

HUMAN CAPITAL IN THE CONDITIONS OF DIGITALIZATION OF UZBEKISTAN

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ABSTRACT

Human capital is the main factor in the modern socio-economic development. In particular, it is important for the innovative and intellectual development of the Republic of Uzbekistan. This becomes especially important during the transition to an innovative economic system and the active development of communication and information technologies, i.e. in the context of active digitalization of economic relations, their transformation towards the intangible sphere, the knowledge economy, the Internet of things, big data, cloud technologies, and so on. These changes require the implementation of innovative approaches to human capital management aimed at developing the economy of the government.

The modern Uzbek society is raising to an innovative path of socio-economic development based on knowledge, and needs the highest level of human productive forces. Investments in science, education, the social sphere in modern economic conditions are of major socio-economic importance; contribute to the expanded reproduction and accumulation of human abilities, professional competencies and economic opportunities of the population.

Nowadays, human capital is getting changed into the form of intellectual capital associated with the heuristic nature of new knowledge. And the younger generation is more becoming the bearer of modern intellectual capital, in which unique values, a new type of motivation, new forms of communication and new skills (including digital ones) are being actively formed.

Surely, knowledge is becoming a vital component of human as a factor regulating and determining his life and activity. As owning the physical capital, human capital is also being formed, which is 'becoming a decisive force in the development of society in the second half of the 20th century.' Therefore, the purpose of the article is to provide a philosophical analysis of the impact of digitalization on human capital and its development. And also the factors of human capital development in the ongoing reforms in the country and in the process of digitization has been emphasized.

INTRODUCTION

As it is known, today the dynamics of the development of the modern world is largely determined by the innovative, creative activity of man, the development of science, technics and technology. Therefore, public and private investments are directed to the qualitative improvement of the structure, content and nature of human capital, professional knowledge, the acquisition of skills, the dissemination of experience, the development of intellectual and creative abilities, and the strengthening of the high moral qualities of a working man.

The Wikipedia dictionaries emphasize that 'human capital is a set of knowledge, skills, and abilities that are used to meet the diverse needs of a person and society as a whole' [28]. Of course, the term 'human capital' has not arisen spontaneously, but has a natural result of the development of world philosophical and then economic thought. The problem of human capital development has deep roots in the history of socio-philosophical thought. It can be stated that certain elements of the theory of human capital were developed by the beginning of the 21st century, but researchers took different positions on the content of the concept of 'human capital'. They identified that

with the person himself and with certain aspects of the personality (skill, acquired abilities). According to *E.M. Samorodova*, until the beginning of the 60s of the 20th century 'the problem of the formation of the labor force was on the periphery of the interests of economic science' [22, 14].

METHODS AND METHODOLOGY

This term was first used by the American economist *Jacob Minser* in 1958, then *Theodore Schultz* in 1961, and *Gary Becker* developed this idea since 1964, substantiating the effectiveness of investment in human capital and formulating an economic approach to human behavior. They defined 'human capital' as an economic assessment of man's abilities, including his talent, education, acquired qualifications, innate abilities. The founders of the theory of human capital, *G. Becker* and *T. Schultz*, directly linked the concept of human capital only with a person as a bearer of knowledge. And they attached special importance to education as the main factor in the development of society and the economy as well.

Developing the idea that human capital is the main factor of economic growth, economist *D. Grayson* writes: 'Human capital is the most valuable resource, much more important than natural resources or accumulated wealth. It is human capital, not factories, equipment and manufacturing stocks that is the cornerstone of competitiveness, economic growth and efficiency' [15, 59].

In their works, *A.I. Dobrynin* and *S.A. Dyatlov* give the following definition: 'Human capital is a certain stock of health, knowledge, skills, abilities, motivations formed as a result of investments and accumulated by a person, which are expediently used in the labor process, promoting the growth of his productivity and earnings' [6]. Also, *Abrigo* states that investing in human capital has a positive effect on labor productivity [2].

In the works of many scientists, the theoretical and methodological foundations of the theory of human capital have been formulated, the positive influence of education, professional experience and skills, health and living standards on economic development has proved. At the same time, many experts give different interpretations of human capital. However, the existing variety of approaches to defining the essence of human capital in general can be summarized as follows.

Human capital is a complicated complex of acquired human abilities, which includes the accumulated stock of knowledge, professional experience and skills, health and psychological motives (personal qualities such as initiative, creativity, and so on). Thanks to these characteristics, the modern worker acts as a key factor in social reproduction. And also human capital has an independent form of movement, the property of self-growth and accumulation, has qualitative and quantitative characteristics, internal structure, expresses certain economic and social links.

On the whole, human capital is the basis for the formation of a knowledge society in the 21st century. In such a society, not only scientific, but also philosophical, religious, art history and other types of human knowledge has a determining value. Therefore, human capital includes not only specialists with education, but also knowledge, upbringing, science, tools of intellectual labor and the environment for the functioning of human capital in terms of performing its productive functions. Indeed, a specialist without software for his work, without the necessary sources of information, databases, methods and technologies cannot perform his work, his functions in modern conditions, as well as without a high quality of life. A specialist does not work in this country, but leaves for a country where he is provided with comfortable conditions for labor intellectual activity.

Scholars from Uzbekistan such as *B.Sh. Usmonov*, *M.Q. Qodirov*, *J.D. Eltazarov*, *M.N. Abdullaeva*, *E.M. Izzetova*, *G.T. Mahmudova*, *G.G. Gaffarova* have worked on economic, socio-philosophical, aesthetic, moral issues of human capital; Russian scholars like *I.G. Shestakov*, *E.V. Shirinkina*, *V.E. Shkurko* have on human capital in the digital age and the labor market, as well as in the context of economic security. On the other hand, above-mentioned scholars have overlooked the philosophical

issues of human capital development in today's digital economy and digitalization environment.

RESULTS AND DISCUSSION

At the present time, humanity is entering a new stage of development which is the information society, in which the main factor of production is information, knowledge, interactive communications. Their realization, application in human life and activity determines the development of the country both socially and politically. In the process of formation of the information society, it is aimed to improve the living standards of the population, develop the socio-economic aspects of life and activity, improve public administration, and others. As noted above, knowledge is getting the driving force of development.

The tasks and problems put forward at the stage of human development are solved primarily by human capital, which plays a decisive role in the development of modern society in relation to physical capital. The high intellectual level and quality of human capital, acquired and enriched in the process of quality education, turns knowledge (intangible object) into an innovative product, a material object, which operates under certain conditions. For instance, in developed countries, national human capital makes 70-80 per cent, and in developing ones it is 5 per cent of the population.

Nowadays, the level of digitalization of a country determines its economic and social development, as well as its competitiveness in the world arena. That not only facilitate state and public administration, simplify people's lives, but also improve the quality of products and services, reduce costs, and also another important advantage is that it contributes to the elimination of corruption. In fact, in the structure of the national wealth of the developed countries of the world, human capital makes up the majority.

Today the world is on the brink of new global changes. In particular, the wider use of information and telecommunication technologies, the Internet, robotization, mediatization, artificial intelligence technologies, virtual and complementary reality, the Internet of Things (IoT - Internet of Things), big data (Big Data), digitalization, resulting from all of the above, opens up new opportunities for mankind.

The term 'digitalization' in all spheres of human life means 'transformation in the socio-economic and cultural spheres through the massive introduction of digital technologies, search, creation, processing, exchange and transmission of information' [7]. And digital reality 'digitizes' us too, accumulates our 'digital footprints', being ahead of not only computer technology. It should be noted that 'digitalization is a new social situation of the 'digital divide', 'digital citizenship', 'digital socialization' [20, 117].

In the broadest sense, the process of 'digitalization' (in English 'digitalization', and sometimes 'digitization') of the economy and society generally stands a socio-economic transformation initiated by the massive introduction and assimilation of digital technologies, i.e. technologies of creation, processing, exchange and transmission of information [10].

Digitalization in the narrow sense is developing and applied in four directions:

- the process of digitizing all forms of human life, including the use of digital technologies for doing business and influencing public life;
 - changing of all types of information (text, images, audio and video) into digital form;
 - digitalization of the processes of globalization and transnationalization of information communications, which opens the way to the world information society (position of the USA);
 - generating and developing national information media, which allow to preserve the peculiarities and protect national interests (the position of the countries of Europe and Asia) [18, 57].
- As part of digitalization, digitalization of analog artifacts is carried out, for instance ancient manuscripts, paintings by artists, recordings from records and cassettes, turning them into FLAC files (file with the FLAC extension, Free Lossless Audio Codec, - an audio file compressed without loss of quality using an open source codec). And also, digitalization makes a person free from routine operations, allows him/her to engage in

strategy, removes obstacles to the development of entrepreneurial activity and, accordingly, contributes to the growth of profits. Digitalization is used in the legal system (for example, smart contracts), removing many of the problems that hinder the development of society, the economy and business. So, what is human capital itself? How does the digitization process affect upon human capital?

These days, mankind and his abilities, knowledge, skills have become a key factor in the prosperity of any society and the economic development of the state. Therefore, the essence of 'human capital', which is an important factor in the development of society, is interpreted by some economists as 'a reserve of knowledge, skills and motivation that everyone possesses' [16]. Practically, it appears as capital because it is a source of future income. This is human capital, because it is unique to a person and is his integral part.

According to Becker, 'human capital is the stock of knowledge, skills and motivation that is present in every person. It is formed through human investment (long-term capital investment) in the form of spending on education, training in manufacturing, healthcare, migration, collection of data on prices and incomes' [4]. Actually, education, the accumulation of industrial experience, health care, information retrieval represent investments in human capital. Education and vocational training increase the level of human knowledge, that is, increase the volume of human capital. Health care reduces morbidity and mortality and increases a person's lifespan. Migration and the search for information lead to the movement of labor to places and sectors where wages are higher, that is, where the cost of human capital is higher.

F. Machlup describes this approach as follows: 'It is necessary to distinguish imperfect work from perfect one, which becomes more productive as a result of investments that increase the physical and mental abilities of a person. This improvement is human capital' [13, 419]. Of course, today human capital is the main wealth of society and a key factor in economic growth. That is why today human capital is a fundamental value of society and an important economic factor.

We focus on the modern digital economy as a dynamic, self-developing system in which human capital is the main source of innovative transformations. S.A. Korshunova emphasizes the following global trends in the development of modern human capital: 'the transformation of human capital into an independent factor of production, the growing role of intellectual capital in the digital economy, the emergence of new requirements that modern employers place on human capital' [11].

As it is known, today the dynamics of the development of the modern world is largely determined by the innovative, creative activity of man, the development of science, technics and technology. The latest achievements of human intellectual activity have been the creation of digital technologies, as a result of which the process of digitalization of the economy, society, politics, culture, and education has been launched. Today, a new generation of young people has already grown up who are a digital generation with a technical mindset, from which the humanistic element is excluded. Science creates a new environment for human life. 'Like art, science is not just a cultural occupation of a person. Science is a way, moreover, decisive, how everything that is appears to us. Therefore, it must be said: the reality within which today's man moves and tries to remain is increasingly determined by what is called science' [9, 239].

V.E. Shkurko examines the theoretical approaches to defining the concept of 'human capital' and 'human potential' and analyzes the directions of its development in the context of the formation of the digital economy. She emphasizes the problematic aspects of human capital growth in the context of modern trends in the development of e-learning environment. That is, she shows that an important aspect of the digital economy is the growth of human capital and ensuring economic security [24]. She also provides conclusions on what factors can contribute to the growth of human capital and the level of economic security of the state.

In turn, digitalization itself has formed the core of the fourth industrial revolution. There is no sphere of economy and life where digitalization does not affect their most essential aspects. This especially applies to the reproductive aspects of both the economy and digitalization itself. Artificial intelligence and the Internet of Things are becoming the most important elements, the role of man and human capital is being modified [19]. So, the new concept of the digital economy provides a convincing explanation for the synergistic effect of the large-scale use of digital technologies for storing, processing and transmitting information in all spheres of human activity.

Lots of things have been said about the digitalization of educational institutions today. There are predictions that the online education platform will supplant universities. Universities began to master new formats for transferring knowledge, first of all, online courses [3]. In Uzbekistan, due to the difficult epidemiological situation, pupils and students were sent on vacation and distance learning. Of course, at present, the main changes in education are associated with the digitalization of education. And also, in the process of digitalization, the very structure of training and the organization of the educational process are fundamentally changing. Therefore, the present time 'person's education determines the level of human capital' [12]. Of course, a person acquires knowledge through the education system. Education meets the growing need for knowledge and technologies. 'Human capital is not only knowledge, skills and self-realization of a person, not just a set of practical skills and intellectual efforts of members of society, but first of all the ability to create new knowledge and values' [1], it is science that contributes to the creation of new knowledge. This is precisely its constructive and creative role in structure of human capital.

It should be noted that the main challenge to the development of human capital in a digital civilization is the speed of transformation of socio-technological infrastructure [23]. Modern socio-economic conditions and active scientific and technological progress lead to the digitalization of all phenomena and processes. In this context, it is important to note that the digitalization of the economy is characterized by both positive and negative aspects. On the one hand, the acceleration of various economic transactions (both in the commercial sector and in public and municipal administration), the openness of data for different groups of users, the efficiency of public and municipal services and fast payments and the use of Internet banking and mobile banking have positive features such as the ability to deliver information to millions (and even billions) of people around the world.

On the other hand, it has a negative character, for instance, the acceleration of economic operations and increased information transparency leads to a significant increase in cyber fraud, which is associated with the theft of funds from citizens and legal entities, harming the economic development of both one country and the world economy; due to the increased transparency of information, a number of people are deliberately misinterpreting it due to lack of relevant knowledge, which is especially dangerous when such actions are public to many listeners. This leads to a decrease in the level of legal and financial literacy of the population. Also, the active use of the Internet by citizens is associated with the constant transmission of large amounts of personal data, the storage of which is carried out by various operators. Insufficient legal and organizational regulation leads to abuse in controlling the quality of information posted, including. The constant use in everyday life of various products of scientific and technological progress, which are able to partially or completely replace the activity of the brain, leads to the decline of the relevant person and the decline of his intellectual level.

That is why, it is necessary to take into account such positive and negative features of digitalization in the development of human capital. Because in the digital age and the digital economy, some professions will disappear, others will emerge, and the social paradigm of human life will change. As a result, systematic thinking, the ability to work in uncertainty (quick decision-making, response to changes in working conditions;

ability to allocate resources and time management) and programming skills (robotics, interaction with artificial intelligence), intercultural communication skills (national culture of partner countries) understanding the context, the specifics of working in industry in other countries), creative thinking and aesthetic taste; cross-sectorial communication (understanding of technologies, processes and market conditions in various fields); will need to develop human capital characteristics such as customer focus (ability to work with consumer requests).

Moreover, the expansion of digital technologies and their application to people's daily lives will change its inner and outer world, which will have more individual but at the same time highly contradictory features. Increasingly more 'digitized', analyzed, managed, and regulated, human life itself eventually loses its originality. The possibility of introducing into the human body microelectronic devices designed to enhance any natural functions (power, speed, vision, hearing) or new ones (night vision, radio signal reception, e-passport or wallet, etc.) is of great concern. After starting, this process becomes irreversible and eventually makes human cyborgs.

All reforms currently being carried out under the Action Strategy are aimed at developing human capital. In particular, the digitization process is focused on the development of human capital. According to the Action Strategy, digitization processes in our country are carried out on a large scale. And also the processes of digitization are taking place in all spheres of public life. The most important spheres for a person are economics, education and medicine.

For instance, within the framework of the 'Five Initiatives' project, digital knowledge training centers will be opened in all regions of the country by 2022 [29]. It is also planned to develop an e-government system that will increase the share of e-government services to 60 per cent by that year. Particularly, 'Digital Entrepreneurship' will develop, by 2023 the volume of services in this area will triple, and their exports will reach 100 million US dollar. Of course, such work will serve to further develop human capital.

It should be noted that human capital, which includes health, knowledge and skills, is one of the main drivers of economic growth and poverty reduction in many countries of the world, especially in Asia, in the 20th century. That is why our country is one of the first countries in Central Asia to support the Human Capital Development Project [27].

The digital economy plays an important role in the implementation of the Action Strategy. The year named 'active investment and social development' which is 2019 sets the task of developing a national concept of the digital economy, which provides for the modernization of all sectors of the economy based on digital technologies. Based on this, the goal has been set to implement the 'Digital Uzbekistan-2030' program [14]. It should be noted that the role of the digital economy in the economy plays an important role in determining the competitiveness of countries in the modern world. Because no matter what sector or sector of the economy we look at, we see the place of digital technology in everything. Especially, we see the share of innovative digital technologies in the country's banking system, as well as at the level of public services.

Considering the role and importance of human capital in the digital economy, let us turn to indicators that assess the degree of development of digital economic relations from different angles. It should be emphasized that each of the indicators assessing the degree of digitalization of the economy contains an assessment of human capital, including in the form of digital knowledge and skills in using information and communication technologies.

Considering the role and importance of human capital in the digital economy, *L.D. Sayfullina* states that 'it is necessary to note the fact that each of the indicators assessing the degree of digitalization of the economy contains an assessment of human capital, including in the form of digital knowledge and skills in using information and communication technologies' [21, 94]. So, human capital is one of the factors for the electronic development of the information society, along with the ICT

infrastructure, the economic environment, as well as the access and use of ICT.

The development of digital technologies makes new demands on the human capital training system, that is, primarily in education. The need to participate in the global digital economy requires training not only programmers and engineers, but also fundamentally new types of specialists. At the same time, the use of digital technologies leads to a reduction in employment in relation to many professions, and in the future causes their complete disappearance. It is replaced by the need for specialists who can serve the digital economy.

Knowledge becomes a necessary component of a person as a factor that regulates and determines the life and activity of a person. During this period, along with the physical capital belonging to the state, human capital is formed, which 'in the 2nd half of the 20th century becomes a decisive force in the development of society.' Thus, it can be talked about the significant importance of indicators characterizing human capital to the level of development of the digital economy, information and communication technologies and the electronic society as a whole.

It should be focused that international organizations and the community give priority to the development of human capital. Specially, the World Bank has allocated 3,4 billion US dollar on implement 19 projects for the development of human capital in Uzbekistan. The main goal of the strategy in our country is 'the development of human capital as a key factor determining the level of competitiveness and innovative development of the country in the international arena' [17].

The main characteristics of the digital society are: the use of technology and technology; the presence of interpersonal communication in social networks; the use of digital technologies as a modern means of entering culture; changing the role of education subjects. It is they who act as the basis for revising the structure of modern education, substantiating the principles on which it is necessary to build it today. And each of them is based on elements of the technological infrastructure of the digital society - networks, big data technologies, platforms and algorithms. This technology infrastructure, in turn, "ensures the super connected, comprehensive and mobile world of today" [26, 2019].

Based on the above, it can be said that, a digital society is a society whose infrastructure operates through digital technologies (big data and artificial intelligence technologies, algorithms and algorithmic systems, cloud computing, etc.), and the basic form of organization and social interaction is network structures and platforms. Defining digitalization as the penetration and integration of digital technologies into all areas of social life that are potentially subject to digitization, it seems reasonable to consider digitalization as a set of the following processes: networking, datafication, platformization and algorithmization.

CONCLUSION

Human capital, being the main resource of the digital economy, undoubtedly requires the use of new approaches to managing its development, taking into account digital trends in socio-economic relations. And also, the future development of Uzbekistan will be based on science, scientific, social and humanitarian technologies, and the digital economy. When implementing the action strategy, digitization processes are carried out based on technologies for creating, processing, exchanging and transmitting information. It could be noted that in the world of digital technologies, it is the humanities that will allow formulating ideas and making balanced judgments, that is, performing tasks that are not given by digital algorithms [5].

The digital transformation has been found to have a direct impact on economic growth, while modern research emphasizes the quantity and quality of accumulated human and digital capital. However, today not all countries are adequately supplied with these new factors of production as required, respectively, not all countries can enjoy the benefits of the global economy equally and therefore the problem of digital inequality arises. On the other hand, even in countries with sufficient human and financial capital, the digital transformation

process is not yet complete, leading to a significant increase in the productivity and competitiveness of companies.

The digital age has not passed philosophical comprehension yet. This is one of the circumstances that hinder the development of a common understanding of the essence of the digital economy. Evolution draws strength from knowledge. Initially knowledge, then actions. In this case, the practice of digitization is ahead of the process of developing scientific knowledge about this phenomenon. On the whole, after the declaration of the coronavirus and the COVID-19 virus as a pandemic by WHO, the digitalization process has intensified many times. Millions of people have started to use digital platforms has been started used more actively by millions of people.

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