

issues of achieving sustainable development and expanding the role of human capital in pandemic and post-pandemy periods

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Issues Of Achieving Sustainable Development And Expanding The Role Of Human Capital In Pandemia And Post-Pandemy Periods

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Annotation. Today, countries around the world are experiencing a pandemic crisis caused by the COVID-19 pandemic. The pandemic crisis, unlike other crises, is characterized by the fact that it is a three-way crisis. In particular, the pandemic crisis is characterized by a demand, supply and simultaneous liquidity crisis. In such a complex environment, the countries of the world are reconsidering the factors and means to achieve sustainable development. It should be noted that the pandemic crisis has shown the need to improve the quality of the human factor and the associated human capital in order to achieve sustainable development. Therefore, this article analyzes the issues of expanding the role of human capital in achieving sustainable development.

Keywords: pandemic, global economic crisis, sustainable development, human factor, human capital, global trends in world economy development, innovative development, national innovation system.

Introduction.

On March 10, 2021, the U.S. Congressional Research Center released a 159-page report entitled “The Global Economic Impact of COVID-19”. The report was updated on July 9 this year. The report is supplemented by additional resources and information on the measures taken by the world's major countries and economies with great economic potential in response to the Covid-19 pandemic. This material is grouped in chronological order by countries of the world and is comprehensive in its study

of the impact of the pandemic on the world economy. On March 11, 2020, the outbreak of a new viral disease called Covid-19 was officially recognized worldwide as a “pandemic”. It has once again demonstrated that the global economy is characterized by interdependence, with viral infection spreading rapidly across countries and affecting the world community at the same time. In early March 2020, when the center of infection moved from China to Europe, it had a serious impact, especially on Italy. But in April 2020, the center of infection moved to the United States. As early as April 2021, with the emergence of new outbreaks in Brazil and India, daily morbidity and mortality in these countries reached record levels.

In the first phase, economic measures against the effects of the pandemic were linked to monetary policy aimed at stabilizing financial markets and ensuring the flow of credit needed to support the economy.

In the second phase, the main focus was on supporting economic growth through budgetary measures.

In the third stage, the development of the vaccine, the launch of its production and the implementation of mass vaccination have been the main focus of public policy, and this stage continues to this day. It is natural for everyone to think about the future course of events.

Since the beginning of the pandemic, the number of cases of coronavirus on the planet has exceeded 215 million. According to official estimates, more than 4,491,000 people have died from the virus so far. More than 2.6 billion people on the planet have been fully vaccinated. At the same time, as a result of the closure of borders and the introduction of quarantine restrictions in more than 80 countries around the world, about 1.5 billion children around the world have been deprived of traditional education.

The pandemic has had a serious negative impact on global economic growth. According to the data, due to the coronavirus, the growth of the world economy in 2020 slowed from 4.5% to 6.0%. At the same time, the growth of the world economy in 2021 is projected to grow from + 2.5% to + 5.2%. In the current dynamics of economic growth, countries with developed economies, which account for about 60% of world economic activity, will not be able to operate at their capacity until at least 2024.

In the first half of 2020 and the third quarter of the year, after the global economic crisis, there were cases of recovery in the world economy. The U.S. and European economies began to show signs of recovery in the third quarter of 2020, with the U.S. economy growing at an annual rate of 5.0 percent and the Eurozone at 12.5 percent in the third quarter. On November 25, 2020, the Japanese government announced that the country’s GDP grew by 4.7% in the third quarter.

On November 24, 2020, the U.S. Dow Jones stock index recorded a value in excess of the maximum value recorded on February 14, 2020.

- However, from September 2020, new restrictions were introduced in Europe and the United States as a new wave of coronavirus erupted. This, in turn, casts doubt on the economy’s ability to recover at a sustainable pace by the end of at least the third quarter of 2021.

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- According to some estimates, between 100 million and 110 million people worldwide will be forced to live below the poverty line. In addition, we can note that according to estimates, global trade will decline to 9.0% in 2020. The economic consequences of the pandemic affect employment, which is characterized by high unemployment rates not seen since the Great Depression of the 1930s, as well as the steadily rising level of debt. The largest share of job losses due to coronavirus control measures falls on the service sector.
- The International Labor Organization estimates that in 2020, 93 percent of workers and employees were forced to work under one or another restriction, resulting in the loss of nearly 9 percent of working time in 2020 due to the global pandemic. The total number of working hours lost due to coronavirus in 2020 compared to 2019 was in Europe (14.6%) and North and South America (13.7%), which in turn led to strict and long-term quarantine restrictions in these countries and regions. explained.
- According to the International Labor Organization, the global job loss in 2020 was 114 million jobs compared to 2019. The largest share of lost working hours due to high unemployment was in Europe (6.0%), America (2.7%) and Arab countries (1.7%).
- According to a number of economists and experts, the imbalances in the labor market caused by the pandemic have a huge negative impact on the economies of developed and developing countries.
- Regarding the impact of the coronavirus pandemic on the world economy, the IMF draws the following conclusions:
 - 1) per capita income will be lower than its pre-pandemic level for several years, which in turn will have a negative impact on current productivity levels;
 - 2) the requirements for national health systems to combat the pandemic have a negative impact on the effective treatment of other diseases;
 - 3) bankruptcy of enterprises leads to a decrease in productivity at the national and global levels;
 - 4) an increase in the level of debt leads to a limitation of potential borrowing opportunities and investment flows.
- According to IMF forecasts, the loss of global economic production in the period from 2020 to 2025 as a result of the pandemic will reach 28 trillion. dollars. The possibility of creating more than 120 million jobs in the tourism sector alone will be completely eliminated.
- The rapid development characterization of the crisis associated with the Covid-19 pandemic raises a number of unpredictable problems, with the result that assessing potential losses is an extremely difficult task. There are a number of questions that need to be answered in connection with these issues, in particular:
 - - How long will the Covid-19 crisis last?
 - - how many jobs are subject to temporary restrictions or are closed completely;

- - how many more countries of the world will be affected by new strains of the virus, as a result of which economic activity will decrease, the rate of economic recovery will slow down;
- - when the negative economic effect due to coronavirus reaches its lowest point;
- - the level of future economic activity due to the further development of the disease;
- - What forms and methods of monetary and fiscal policy should be used at the national and global levels to overcome the crisis;
- - what will be the temporary and permanent impact of the crisis on business;
- - how to organize production in the conditions of restrictions;
- - What should be the ratio between economic policy and health needs and requirements in the implementation of measures to ensure the stability of the economy and prevent the spread of the virus?

Admittedly, today the world economy is developing in an abstract environment. According to American economists, the main factor of economic decline in the context of a pandemic is related to this economic uncertainty. The Index of Economic Policy Uncertainty (EPU) is used to determine the degree of accuracy of the economic policy pursued by the state in the economy. If we analyze the EPU index for the period from 1997 to 2017, we can see that the uncertainty index of economic policy in the 18 countries of the world, which produce two-thirds of the world's GDP, ranged from 150 to 300. However, analysts say the economic policy uncertainty index has not fallen below 450 points over the past year and a half due to the pandemic.

At a time of such uncertainty, the countries of the world community are striving to develop and implement their own programs and plans for sustainable economic development. Today, based on the experience of other countries, we conclude that in the post-pandemic period, we need to focus on the following areas for sustainable development of the country's economy:

- build all our actions on the basis of knowledge. It is no secret that today national economies based on the "knowledge economy" have reached the peak of development.
- The ongoing reforms in the country should ultimately serve the well-being of the population, in short, improve the quality of human capital;
- Consistent implementation of the elements of the "green economy" at a time when there is a risk of environmental risks, desertification, a sharp decline in natural resources for countries around the world is one of the urgent tasks of today;
- It is no secret that the world is becoming more and more digital, digital technologies, the digital economy has penetrated deeper into our daily lives, so we can say that the sustainable development of the country's economy in the future depends on the consistent introduction of digital economy;
- Today's life shows that it is difficult to achieve economic development without industrialization, so a country that wants to achieve development must make every effort to accelerate the development of industrial production;

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- Another important condition for achieving economic development is rapid integration. In this regard, the active policy of openness pursued by the leadership of our country in recent years is to be applauded.

The only way out of the pandemic is through scientific cooperation, sharing information resources, and combining political and economic aspirations for peace and stability, writes Sanjeev Khagram, dean of Thunderberd International School of Management in India.

In 1972, the theory of continuous equilibrium was put forward by biologists Stephen J. Gould and Niles Eldredge. According to this theory, the population of living organisms in the world undergoes significant evolutionary changes under historically short but complex conditions. The above-mentioned scientists point out that the evolution of living organisms is not a stable and continuous process, but rather that it accelerates when biological species are exposed to high pressures, especially in crisis conditions.

In the current context of the COVID-19 coronavirus infection pandemic, humanity is experiencing a similarly complex situation. Individuals, societies and organizations are facing significant challenges in this crisis, which will accelerate the fourth industrial revolution by uniting the boundaries of the biological and digital worlds. The pandemic makes us feel how much we are connected to 21st century technologies — artificial intelligence, internet devices, social media, digital learning platforms, virtual reality, unmanned aerial vehicles, and so on. Moreover, such unprecedented conditions and opportunities encourage us to rely more on digital, biological and physical technologies and to think more about how these promising technologies can be used to create new values.

Today, more than 7 billion people around the world live in conditions of self-restraint. The organization of distance learning, distance learning, which a few months ago was difficult to imagine, is no longer a novelty today. There are currently 1.5 billion people in the world. the student is studying distance learning. Organizations and business structures operating in various sectors and industries of the economy are trying to rebuild their business models on the basis of digital technologies.

It should be noted that in historical situations, where the balance of power is sharply distorted, the economy always strives to survive. It is as a result of such aspirations that innovations and inventions are created that can radically change the life of society. Scientists call this period the "Anthropocene", because humanity is the leading force in the formation of the planet's ecosystem. Therefore, a society that feels change has always been a leader in the world community, there is no future for a society that does not advance change in time and adapt to such changes.

Literature review. The theory of human capital was founded as an independent theory by the representatives of the Chicago school in the 50-60s of the XX century, and its theoretical and methodological foundations were formed in the works of T. Schultz, G. Becker, H. Bowen, M. Blaug, J. Mincer, S. Polachek. , developed [1,2,3,4]. In addition, to Western economists who have conducted research on the impact of human capital on the quality of economic growth: Shumpeter Y., Keynes, Harrod R. K K. McConnell., S. Bryu., F.Agiyon, Gregory N Menkyu. P.Massa., U.Sharp., Samuelson P., V.Nordhaus, R.Dornbush., S.Fisher, G.Lorens, D.Mikl, E.Xansen, G.Mensh., Oppenlander K.N., D. N Kondratev, et al. [5,6,7]. In this research, the research of F. Agiyon, who approached the impact of human capital on the quality of economic growth from the perspective of modern science and

incorporated theories of endogenous economic growth, taking into account the growing efficiency of innovative activities, plays an important role.

Among the Russian scientists who have made a significant contribution to the study of human capital and the problems of innovative investment and their impact on the quality of economic growth: Nuriev R.A., Notkin A.I., Pervushchin SP, Pogosov IA, Polyakova T .N., Illarionov A., Shmelev N., Sharaev Yu.V., Kudrov V., Gubanov I.S., Zhukov S., Kvashnina N.A., Korniyakov V.T., Kondratev V., Kurenkov Yu ., Eliseeva E. and the scientific research of others can be highlighted.

In turn, Uzbek economists pay special attention to the study of various aspects of this problem. In particular, academicians RA Ubaydullaeva, QH Abdurahmanov and SS Gulomov studied various aspects of human capital [8]. Theoretical and methodological aspects of human capital AA Artikov, NK Zokirova, OK Abdurahmanov, BH Umurzakov, HP Abulkasimov, AV Vakhobov [9], its socio-demographic features LP Maksakova, NH Rakhimova, DM Karimova, the development of the educational complex and its role in human development have been studied by Z.Ya. Khudoiberdiyev, D.N. Rakhimova, M.Kh. Saidov. In recent years, the researcher Sh.G. Studied by Akramova [10].

Research methodology

Methods such as scientific abstraction, dialectical research, induction and deduction, target development, monographic observation, systematic and comparative analysis, graphical representation, expert evaluation and economic statistics in the development of scientifically based conclusions and recommendations based on the systematization of the results of the analysis widely used.

Analysis and results

In developed countries, investment in human capital is seen as an important factor in increasing competitiveness and ensuring economic growth at the micro and macro levels. Ensuring the accumulation and enrichment of human capital, the consistent implementation of strategies aimed at improving their professional skills and experience through continuous education throughout life, is an important condition for sustainable economic development.

The processes taking place in the world economy clearly show that the ratio between the factors influencing the socio-economic development of the country is changing. The World Bank's study of the composition of global national wealth in 141 countries shows that the share of human capital in its total value is 64% and its volume has grown by 55% over the last 20 years. In high-income countries that are members of the Organization for Economic Co-operation and Development (OECD), the share of human capital in national wealth was 70%, while in low-income countries its share was 41% "[11]. It is the differences in human capital that determine the competitiveness of a country's economy in the world market, the well-being of the population and human development in general, in particular, "10-30% of per capita income differences between countries are explained by human capital" [12]. It should be noted that today the factors of economic growth are changing. Instead of traditional factors (labor, land, capital, entrepreneurial ability), science and education, that is, the intellect of the nation in general, come to the fore. In this regard, at the next stage of economic reforms in the Republic, the problem of ensuring the quality of sustainable economic growth in the national economy is becoming increasingly important.

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The existing discussions on this topic in the economic literature show that economic research is multifaceted and in different directions. It should be noted that today there is no generally accepted idea of increasing the impact of innovation and investment in ensuring the quality of sustainable economic growth in the national economy. In this regard, this topic is relevant not only from a practical point of view, but also from a theoretical point of view. As noted at the meeting of President of Uzbekistan Shavkat Mirziyoyev on December 30, 2016 with leading scientists of our country, it is important to further improve the integration of science, education and industry. Today, the time demands to further strengthen scientific cooperation with the world's leading universities, research centers and academies of sciences. It is difficult to imagine the development of our country and society at the level of modern requirements without science. Fundamental research plays an important role in the development of science. It is through them that new knowledge is acquired and theories are formed. A solid foundation will be laid for future applied research and innovation.

In an environment where competition between goods and services in the world market is intensifying, innovative development of the economies of developing countries is almost the only way to minimize technological backwardness and ensure competitiveness. The success of any state in innovative development depends in many respects on the effectiveness of its public policy in the field of innovation and the quality of human capital formation.

In any national economy, human capital is a key factor in production, an important condition for supporting the national economy and increasing its competitiveness. That is why today in developed countries, human capital is considered as an important factor in economic development and economic growth. The transition from raw materials to innovative sources of economic growth is emerging as a primary factor in human capital, which is becoming a major resource for value creation, increasing national wealth. Ensuring the accumulation and enrichment of human capital, the consistent implementation of strategies aimed at improving their professional skills and experience through continuous education throughout life, is an important condition for sustainable economic development.

It should be noted that today the factors of economic growth are changing. Instead of traditional factors (labor, land, capital, entrepreneurial ability), science and education, that is, in general, the factors that are the intellect of the nation, come to the fore. In this regard, at the next stage of economic reforms in the Republic, the problem of ensuring the quality of sustainable economic growth in the national economy is becoming increasingly important. The existing discussions on this topic in the economic literature show that economic research is multifaceted and in different directions. It should be noted that today there is no generally accepted idea of increasing the impact of innovation and investment in ensuring the quality of sustainable economic growth in the national economy.

At the current stage of socio-economic development of many countries, the strategic goal is the transition to an innovative economy, which will ensure the most efficient use of the economic potential of the region. The main component of this potential is national wealth, which is the leading source of competitiveness. According to World Bank experts, the share of physical capital in the national wealth of all countries is on average 16%, natural capital - 20%, human capital - 64%. (In such countries as Germany, Japan, Sweden, the share of human capital reaches 80%). In Uzbekistan, this figure is 62%, but its share is lower than in developed countries. In this regard, we must take into account the impact of the transformation processes that took place in the 1990s on the formation of human capital, which

was accompanied by depopulation of the population, such losses became a threat to national security both quantitatively and qualitatively.

In practice, there are many cases of inefficient use of human capital due to the fact that the population is employed in jobs that do not correspond to their specialization, do not meet the requirements of jobs and other aspects. Therefore, in the transition of the country to innovative development, it is an objective necessity to create conditions for the formation and realization of human capital in labor activity.

In any national economy, human capital is a leading factor of production, an important condition for supporting national production and increasing its competitiveness. The first needs and conditions for innovative development in European countries emerged after the Second World War: on the basis of a linear model of innovation aimed at ensuring the effective operation of all stages of the innovation cycle, from the acquisition of new knowledge to its introduction into the production process. At one time, Uzbekistan also felt the need for these changes: structural changes in science-intensive and resource-saving technologies, the role of intellectual resources and the social orientation of the economy in general. As Nobel Laureate Simon Kuznets points out, in order to make the leap in scientific and technological progress, the country needs to accumulate the necessary initial human capital, otherwise the transition to the next technological sector of the economy will not take place [13].

At present, the role of human capital in the socio-economic development of society, its development based on national characteristics, its effective use, the creation of conditions for its full expression, the role of countries in the international community, decent living and sustainable development. has become one of the directions. In this regard, it is important to study the impact of the level of human capital development on economic growth, assess the relationship between the components of human capital, determine the impact on the introduction and dissemination of innovations, study effective methods of human capital development.

Innovative development can be interpreted as follows:

- as a type of economic development based on innovation;
- as a strategy based on the widespread introduction of innovations in various spheres of society;
- as a factor of competitiveness;
- as a set of financial-economic, socio-psychological-logical, political factors of creation, improvement and use of innovations - factor approach;
- as a process of increasing the efficiency of activities, development of the social sphere, improving the living standards and quality of life of the population, the accumulation of positive changes along with the development of infrastructure; transition to a new technological basis - a process approach;
- capital, in terms of improving the innovative climate of the region in terms of the activities of innovative development entities aimed at the efficient use of resource potential, strengthening and expanding economic ties, increasing the intensity of investment processes, mobilization and improvement of innovative potential;

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- in terms of the possibility of changing the external and internal environment (the ability to identify and adapt to change, the ability to create scientific and technological progress);
- In terms of readiness to implement advanced developments, innovative products.

Today, in any country, it is an important task to build a national innovation system that is unique and sufficiently effective. It should be noted that the transition to a new model of innovative development will not allow to overcome the negative processes that have suddenly accumulated and accelerate economic growth. The transition to a new model of innovative development requires special attention to accelerating the use of innovative potential, structural restructuring of the economy, the creation of new economic mechanisms that will allow the effective functioning of innovative economic systems. There are currently four models of innovative development in the world based on the interaction of business, science and government, and countries prefer to choose one or another model, taking into account certain conditions and factors.

The “tertiary spiral” model, based on the relationship between the university, industry and the state, based on the comparison and study of the advantages of existing models of innovative development, is of great interest. In this model, great attention is paid to universities in the formation of the foundations of an innovative economy.

Table 1. Comparative description and analysis of existing innovative development models

Purpose	Tasks	Model core	Innovation cycle
I. "Euro-Atlantic model" (UK, Germany, France, Italy)			
Creating a complete innovative system cycle	-commercialization of private developments; - import of necessary developments; -export of high-tech products and technologies	Universities and research centers	A complete innovation cycle
I. "East Asian model" (Japan, South Korea, Hong Kong, Taiwan)			
Building an innovation system integrated into the global innovation system	-import of necessary developments; export of high-tech products and technologies	Research laboratories and applied research centers under corporations	Lack of fundamental science
I. "Alternative model" (Thailand, Chile, Turkey, Jordan, Portugal)			
Integration with innovative systems of developed countries	import of high-tech products and technologies	Innovative infrastructure of universities and technology parks	Lack of fundamental and applied science
I. The “tertiary spiral” model			
I. (USA, some elements of this model are reflected in the national innovation system of European countries)			

Accumulation of financial resources on the basis of swallowing the innovative systems of other countries	-commercialization of private developments; - Regulation of exports of high-tech products	Science-government and business interaction	A complete innovation cycle
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Source: Akhmedov D.K., Numanov K.F. *Theoretical aspects of the innovation model of economics. Economics and education / 2020№4*

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In 1995, Henry Itskovitz, a professor at the University of Newcastle in the United Kingdom, proposed the “tertiary spiral” model by Loyette Leidesdorf, a professor at the University of Amsterdam. Unlike other models of innovative development, in the “tertiary spiral” model, the interaction of three components: the university, business and the state, plays an important role.

Table 2.

Analysis and comparative description of existing models of innovative development

Role of country	Methods of stimulating innovative activity	Aspects of financing R&D	Distinctive features
I. "Euro-Atlantic model" (Great Britain, Germany, France, Italy)			
-support of innovative enterprises through the mechanism of public-private partnership; - Stimulation of public-private partnership in the field of innovation; -financing of innovative projects,	- Improving the legal framework; -financial; -tax	- state grants; -financing by the private sector; -additional government spending	The reform role of the state in the implementation of the strategy of innovative development and the important role of private business in financing innovation

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assistance in commercialization			
I. "East Asian model" (Japan, South Korea, Hong Kong, Taiwan)			
-creation of appropriate conditions for innovative activities of corporations; - Targeting for the export of high-tech products	Creating organizational conditions for the formation of innovative activity	Public and private sector expenditures. Dominance of private sector costs (about 80%)	The main customer and consumer of innovation is big business
I. "Alternative model" (Thailand, Chile, Turkey, Jordan, Portugal)			
-formation and development of innovation infrastructure; - training for the formation of an innovative economy; - mastering new technologies; -selection of priority areas for ensuring innovative development	Creating organizational conditions for the formation of innovative activity	Public and private sector expenditures. Public spending is mainly spent on training for innovative infrastructure	The leading role of the state in the development of innovation development strategies and innovation financing
I. "Triple spiral model" (USA, some European countries)			
-creation of all conditions for active cooperation of all participants of innovative activity; -support of technological development; Encourage the commercialization of ITTKI results	Improving the legal framework for finance, taxation, intellectual property	Public and private sector expenditures; -use of venture capital; - Private sector spending dominates (about 60%)	The mechanism of complementarity of participants in innovative activities

Source: Akhmedov D.K., Numanov K.F. *Theoretical aspects of the innovation model of economics. Economics and education / 2020№4*

The “tertiary spiral” model represents a three-dimensional network that includes interacting subjects and three basic elements.

Focusing on the essence of the concept of "tertiary spiral", G. Itskovits: "Business and government used to be seen as the driving force behind industrial policy, but today, as modern knowledge is increasingly applied in practice, universities are becoming a decisive force. Whereas in the past technological progress through the implementation of inventions required the life of an entire generation, today the duration of this cycle is so short that inventors

University	Business	State
Increased investment in fundamental and applied research	Production innovation, the transformation of production into high-tech production	Development of priority areas of scientific research, realization of the scientific potential of the country
Search for channels for the creation of research institutes, laboratories, technology parks, incubators, updating the material and technical base, the transfer of technology to production	Increased competitiveness in the market due to the use of high-performance technologies	Increase of business activity in the country due to the provision of tax benefits to business structures cooperating with universities
Establishment of business units on the basis of the University	Establishment of structural subdivisions engaged in research activities at the enterprise	Decreased dependence on natural resources, growth of intellectual and human capital
Increased autonomy and financial independence	An increase in profit due to an increase in value added	Increased professional training in accordance with the modern requirements of the labor market
Expanding opportunities in the field of student employment and research	Attracting highly qualified personnel	Development of regional scientific and technical centers, socio-economic development of the regions
Commercialization of knowledge and obtaining patents for inventions, acquisition of intellectual property rights	Expanding the participation of business structures in the educational process of higher education institutions. Establishment of joint venture funds	Integration into the international scientific community, internationalization of knowledge and technology transfer
Further increase the prestige of the university and science	Increasing the prestige of business structures, greater attention by the state and recognition by society	Increased country competitiveness

both in the research process and in the implementation of innovations. "[14]

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Shkodsky SV, Nazarov AG in their research substantiate the effectiveness of cooperation in the framework of the "tertiary spiral" model, which covers the priorities of the interacting parties.

In the form of accumulated knowledge, human capital as an intangible asset of an individual can be increased in various ways: continuing education, creating new knowledge and patenting inventions, improving management skills (Guillard, Roussel, 2005.P.3.) Thus, human capital and expresses the generality of skills, while social capital implies its use in joint activities. It should be noted that high quality human resources that are not used in the process of creating value added or improving the quality of life cannot be valued as human capital.

The urgency of the problem of human capital management is related to the solution of strategic tasks of the country's entry into the innovative path of development. Organizational changes, changes in technology, increased competition between enterprises [15], lead to the need to ensure an efficient production process and are accompanied by increasing demands on the level of human resources by employers (Bartel et al., 2002; Borgans and Ter Viil, 2004; Watkins et al. Marsik, 1993; Gosal, 2002; Lall, 2001). We can ensure compliance with these requirements by providing higher education and qualification levels, as well as their participation in retraining courses. That is, the solution of the identified strategic tasks is largely determined by the specifics of the formation of human capital.

Conclusions and suggestions. The following conclusions were drawn from the research:

1. The formation and use of human capital have been identified as interrelated processes that occur throughout the human life cycle, forming the process of reproduction of human capital.
2. The stages of reproduction of human capital have been identified, including the period of potential accumulation, such as birth, upbringing, basic development; period of formation and development of professional competencies; a period of decline in social, labor, and creative activity. It was found that the stages differ from each other in the amount of investment, the subjects involved in the process.
3. Factors influencing the formation of human capital are formed according to such features as the subjects of formation, areas, stages, the nature of the impact on the process of formation, the results of formation. These factors include individual abilities, parental data, social status of the population, tax policy, ideological factors.
4. The stages of the use of human capital have been identified, which implies the realization of the accumulated potential in labor or other activities to obtain economic and other results. The latter has a significant impact on the start of the next cycle of human capital growth, creating the preconditions to encourage economic agents to invest in improving the education and skills of the population or, conversely, reducing motivation (e.g. when labor costs are higher than wages).
5. Factors influencing the use of human capital are typified by the nature of the impact (internal / external) and the efficiency of use (effective / inefficient use). While internal factors are primarily related to individual characteristics of the population, and sometimes directly to environmental influences, external factors are related to socio-economic and political changes at the regional and urban levels.

6. The need for state regulation of the formation and use of human capital in the context of ineffective institutional measures (demographic, social and labor legislation), the ineffective impact of macroeconomic parameters for these processes (socio-economic situation in the country and the region, tax policy) etc.).

7. The emergence of negative factors affecting the formation and use of human capital has been found to be related to the lack of systematic purposeful management influence at each stage of its life cycle. At the same time, government regulation should combine the use of direct and indirect management methods, stimulate innovation and the development of human capital.

8. The policy aimed at raising the level of knowledge of the population at the expense of the subjects of socio-economic relations affects the level of accumulation of human capital, helps to increase labor productivity, creates preconditions for effective use of technology, eliminates existing barriers to innovative development of technological relations and regions..

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