



THE METHODOLOGICAL ASPECT OF HUMAN CAPITAL FORMATION IN THE DIGITAL ECONOMY

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ABSTRACT

The development of the digital economy, the use of modern innovative technologies, as well as the introduction of market relations, create prerequisites for increasing the economic efficiency of the agricultural industry. The paper describes the main methodological approaches to human capital formation in different time periods. The authors determined that human capital is important in the development of modern economic relations. The evolution of the development of this concept has been considered and the main development trends in the economy digitalization have been identified.

Keywords: human resources, knowledge economy, human capital, digital economy, agriculture.

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1. INTRODUCTION

A significant number of approaches to the study of the concept of "human capital" are primarily caused by the rapid development of modern information technologies that can qualitatively change a person's life for the better [1-8]. Under current conditions, the definition of capital is associated with profit making, the sources of which are social or human capital, in addition to financial assets and other material goods [9-11].

2. LITERATURE REVIEW

Studies of the following scholars are devoted to the problems of human capital formation: Yu.A. Korchagin, A.N. Dobrynin, S.A. Dyatlov, A.G. Paptsov, P.M. Pershukevich, A.V. Petrikov, N.I. Proka, E.V. Rudoy, I.S. Sandu, A.N. Semin, N.A. Svetlakova, A.T. Stadnik, V.F. Stukach, K.S. Ternovykh, S.A. Dyatlov, E.D. Tsyrenova, R.I. Kapelyushnikov, L.A. Tretyakova, A.V. Turyansky, E.V. Rudoy, I.G. Ushachev, S.A. Shelkovnikov and other scholars.

3. METHODOLOGY

The works of domestic and foreign scholars devoted to the study of the role of human capital in increasing the economic well-being of the state served as a theoretical and methodological basis of the research [12-14]. Modern methods of monographic and system analysis were used in the research process.

4. RESULTS

The human capital theory has been actively developed since the middle of the last century and a sufficient number of approaches to the definition of this concept have been formed over such a long period of time. Today, there are several main directions for defining the concept of "human capital" [15]. In the framework of the first approach, economists pay considerable attention to quantitative methods of the economic efficiency of investments in the upbringing, education and health care of a human capital carrier [16]. The second direction is based on the difference in incomes received by a person due to innate abilities, under the influence of a hereditary factor. The main representatives of this trend are L. Walras, I. Fisher, A. Marshall, T. Schulz, G. Becker, L. Thurow, F. Machlup, Y. Ben-Porat.

According to the first direction of the economic thought expressed by the founder of the human capital theory Gary Becker, who received the Nobel Prize for achievements in the formation of the human capital theory: "... human capital is formed by investment in a person, including education, training in production, costs of health care, migration and search for information on prices and incomes" [17].

The long evolution of economic teachings of well-known economists has led to the need to deepen the significance of man in the development of productive forces and in increasing economic growth. Stable economic growth in developed countries that use human potential, in addition to well-known production factors, has led to the development of economic thought in the field of human capital [18].

S. Fisher, R. Dornbusch and R. Schmalenzi give the following definition: "Human capital is a measure of the ability to bring income that is embodied in man. Human capital includes innate

abilities and talent, as well as education and acquired qualifications". These scholars refer the abilities acquired during life to human capital, in addition to innate qualities [19].

An American economist L. Thurow summarized the first studies in the field of human capital and defined it as the ability of people to produce objects and services. According to the scholar, the economic ability of a person is not only another productive investment of an individual, but it also affects the performance of all other investments.

Along with the above approaches, human capital is studied from the perspective of performance. In his research, Romer singles out human capital as a fundamental source of economic efficiency. In his opinion, only knowledge and human capital are used to create new structures and knowledge [20].

The accumulation of the above definitions of human capital on the basis of the above approaches, depending on the field of study, in which this concept is considered, makes it possible to systematize the terminology in the context of interdisciplinary sciences in the following form (Table 1).

Table 1 – The main approaches to the definition of human capital in the context of interdisciplinary sciences

Branch of science	Definition of human capital	Representatives
Economics	A stock of knowledge, skills and abilities that each person has and which can be used either for production or for consumer purposes.	R.I. Kapelyushnikov, A.I. Dobrynin, S.A. Dyatlov, E.D. Tsyrenova, Yu. A. Korchagin and others
Sociology	A set of skills, abilities and knowledge, as well as attitudes, internalized by an individual and acting for him/her as the basis for the implementation of the life scenario.	I.A. Krutiy, O.V. Krasina
Economic psychology	Quantity and quality of people, who meet the medical criteria, suitable for competition by their psychological, intellectual, cultural, professional parameters	A.I. Yuryev, Ya.M. Roshchina
Social hygiene	The abilities accumulated by society to restore and develop in the generations of people socio-biological properties, health, habits and lifestyle, knowledge, creative work, etc.	A.I. Babenko
Psychology	A self-developing sociocultural and psychophysiological complex resource-economic individual-reflective system. A stock of profitable knowledge and competencies, health and education of a subject, as well as his/her bioenergetic and psycho-physiological resources and personal-professional and reflexive-creative capabilities	I.N. Semenov, A.L. Zhuravlev, D.V. Ushakov
Political psychology	The political context and role functions of specific actors are taken into account. The range of objects of analysis also includes the personal characteristics of a politician to the extent that they determine the efficiency of his political role.	A.V. Selezneva, I.I. Rogozar-Kolpakova, E.S. Filistovich, V.V. Trofimova, E.P. Dobrynina, I.E. Strelets, I.S. Burikova, M.A. Konovalov.

As can be seen from Table 1, the concept of human capital is currently widely discussed not only in economics, but also in political psychology, sociology and social hygiene [21-25]. In view of this, the structure of this concept periodically changes depending on the sphere of scientific application, while the broad meaning of the interpretation remains unchanged.

For example, a Russian psychologist Aleksandr Ivanovich Yuryev identifies four basic abilities of human capital – workability, ability to innovate, ability to learn and vitality [Yuryev, 1998].

In the studied published literary sources there are many approaches to the definition of the category "human capital".

Analyzing the existing approaches and agreeing with many of them, we identify several fundamental distinctive aspects:

- one of the features of human capital is a desire and abilities of an individual to continuous self-improvement through self-development and self-learning, as well as through the use of investments in it to increase its volume;

- the reproductive process of the functioning of human capital (including investments in health and education, professional development, etc.) lasts almost all life. Hence, it would be more correct to use the concept "forming", rather than "formed" (as used by some authors, including those mentioned above) [26-27];

- inherent and acquired potential, as well as human capabilities, become human capital only when they are used in the labor process and provide a certain benefit to its holder.

Depending on the number of types of knowledge, as well as experience, forming the basis of human capital, there are two types of it:

- total human capital is a combination of general theoretical knowledge, the level of moral and cultural development, a set of skills and experience that can be used by a person in any type of economic activity and, as a result, at any enterprise and in its structural divisions at workplaces;

- professional human capital (one of the constituent parts of total human capital) is a set of skills, knowledge and experience related to a particular professional activity and therefore implemented, as a rule, at a specific workplace, in certain structural divisions and enterprises.

It is worth noting that the main prospects for the development of productive forces in the 21st century are associated with the development of human potential as a fundamental production factor [28-36].

Under the conditions that have developed by today, the information society has entered a new era called the digital economy [37-39]. According to Decree of the President of the Russian Federation of 09.05.2017 No. 203 "On the Strategy for the Development of the Information Society in the Russian Federation for 2017–2030", the priority direction for the implementation of this Decree is the development of human potential and the enhancement of Russia's role in the global humanitarian and cultural space [40].

As for agriculture, the introduction and development of digital technologies in the industry directly depends on the availability of skilled workers [41-46]. According to researchers, a huge resource potential [47-48] has been accumulated in agribusiness, which is still far from being used efficiently, which is primarily indicated by the low level of labor productivity (Figure 1).

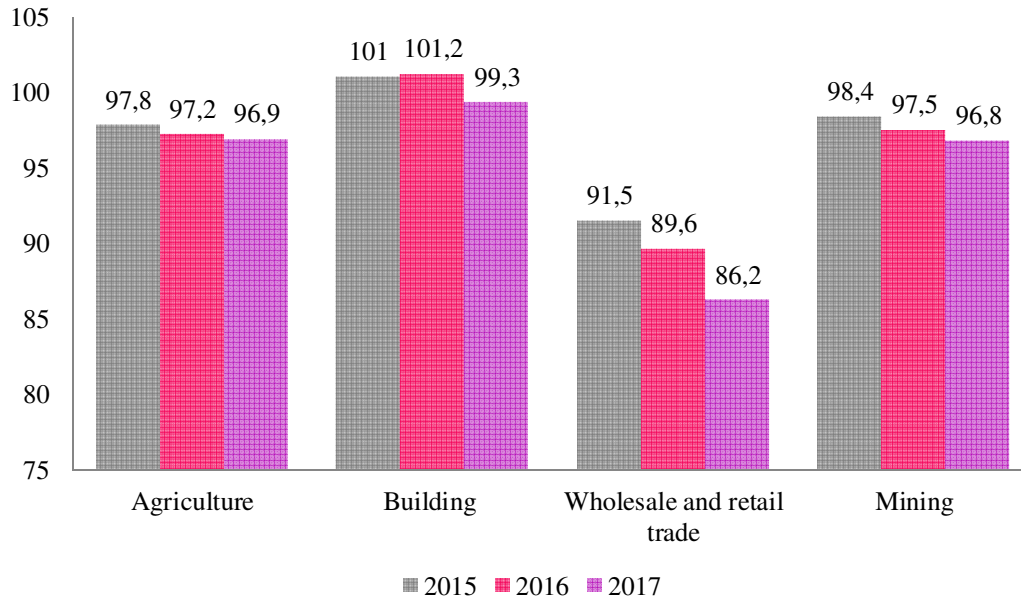


Figure 1 – The dynamics of labor productivity by type of economic activity, %

The realities of today are such that innovative technologies are used in all sectors of economy, including in agribusiness [49-56]. It is worth noting that the agricultural industry is very labor-intensive, it depends on the climatic conditions and the "whims" of nature, and therefore mankind has always tried to resort to various technologies in order to increase the yield and productivity of farmland.

5. DISCUSSION

In modern conditions, a strategic role of human capital in forming the digital component of the backbone sectors of economy [57-61], in particular, of agribusiness, is beyond doubt, since information technologies serve not only as a technological basis for the modernization of agricultural production, but also as a basis for continuous self-improvement and the expansion of workers' knowledge [62-69]. The creation of digital infrastructure allows both turning the information into a resource for economic growth and adaptively using the organizational activity of the workforce [70-77].

6. CONCLUSION

Thus, current trends in the socio-economic development show that there is a need to formulate new priorities and criteria in interpreting the concept of human capital, which would summarize the main features of a highly developed modern society capable of carrying out economic activities in the digital economy.

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