy-iqtisodiy taraqqiyotni ta'minlash inson kapitalini rivojlantirishning global muammosi, xususan, sog'liqni saqlash, ta'lim va turmush darajasi. Ushbu insho O'zbekistonning iqtisodiy kengayishi va inson kapitalining rivojlanishi o'rtasidagi bog'liqlikni ko'rib chiqadi. O'zbekistondagi iqtisodiy o'zgarishlarning dinamik manzarasida inson kapitalining rivojlanishi barqaror iqtisodiy o'sishning hal qiluvchi omili sifatida namoyon bo'lmoqda.

**Kalit so'zlar:** Shaxs, Kapital, Iqtisodiyot, O'sish, Investitsiyalar, Ta'lim, Sog'liqni saqlash, O'zbekiston.

**РАЗВИТИЕ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА И ЭКОНОМИЧЕСКИЙ РОСТ В УЗБЕКИСТАНЕ**

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**Аннотация.** Экономический рост и человеческий капитал взаимосвязаны. Человеческий капитал может помочь расширить базу знаний экономики, здоровье и благополучие, что, в свою очередь, влияет на экономический рост. Способность менять жизнь известна как человеческий капитал. Обеспечение социально-экономического развития является глобальной проблемой развития человеческого капитала, в частности здравоохранения, образования и уровня жизни. В этом эссе рассматривается взаимосвязь между экономическим ростом Узбекистана и развитием человеческого капитала. В динамичном ландшафте экономических изменений в Узбекистане развитие человеческого капитала выступает решающим фактором устойчивого экономического роста.

**Ключевые слова:** Человек, Капитал, Экономика, Рост, Инвестиции, Образование, Здравоохранение, Узбекистан.

**Introduction.**

It is well known that in the conditions of the market economy, the income of economic entities is not guaranteed and is not distributed among different layers of the population. Because one of the positive aspects of the market economy is the growth of property income and business income (even if they correspond to a small part of the population). Differences in per capita incomes are income inequality.<sup>40</sup>The last few decades have seen a tremendous transformation of the Republic of Uzbekistan, which is located in the center of Central Asia. President Shavkat Mirziyoyev's innovative leadership is guiding the country as it emerges from a past steeped in antiquated customs and forges ahead towards modernity and international significance. It's becoming more and more clear that Uzbekistan's most important asset—its human capital—needs to be developed if it is to realize its potential as a regional economic powerhouse. Any society's greatest asset and most precious resource is its human capital, which also serves as the primary criterion for socioeconomic advancement. One of the major issues facing global science is the study of humanity, the development of human capital, the combination of creative traits and skills, and the investment in human capital. Thus, the 21st century continues to be pertinent for studying human capital and its advancement. For the past fifty years, human capital has been crucial to socioeconomic progress. Its rapid expansion is actually outpacing it and gradually pushing it out of the GNP structure. As a result, it currently makes up around 80% of the national wealth of developed nations. That made up 48% in 2020, followed by natural resources at 20% and fixed capital at 32%. The World Bank estimates that the worth of all human capital on the planet at the end of the 20th century was 550 trillion USD, more than eight times the global GDP<sup>41</sup>.

In 1978, the analysis of the UN in the field of international statistics was developed, in which 12 main indicators for assessing the standard of living of the population are presented. One of them is the income of the population. At the same time, indicators such as per capita gross

<sup>40</sup> Note: We are indebted to Sh.Sh.Shodmonov for helpful discussions and helpful comments

<sup>41</sup> Ph.D in Economics, Associate Professor

domestic product, gross national product, human development index, as well as coefficients of stratification by specific population groups (quintile, decile groups) are also used in practice.

For instance, in 2020-2021, the following main strategic directions of poverty reduction tools were put into practice in the republic of Uzbekistan:

First of all, the institutional foundations of poverty reduction were created in Uzbekistan, a ministry coordinating issues of poverty reduction and a scientific center conducting scientific research in this direction were established.

Secondly, in order to provide material and non-material support to the needy population during the pandemic, the "Iron Book" system was established.

Thirdly, together with experts from the World Bank and the United Nations Development Program, the project "Strategy to reduce poverty in the Republic of Uzbekistan until 2021-2030" was developed.

Human Capital Index as a child born in Uzbekistan will be 62% as productive when she grows up as she could be if she enjoyed complete education and full health. This is lower than the average for the Europe & Central Asia (69%) but higher than for Lower Middle Income countries (48%).

The future socio-economic development perspective of Uzbekistan is related to the qualitative development of human creative abilities, which becomes the main factor of economic development. The human capital of a nation is one of the main components of the national wealth of society. Therefore, there is an urgent need to study the problems of human capital development, to expand the possibilities of its further development, and to develop scientifically based recommendations for the formation and fuller implementation of human capital, which determined the importance of this study.

### Literature review.

The term was coined in 1961 by Theodore Schultz, and Garry Becker developed the idea from 1965, justifying the effectiveness of human capital investment and formulating an economic approach to human behavior. Schultz made a huge contribution to the formation of the theory of human capital in the early stages of its development, its recognition in the scientific community and its popularization. He was one of the first to introduce the concept of human capital as a production factor. Furthermore, he made significant contributions to the understanding of human capital's function as the primary generator and cornerstone of industrial and post-industrial economies. According to Schultz, the maintenance of one's health, one's capacity for productive work, and one's ability to effectively contribute to society as a creative force are the primary outcomes of investing in an individual. He thought that human capital possesses the qualities that make it productive. Human capital has the capacity to grow and procreate. The contributions of institutional theory, neoclassical theory, Neo-Keynesianism, and other private economic theories form the foundation of the theory of human capital. It emerged as the economic and associated sciences' answer to the need for the real economy and real life. A challenge existed in having a comprehensive grasp of an individual's function and the cumulative effects of his or her intellectual pursuits on the rate and calibre of social and economic progress.

Firstly, Adam Smith in "The Wealth of Nations" (A. Smith, 1776) set the stage for the study of human capital. Although he does not use the phrase human capital, he identifies the acquired and useful abilities of individuals as a fundamental source of wealth and economic progress of a country. Writing more than a century later, Alfred Marshall notes in his "Principles of Economics" (Marshall, 1920) the long-term nature of investments in human capital and the family's role in undertaking them. However, Marshall is also credited with delaying the study of human capital due to his reluctance to put it on the same footing as physical capital.

The modern study of human capital coincides with two developments in economics. The first was a resurgent interest in understanding why economies grow. It was apparent to

researchers that national output was growing at a much faster rate than the rates of growth of inputs – land, labor, and physical capital (Denison, 1962).

The second development dovetailed with the first – the availability of large datasets that allowed exploration of worker productivity and earnings and how they related to characteristics such as the years of education and age.

Three authors deserve particular note amid the flurry of theoretical and empirical work in the late 1950s and early 1960s. Jacob Mincer (1958) stimulated a vast literature measuring the returns to education. Using census data, he documented the now-classic result that the years of education has an inverted U-shape on the rate of earnings growth. Theodore Shultz focused on the role of education and general investments in human capital in explaining the increased productivity of labor. His monograph “The Economic Value of Education” focused attention on education as a subject worthy of concentrated study by economists, thus beginning the field of the economics of education. Gary Becker (1964) organized the emerging threads of empirical and theoretical work into a coherent framework that provided a guidebook for future research<sup>42</sup>(E.R.Eide, M.H.Showalter, “Human Capital”. International Encyclopedia of Education (Third Edition), 2010).

The main objectives are to influence the economic growth and raise the living standard of the people of Central Asia through Human Capital and improve the Human Capital to achieve high level and maintain the regional economic development in Central Asia. Dervis Boztosum et al. describe that investment in human capital is more important than physical capital to achieve the desirable level of economic development<sup>43</sup> (Derviş Boztosun, Semra Aksoylu, and Zübeyde Şentürk Ulucak, "The Role of Human Capital in Economic Growth," Economics 4, no. 3 (2016)). Muhammad Azam et al. also highlight that the human capital play vital role in the process of economic development.<sup>44</sup> (Muhammad Azam and Ather Maqsood Ahmed, "Role of human capital and foreign direct investment in promoting economic growth: evidence from Commonwealth of Independent States," International Journal of Social Economics 42, no. 2 (2015)). Emilio Sacerdoti et al. conducted a study in Western Africa to investigate the impact of human capital on economic growth and depicted that the human capital was not more effective like physical capital on economic growth. The study depicted that the reason behind the less effective of human capital was that the individuals was not qualified and trained and they are unable to use innovative technology in human capital.<sup>45</sup> (Emilio. Sacerdoti, Sonia. Brunschwig, and Jon. Tang, "The impact of human capital on growth: Evidence from West Africa.," International Monetary Found, African Department (IMF Working Paper) 98, no. 162 (1998)).

Additionally, the study discovered an inverse relationship between initial human capital and economic growth and a positive relationship between economic expansion and imbalances in the market. According to the study, if a poor country has a high level of human capital per person relative to its per capita GDP, it can converge towards a richer country. Gemmell (1996) evaluated the role of human capital on the economic growth in a cross-country sample of developed and underdeveloped countries. The study adopted the Mankiw et al. (1992) framework by using the same Summers and Heston (1991) data set and OLS technique as used in Mankiw et al. (1992). However, the study adopted a different measure of human capital. In the study, the human capital was divided into primary, secondary and tertiary human capital proxied through the enrolment rates at these levels. The study found a positive and significant role of human capital on economic growth.

<sup>42</sup> E.R.Eide, M.H.Showalter, “Human Capital”. International Encyclopedia of Education (Third Edition), 2010

<sup>43</sup> Derviş Boztosun, Semra Aksoylu, and Zübeyde Şentürk Ulucak, "The Role of Human Capital in Economic Growth," Economics 4, no. 3 (2016)

<sup>44</sup> Muhammad Azam and Ather Maqsood Ahmed, "Role of human capital and foreign direct investment in promoting economic growth: evidence from Commonwealth of Independent States," International Journal of Social Economics 42, no. 2 (2015).

<sup>45</sup> Emilio. Sacerdoti, Sonia. Brunschwig, and Jon. Tang, "The impact of human capital on growth: Evidence from West Africa.," International Monetary Found, African Department (IMF Working Paper) 98, no. 162 (1998).

The statistical data on the developed countries' economies growing faster than calculations made with the classical growth factors in mind provided the impetus for the development of the theory of human capital. Human capital has been identified as the primary productive and social factor in the development of a modern economy and society through an analysis of the actual processes of development and growth under current conditions. The ideas of the human factor and human resource are naturally expanded upon to form the concept of human capital, which is a more comprehensive economic category. The knowledge and work capacity of an individual constituted the initial boundaries of the economic category known as "human capital," which developed gradually. Furthermore, from the perspective of economic theory, human capital was long viewed as merely a social factor of development, that is, a cost factor. It was once thought that spending money on education and upbringing was wasteful and expensive. Over the course of the second half of the 20th century, attitudes toward education and human capital steadily shifted. The ability to earn money is measured by a person's human capital. Inherent skills and aptitude are included in human capital, along with education and obtained credentials.

The level of human capital development is becoming increasingly important for determining the level and rate of economic development in every country in the world. As a result, many nations now prioritize enhancing the quantity and caliber of human capital in their economic policies. The contemporary notion of human capital is based on unique historical preconditions as well as unique, unique, and universal patterns of occurrence. Considering the aforementioned, we believe that work, education, health, and overall quality of life comprise human capital.

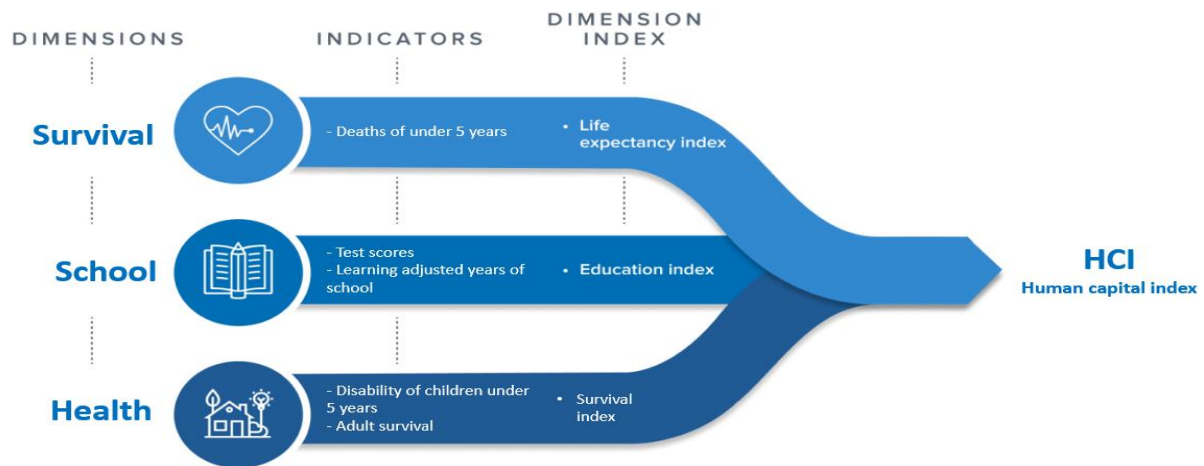
### **Analysis and results.**

Uzbekistan's primary strategic objective is to join the world's developed nations and provide a good standard of living for its people. The nation is implementing a well-defined, well-thought-out plan of action, and the institutional, legal, practical, consistent, and systemic measures adopted fully support the implementation of democratic, political, and economic reforms, as well as social transformations meant to provide ample opportunity for the full realization of each citizen's and society's collective potential on the professional, intellectual, and spiritual levels.

The Human Capital Index (HCI) is a composite index describing the level of human capital development in countries and regions of the world, issued by the World Bank Group and used as part of the Human Capital Project. The project was originally led by economists Noam Angrist, Simon Jankov, Pinelopi Koujianou Goldberg and Harry Patrinos. Proposed human capital measurement using Global Learning Data survey. The index should be used by countries to analyze problematic issues in their socio-economic policies and to assess their readiness to move to a sustainable development model. The index measures the level of human capital development of the next generation, that is, the calculation of the human capital index includes the following three components (Figure1):

1.Survival. This indicator is measured by the mortality rate of children under 5 years of age. This will help determine the quality of the country's health care system, maternal and child health care.

2.School. It is used in conjunction with information about the amount of education a child can receive before turning 18 and what they can learn at school. This is determined by the successful passing of tests based on international standards of schoolchildren in the country. Aggregation of this information allows us to calculate expected years of education adjusted for quality. By adjusting for the quality of education, it can be seen that children in some countries receive less education than children in other countries, even with the same number of years of education.



**Figure 1. Human capital index indicators**

3. Health. This component uses two indicators to assess the general health status of the country's population: 1) absence of disability among children under 5 years of age; 2) Adult survival rate, defined as the percentage of 15-year-olds who survive to age 60. The first indicator reflects the state of health of a child of primary school age; the second indicator is used today as a measure of the health status of a child born today.

The Human Capital Index's aggregation methodology is determined based on the following account books [4]:

The components of the Human Capital Index (HCI) are combined into a single index by first converting them into contributions to productivity relative to a benchmark of complete education and full health. Multiplying these contributions to productivity together gives the overall HCI:

$$\text{HCI} = \text{Survival} \times \text{School} \times \text{Health}$$

According to the 2020 report produced by the United Nations Development Program (UNDP), the Human Development Index has a category called "High level of human development", in which the countries at the top can be considered developed countries and the population has a high standard of living. According to it, the countries with the highest human development index are Norway (0.957), Ireland (0.955) and Switzerland (0.955). Uzbekistan took the 101st place in this list with an index of 0.727.

In today's world, the Human Development Index looks at three key areas to measure a country's human development achievements and results. The first is life expectancy, which refers to whether a country has adequate health services to ensure a long and healthy life, or vice versa.

The second dimension measured in the Human Development Index is the level of literacy of people. This is measured by indicators of adult literacy (primary, secondary, tertiary, etc.) and duration of compulsory education.

The third dimension is the standard of living, that is, the income of the country's population. This measure is measured by GDP per capita at purchasing power parity in US dollars.

**Human development index (HDI) and GNI per capita.** Uzbekistan's HDI value for 2019 is 0.720— which put the country in the high human development category—positioning it at 106 out of 189 countries and territories. Between 2000 and 2019, Uzbekistan's HDI value increased from 0.599 to 0.720, an increase of 20.2 percent. Table A reviews Uzbekistan's progress in each of the HDI indicators. Between 1990 and 2019, Uzbekistan's life expectancy at birth increased by 5.2 years, mean years of schooling increased by 2.7 years and expected years of schooling

increased by 0.8 years. Uzbekistan's GNI per capita increased by about 115.6 percent between 1990 and 2019<sup>46</sup>

Table 1.

Key socioeconomic indicators for Uzbekistan<sup>47</sup>

| Indicators                     | Uzbekistan   |
|--------------------------------|--------------|
| Populatin                      | 25,6 million |
| Per capita GDP                 | US\$ 2.324   |
| Literacy                       | 99.3%        |
| Services within economy        | 43.8%        |
| Income level                   | Low income   |
| Human Capital Index            | 0.727        |
| Female economic activity level | 62.3%        |

However, receiving foreign capital has a number of benefits for Uzbekistan's economy. According to Yasar and Morrison Paul (2007), Uzbekistan's economy has greatly improved over the last ten years. The primary goals of the nation's development strategy were the import of equipment and the export of natural resources like minerals and natural gas. However, because the nation's economy is not yet directly linked to the global market, it has not been significantly impacted by the recent financial crisis.

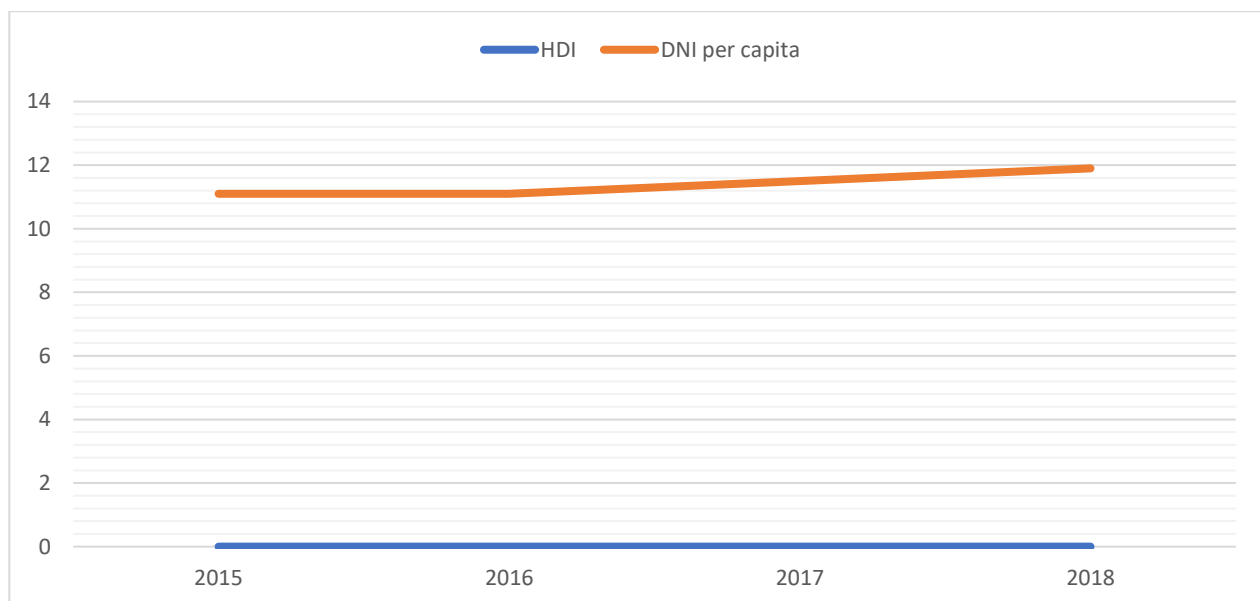


Figure 2. HDI and GNI per capita

In this sense, the primary national goal of Uzbekistan today is the modernization of the educational system. The nation cannot achieve renewal in all areas of public life and break free from "raw material dependence" without finding a solution that will lead it towards post-industrial growth. Significant adjustments must be made to the way education is organised and delivered, along with more financing and better university administration.

<sup>46</sup> URL: <http://hdr.undp.org/en/countries/profiles/UZB>

<sup>47</sup> World Bank, WTO data (2002 – 2004) in Baum & Thompson(2007)

Table 2.

**Rating of the countries of the world according to the human development index(HDI)<sup>48</sup>**

| Country ranking | Country     | The Human Development indexes |
|-----------------|-------------|-------------------------------|
| 1               | Norway      | 0.957                         |
| 2               | Ireland     | 0.955                         |
| 2               | Switzerland | 0.955                         |
| 17              | USA         | 0.926                         |
| 19              | Japan       | 0.919                         |
| 51              | Kazakhstan  | 0.825                         |
| 52              | Russia      | 0.720                         |
| 85              | China       | 0.761                         |
| 106             | Uzbekistan  | 0.720                         |

**Health capital and Demographic policy.** A vital component of human capital, health capital is invested in to maintain efficiency through lowering morbidity and lengthening the productive life span. The quality of health services received by an individual from birth until old age has a significant impact on their level of health. Disability is an expression of declining health, morbidity, and disabilities. Naturally, a lower disease rate corresponds to a healthier population and a higher return on investment in health care. However, there are issues facing society today that have an impact on the development of health capital.

Chronic respiratory disorders, diabetes, cancer, and cardiovascular disease are examples of non-communicable diseases. The leading causes of disability and mortality in Uzbekistan are diseases like diabetes mellitus, malignant neoplasms, stroke, cardiovascular disease, and chronic respiratory disorders. They are primarily linked to risk factors for high blood pressure, high blood cholesterol, tobacco and alcohol use, being overweight, consuming insufficient amounts of fruits and vegetables, and engaging in little physical activity.

In 2016 alone, non-communicable diseases claimed the lives of 40 million people, accounting for 70 percent of all deaths worldwide. It is known that in our country, non-communicable diseases cause 78 percent of all deaths every year. In 2017, diseases of the circulatory system (69 percent), including ischemic heart disease, arterial hypertension and their complications (myocardial infarction, cerebral stroke), occupied the first place in the overall structure of sex- and age-standardized indicators of causes of death (69 percent). They are followed by malignant neoplasms (8 percent), diabetes mellitus (3 percent) and chronic respiratory diseases (3 percent). Experts note that 31 percent of premature deaths from non-communicable diseases can be prevented or delayed by preventing risk factors and improving the organization and provision of medical care for patients with non-communicable diseases. As of October 31, 2020, the number of people infected with coronavirus is 66,628, deaths - 563 (0.8%), recovered - 63,864 (95.9%), now 2201 (3.3%) people are sick. In Uzbekistan, measures are being consistently taken to prevent, treat and control this type of disease, their risk factors, and to reduce premature mortality and morbidity.<sup>49</sup>

### Conclusions.

Human capital, which is a set of social relations, corresponds to the society. The development of human capital directly depends on a person's consciousness, morals, spirituality, worldview, socio-economic, political relations, the essence and nature of the social system. Since

<sup>48</sup> Human Development Report 2020. The Next Frontier: Human Development and the Anthropocene. United Nations Development Program. December 15, 2020. p. 343–346.

<sup>49</sup> URL: <https://stat.uz/ru/164-ofytsyalnaia-statystyka-ru/6572-sotsialnaya-sfera>



a person has intelligence, he understands the events in the real world, and manages the world with his scientific thinking, work, and potential. The growth of human capital is influenced by the overall events in the surrounding social environment.

So, to create innovative human capital, every family of the country and the children born in it should be directed to acquire knowledge from an early age, instill in their hearts a desire for science, love for work, and educate them with the latest technologies, world-standard textbooks and manuals. Knowledge ensures the use of all opportunities in society, and skills ensure social development and economic growth. This phenomenon calls for continuous funding of education.

In order to achieve the set target parameters, the entire education system needs to be improved in terms of quantitative and qualitative indicators. Despite the many levers of state power, the effectiveness of state control over the education system is low. The unresolved issue of education quality remains. This necessitates a systemic reform and a radical improvement in the education system of the country, taking the process of training of highly qualified personnel with contemporary knowledge and high spiritual & moral qualities to a new level. Investing in education is directly related to education capital. Investing 1 percent in education will result in 1.2 percent increase in education capital. Raising the education index by 1 percent would result in 1.6 percent increase in GDP.

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