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HUMAN CAPITAL IN THE CONTEXT OF A PANDEMIC: MANAGEMENT AND FURTHER DEVELOPMENT

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Abstract. The article considers the main problems of the human capital development and its reassessment in the conditions of the pandemic. In the conditions of economic management, a demand for human capital has increased during the pandemic. The most popular personnel have been medical workers, as well as employees providing biological safety. The purpose of the research is to study the issues of management and development of human capital in both theoretical and practical aspects.

The article analyzes the development and formation of human capital, the relationship between intellectual capital, the level of education and personal income of subjects in the conditions of a pandemic. The topic of the article is relevant and new due to the fact that during the pandemic there was a reassessment of human capital, global and significant changes took place in the labor market.

Keywords: human capital, pandemic, intellectual capital, crisis.

Introduction. One of the main factors of the economic development today is human capital. Human capital is the accumulated knowledge, skills and abilities that a person acquires in the process of general and special education, professional training, as well as through experience. In last years, much attention has been paid to the rational conduct of personnel management, the essence is the effective management of human capital, which contributes to improving the quality of work of the entire personnel service at enterprises. Human capital is the driving force of scientific and technological progress, and the well-being of the economy as a whole depends on how effectively it is formed and developed.

The main civilizational resource of the country is human capital, thanks to which the competitiveness of all economic and administrative resources is actually ensured. Also, human capital is one of the main strategic priorities of development, the main resource of society, the country, as well as individual regions.

Theoretical analysis. Achieving success in the market can only be the result of creative activity of a person who proactively interacts with the external business environment.

The accumulation of experience and knowledge leads to the construction of new models of understanding the environment by the most active individuals. In turn, such models make changes to potential solutions chosen from a variety of possibilities available to a particular person [1].

The choice of a model of economic behavior is determined by the decision of individuals and groups. In this regard, economic behavior is considered as an active influence on all organizational processes. The human factor determines the degree and direction of changes in the organization, during which a certain organizational genotype is formed – the properties and characteristics of an economic entity that allow it to survive and develop. Such properties include, in particular, the ability to solve complex organizational problems, to put forward creative innovative business ideas.

The level of human capital depends not only on the needs of the enterprise in personnel, but also on the abilities of the employee himself. An employee of an enterprise in the process of

performing his functions creates material and non-material benefits, after the expiration of time, the human capital is improved.

Human capital develops and forms throughout life and goes through several stages, which can be represented as a model of formation, reproduction and accumulation.

In present time, a role of the state in the system of factors for the development and improvement of human capital has increased. In modern economic conditions, the economy of Kazakhstan is moving towards a new innovation system, which implies the introduction of new development trends and increasing intellectual activity at enterprises, which requires the creation and implementation of a new state policy [2]. The availability of highly qualified personnel of the enterprise plays an important role in the success of enterprises in the conditions of digitalization of the economy. The use of digital technologies in enterprises leads to global changes in the labor market [3].

Results and their discussion. The COVID-19 has dealt a powerful blow to the global economy, provoking the deepest global recession in the last eight decades, surpassing the global crisis of 2009 by almost three times in depth [4].

According to statistics, despite unprecedented government support, the global gross domestic product (GDP) decreased by 5.2% in 2020. The number of cases and victims of the pandemic continues to grow: more than 1 million deaths and millions of people suffering due to the deterioration of prospects and loss of livelihoods.

The pandemic and related restrictive measures caused a sharp reduction in consumption and investment, as well as led to serious changes in labor markets. It is estimated that the loss of working time in the second quarter of 2020 was equivalent to the loss of almost 500 million full-time jobs [5].

Cross-border spillover effects have led to disruptions in the financial and commodity markets, world trade, supply chains, the transport industry and the tourism industry. As a result, in 2020, the vast majority of emerging market and developing economies (EMDE), per capita income is expected to decline, which will plunge millions of people into poverty again.

The number of new COVID-19 cases is increasing by more than 250,000 daily, with the highest incidence rates observed in the US, India, Brazil, Colombia, South Africa and Mexico. As the monthly statistics show, after the recession in the second quarter, global economic activity is beginning to recover. At the same time, various indicators of activity remain significantly below the levels that were observed at the beginning of the year.

In the second quarter of 2020, the level of economic activity in the United States declined sharply, and output declined by an unprecedented 31.7%. Most states reported a trend of a daily increase in the number of new cases of COVID-19, which suspended the implementation of their plans to open the economy or led to the re-introduction of restrictions.

In the second quarter, the eurozone experienced a sharp drop in economic activity and a decline in output by 39.4%. As many EU member states eased pandemic-related restrictions in the third quarter, high-frequency indicators pointed to an increase in the level of economic activity, especially in the retail sector, but the recent increase in the number of new COVID-19 cases slowed the pace of recovery. The growth of industrial production was not very significant: in June, the indicators were about 7% lower than at the beginning of 2020. The governments have agreed to create a pan-European fund for economic recovery, which provides grants in the amount of 390 billion euros to the EU member states most affected by the pandemic.

As noted in the global economic growth forecast, which was published in June, the pandemic will recede in such a way that advanced economies will be able to begin lifting restrictive measures around the middle of 2021, and EMDE countries a little later. It also assumed that the adverse global spillover effects would weaken in the second half of the year, and the disruptions in the financial markets would be short-lived.

Despite the fact that a slight economic recovery was forecast for 2021 with a global growth rate of 4.2%, production volume was not expected to return to previously expected levels. In addition, according to this forecast, due to the COVID-19, from 71 to 100 million people may

become extremely poor worldwide, which will negate the previously achieved progress in reducing poverty and will be the first increase in the level of extreme poverty worldwide since 1998.

Human capital is one of the most inalienable assets that a person can possess. In this sense, human capital is a basic asset, thanks to which citizens become productive members of society and create opportunities for the prosperity of their countries [6].

The recovery of human capital after the pandemic is possible only if state take decisive measures. There are two reasons for this. First, the benefits of investing in human capital are partly related to the interaction between people and other factors of production, and these social benefits are usually not transferred to individual citizens [7]. Secondly, families and individuals may want to invest in human capital, but they may not have enough money for this, especially given that it takes some time to get a return on investment. By providing access to education and health services, states enable families and citizens to overcome this limitation and create conditions for realizing the public benefits of investing in human capital [3].

At the same time, the pandemic has clearly shown that in times of crisis, a significant increase in inequality in access to quality education is possible. A distance learning, which became necessary as a result of the pandemic, posed a difficult task both for teachers who did not always have the necessary skills for this form of education, and for students who did not always have access to digital technologies necessary for distance learning. The closure of schools can lead to losses in education even in cases where alternative forms of education are organized. Their closure can be especially harmful for children from socially vulnerable families. In addition, labor markets require a higher level of human capital development than in the past; therefore, having a reliable foundation is becoming increasingly important, since basic education will not be enough.

Scientists and experts argue that human capital, like physical, natural, and financial capital, has a value, is subject to modernization and development, and the main indicator of measuring human capital is its productivity [8]. Research in this area shows that the national human capital accounts for more than half of the national wealth of each of the developing countries and more than 70-80% of the developed countries of the world.

Kazakhstan showed relatively good results in the Human Capital Index (HIC) in 2020. For instance, since 2010, the value of the HIC in Kazakhstan has increased from 0.59 to 0.63.

The state program «Digital Kazakhstan» defines the development of human capital as one of five important areas. In general, human capital has a great influence on the development of the country's economy. The level of digital literacy of the country's population is 82.1%.

Today, it is important for Kazakhstan to develop a clear large-scale comprehensive program for the development of high-quality, competitive human capital at both the macro and micro levels. In addition to all the main components of human capital, attention should be paid to the issues of social responsibility of business for training and improving the skills of employees, as well as the regulation of migration flows in favor of the state.

Currently, the economy of Kazakhstan lags behind in some key indicators of innovation and competitiveness, and the level of professional skills development in the country is lower than in the countries of the Organization for Economic Cooperation and Development (OECD), which the country focuses on. Moreover, the COVID-19 has significantly reduced domestic economic activity: The country's GDP fell from 4.5% in 2019 to 2.6% in 2020, and the poverty rate increased from 6% in 2016 to 14% in 2020. To overcome the economic shock and achieve the goals of the strategy «Kazakhstan-2050», targeted reforms are needed to diversify the economy towards the development of more complex sectors based on knowledge and skills.

The COVID-19 has significantly undermined Kazakhstan's achievements in development of human capital over the past decade. The poor and vulnerable segments of the population have suffered the most, which will negatively affect their lifelong learning, earnings and social and economic well-being. In order to achieve sustainable growth, Kazakhstan needs to review state policy and investments in the direction of meeting the needs of less prosperous regions and

vulnerable segments of the population. The main attention should be paid to the quality of education, the development of skills and the life expectancy of the adult population.

In Kazakhstan, there is a significant inequality in terms of indicators of human capital development by region, gender and social and economic status.

Regional differences are particularly pronounced in terms of learning outcomes. For example, the indicator of the human capital index for Atyrau corresponds to the indicators of poorer countries, such as Kosovo and Georgia. On the contrary, the highest regional indicator in Nur-Sultan corresponds to the indicators of Luxembourg-slightly lower than that of the United States. The quality of education and the cost of education also differ significantly across the country's regions. The education funding policy does not contribute to the development of incentives for teachers and school leaders to support low-performing students. Also, despite the ongoing health care reforms, there is a significant gap in the indicators of Kazakhstan and the OECD countries in terms of quality control over risk factors, appropriate treatment and equality of health care costs by region.

If the country continues to develop human capital at the same period 2010-2020, it will take 44 years to reach the indicators of the country that ranks 30th in GDP per capita, and this is assuming that the rest of the world will not develop. To enter the list of the 30 leading economies of the world, Kazakhstan needs to review the current economic model and take intensive measures to diversify the economy, while simultaneously building up the skills of the next generation throughout the country.

Human development is defined as a priority direction in all strategic documents of Kazakhstan. The fundamental basis of the documents adopted by the Decree of the President of the country, in particular, in the new system of state planning, the updated National Development Plan of the country until 2025 and the new Concept of Public Administration until 2030, is human-centricity, indicating that the measures taken within the framework of reforms should set the ultimate goal of improving the life of each individual citizen of Kazakhstan. The implementation of the National Development Plan until 2025, among other things, is aimed at leveling the consequences of the pandemic and improving the quality of human capital. On the basis of this document, reforms will be carried out in all spheres.

The education system in Kazakhstan faced challenges even before the outbreak of the pandemic. Before the COVID-19 outbreak, 6 out of 10 students in Kazakhstan were functionally illiterate – and this is in a country with an above-average income level, where the average child completes 13.7 years of schooling. The pandemic threatens to lead to functional illiteracy of more than 100,000 more students.

Functional literacy is not the same as «ordinary» literacy. Literate students can easily remember most of the capitals of the world or learn by heart the periodic table of Mendeleev. However, they cannot apply their acquired knowledge – in mathematics, natural sciences and reading – in everyday life in order to work at a professional level and succeed as a person and citizen.

Recent World Bank estimates for Kazakhstan also show that as a result of the pandemic, learning indicators will decrease by 8 points on the PISA scale. PISA is an international program for assessing the educational achievements of students, which assesses the skills in mathematics, reading and science among 15-year-olds.

In the country, «four Kazakhs» coexist, each with a different level of income, birth rate and life expectancy and other indicators that affect the index. It was striking to see the huge differences between the four regions: for example, there is a four-fold difference in income between regions with high and low indicators, the north of the country can be compared with Europe in terms of fertility, while the south reflects the trends of low-income countries, and the north-west of Kazakhstan is similar to the countries of Africa in terms of life expectancy.

The PISA results similarly confirm the differences in the level of human capital in Kazakhstan – according to the study, regions with low academic performance lag behind regions with high academic performance by an average of 4 years of study, showing weak results in both

rural and urban schools, while in regions with the highest academic performance there is the largest gap between rural and urban schools. North Kazakhstan is an inspiring example of a region where the overall level of academic performance in the region is high, and the gap between urban and rural schools is one of the smallest.

The gap between the best and low-performing students is also alarming. Take for example the Nazarbayev Intellectual Schools (NIS) – a network of 22 highly competitive schools for the most capable students aged 5-18 years. NIS students are ahead of their peers by 124 PISA points, which corresponds to almost three years of study. As for functional literacy, the performance of students from NIS is also strikingly different from the national average: according to the results of PISA for 2018, only 6.2% of students from NIS were recognized as functionally illiterate compared to 64% in country. The high academic performance of a small number of students is good, and such results should be pursued further, but Kazakhstan also needs to improve the average level of skills both to ensure greater equality and to achieve the level of development that the country aspires to.

Since the length and quality of schooling is linked to the ability to generate income in the future, closing schools is likely to reduce the income of those who are faced with this. According to our estimates, in Kazakhstan, as a result of 4 months of school closures in March-June 2020, the future income of this generation may decrease by 2.9%, which is the equivalent of total economic losses up to \$ 1.9 billion annually.

For a country aspiring to join the group of 30 most developed countries by 2050, strengthening human capital is an urgent task. Kazakhstan is the largest landlocked country, as well as the most sparsely populated country in the world, and it cannot rely only on natural resources or on the markets of densely populated regions to ensure growth.

In order to increase human capital, Kazakhstan plans to increase funding for education from the current 3.4% to 7% of GDP by 2025. This is a welcome initiative that will allow the country to approach the OECD average for spending on education, but it is important to ensure that these investments are effective and benefit all children.

To somehow smooth out the impact of the pandemic on education, commitment and constant monitoring at the highest levels of government will be required. Enhanced performance monitoring, evaluation, mentoring and accountability can help schools and teachers achieve results [9].

The project for the modernization of secondary education, implemented with the support of the Bank, pays special attention to improving quality and equality, especially among vulnerable schools. The initial structure of the project was aimed at improving the quality in primary and secondary education, especially among rural and vulnerable schools. Thus, it is necessary to find ways to adapt the project in order to help solve specific problems of educational equality that have arisen as a result of the COVID-19 crisis.

In particular, Kazakhstan will need to address the growing learning gap, which has been exacerbated by the closure of schools during the pandemic. The training recovery program should include an in-depth assessment of this gap, as well as accelerated teacher training, increased enrollment of students in need of support, the implementation of an intensive additional training program and continuous monitoring of the learning recovery process.

Such an approach can help effectively counter the challenge of the “four Kazakhs” in the post-pandemic period and overcome the growing inequality in education, especially among the poorest and most vulnerable segments of the country’s population.

Conclusions. The article considers the main problems of development and formation of human capital in the conditions of the COVID-2019 and the economic crisis caused by it. According to the research results, it can be concluded that it is necessary to modernize the business environment and culture in the post-crisis period.

Currently, one of the components of human capital is the sphere of the «knowledge economy». To maximize income from modern technology, investments in human capital in the form of modernization and development of high-tech industries are needed. In this regard, there

is a need to review the system of education and professional training of employees and specialists. In this situation, all issues should be divided between three areas: science, education and labor.

It is necessary to develop a system of knowledge transfer, internships and mentoring. The development of a mentoring system is necessary in order for a highly qualified specialist not only to perform his functions, but also to transfer his experience to young specialists – in this way, a school of skill can be created.

Comprehensive state support is necessary for the development and improvement of the competitiveness of human capital, the main types of which are:

- maintaining a close relationship between education, science and business;
- development of education: affordable and high-quality education, compliance of Kazakhstan's education with international standards;
- development of innovative potential: effective fundamental science;
- effective scientific and technical venture business;
- creation of an information society.

The development of education and the innovative potential of the country are the main ones for the development and improvement of the competitiveness of human capital.

The trends of the market economy in the context of the pandemic impose new requirements on labor markets and education systems. Graduates of universities and secondary specialized educational institutions must meet the modern increasing requirements in a crisis and have the abilities, knowledge and skills of working with clients, communications, and have language skills. In the future, the Kazakh model of education should meet the requirements of adequate responses to changes in market conditions.

According to the results of research, it can be concluded that the overall economic recovery around the world depends on the effectiveness of health care in general and the measures taken to combat the pandemic, the resurgence of the virus, as well as the economic policy measures taken by the governments of all states.

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Аннотация. В статье отображены основные проблемы развития и формирования человеческого капитала и его переоценки в условиях пандемии COVID-2019. В условиях хозяйствования во время пандемии усилилась востребованность в человеческом капитале. Наиболее востребованными кадрами оказались медицинские работники, а также работники, обеспечивающие биологическую безопасность.

Цель исследования – изучение вопросов управления и развития человеческого капитала как в теоретическом, так и в практическом аспектах.

В статье проведен анализ развития и формирования человеческого капитала, проанализирована связь между интеллектуальным капиталом, уровнем образования и личными доходами субъектов в условиях пандемии.

Тема статьи является актуальной и новой в связи с тем, что во время пандемии произошла переоценка человеческого капитала, на рынке труда произошли глобальные и существенные изменения.

Ключевые слова: человеческий капитал, пандемия, интеллектуальный капитал, кризис

Түйін. Мақалада COVID-2019 пандемиясындағы адами капиталды дамыту мен қалыптастырудың және оны қайта бағалаудың негізгі мәселелері көрсетілген. Пандемия кезінде басқару жағдайында адам капиталына сұраныс артты. Ең көп сұранысқа ие кадрлар медицина қызметкерлері, сондай-ақ биологиялық қауіпсіздікті қамтамасыз ететін қызметкерлер болды.

Зерттеудің мақсаты-теориялық және практикалық аспектілерде адами капиталды басқару және дамыту мәселелерін зерттеу.

Мақалада адами капиталдың дамуы мен қалыптасуына талдау жасалды, пандемия кезіндегі зияткерлік капитал, білім деңгейі және субъектілердің жеке кірістері арасындағы байланыс талданды.

Мақаланың тақырыбы өзекті және жаңа болып табылады, өйткені пандемия кезінде адам капиталын қайта бағалау, еңбек нарығында жаһандық және маңызды өзгерістер болды.

Кілт сөздер: адам капиталы, пандемия, зияткерлік капитал, дағдарыс