Theoretical approaches to the concept of human capital in agriculture

T Karpova and M Muravieva
Saratov State Vavilov Agrarian University, 1, Theatre square Street, Saratov 410012, Russian Federation
E-mail: tanya3107@yandex.ru

Abstract. The article deals with the concept of human capital, the fundamental distinctive aspects of human capital, the definition of human capital. Strengthening food security of the country is impossible without identifying imperfections in the systems of labor motivation of economic entities of the second sphere of agriculture. Agricultural production urgently needs to develop a set of such measures, as it is the most vulnerable to crises. In this regard, the analysis of existing methods of stimulating the effective use of labor resources was carried out and new, more advanced methods of improving the efficiency of human capital in agricultural enterprises were developed. The proposed methods of effective use of human capital can be recommended for implementation in agricultural enterprises. They will increase the profitability of production by enhancing human resources and sustainable productivity growth, as well as more efficient use of fixed and current assets.

1. Introduction
The driving force for sustainable growth of labor efficiency and the final finance results of the functioning of agricultural enterprises is the effective use of human capital and methods that motivate the interest of participants of the production processes in the results of labor. The trend for the transition of economic branches to a new practice of life determines the need to find innovative technologies and methods of agricultural production management. Managerial decisions to reform existing methods of the use of human capital should be made. Their successful testing will make it possible to interest employees in the growth of the final finance results of economic operators and to apply these decisions to the existing conditions of external and internal environment of agricultural enterprises. Researchers P-A Chiappori, A Galichon and B Salanié, D Acemoglu and P Restrepo, J J Heckman, J E Humphries and G Veramendi [1-3] was auto-generated theoretical aspects of human capital. However, due to the diversity of the concept of human capital, the generally accepted method of its evaluation and, consequently, methods of increasing its efficiency have not been formed to date. Currently, human capital in agriculture is considered to be insufficient, and high rates are made on import substitution, it is necessary to produce a sufficient number of quality products, and without human capital it is impossible to do. This experience can be applied only in the territory of the Russian Federation, but also in foreign countries.

2. Materials and methods of research
The following methods were used within the study: abstract-logical method in considering the theoretical aspects of formation of the category “human capital”; monographic method in advanced
study and generalization of the experience for the use of the existing methods which motivate the effective use of labor potential in agricultural organizations. It is planned to apply the method of analysis in studying the complex frame of economic phenomena. The method of synthesis is used in studying the integration of individual elements for overall assessment of efficiency of economic operators and the method of comparison is used to identify differences in actual data, studying the dynamics of phenomena and processes.

In order to assess the efficiency of financial-operating activities of agricultural enterprises of the region required to identify internal reserves that will allow the transition to progressive methods of stimulating the effective use of human capital, it is necessary to use the statistical-economic method. In this regard, it is possible to use economic groupings, statistical-economic analysis of relationship between indicators.

The conceptual base of the process of human capital formation, such interrelated and fundamental categories as human resources, human capacity, labour potential, labor forces, labour power are studied in the works of many both domestic (B M Genkin, M V German, and L V Zgonnik, K V Kurchidis, V V Lukashevich, E B Nikolskaya, S G Radko, B Y Serbinovsky, I V Skoblyakova, A A Soloviev, S G Strumilin, A M Tetereva, P E Shlender) and foreign authors (M Armstrong, B Becker, R Beatty, M Huslid, etc.). Various aspects of labor potential, human resources, human capital and human resourcing of the agricultural sector of the economy are reflected in the works of E A Barbashin, N F Vernigor, V A Dergunov, A F Dorofeev, N M Edenkina, S M Yerokhin, V A Efimov, I B Zagaitov, A M Zubakhin, K P Kameneva, A M Kozina, E I Lovchikova, Y N Nazarkina, M V Noskova, A V Pashin, N I Prok, L V Skulskaya, A V Ulezko, V V Ukhobotov, I M Chetvertakov, N N Filippova, T K Shirokova etc.

The problems concerning the theoretical and practical aspects of the development of methods motivating participants of production processes to improving labour efficiency are reflected in the works of domestic and foreign scientists, among which both classics (F I Herzberg, J M Keynes, F W Taylor, A V Chayanov, Th W Schultz, F Engels) and modern scientists F G Arutyunyan, L B Bondarenko, M N Gromov, A S Deryuga, A Y Kibanov [4, 5] can be mentioned.

3. Results and discussion
Under current socio-economic conditions, one of the main factors of production is human capital. This is due to the rapid development of scientific and technological progress, introduction of its achievements in production, as well as the emergence of new knowledge-intensive branches. As the economy develops, the importance of the components making up the human capital is continually increasing. A person in the contemporary economy is rated as a valuable asset of the enterprise but not a source of expenditure. Over last years the issues of the so-called “human capital” have become relevant in the economic literature with that an increase of investment in a person is meant.

In West European countries, the theory of human capital began to develop quite actively in the postwar years. The solution of social issues, the growth of investments in human capital were intensified and they significantly exceeded investments in industrial capital, and as a result researchers note high rates of labor efficiency and the economy as a whole [6].

Currently, despite the fact that human capital is considered in two dimensions: formation and use of labor force or based on the assessment of the labor cost, it is necessary to note a rather narrow interpretation of this complex concept. Labor forces retain and use knowledge and skills and create intellectual capital. Their knowledge is enhanced through mutual understanding with others and generates assimilated knowledge belonging to the organization [7].

The essence of human capital is sufficiently revealed in the definition given by Tuguskina G. N.: “Human capital is a complex of potentials, moral-psychological and physical health, knowledge accumulated and increased as a result of investment, skills and experience necessary for professional activity in a particular sphere of social reproduction, providing benefit to its owner” [8]. A I Kochetkova defines human capital as a stock of abilities, knowledge, skills and motivations embodied in a person [9].
Analyzing the existing approaches and agreeing with many of them, we single out several fundamental distinctive aspects (Table 1):

**Table 1. Fundamental distinctive aspects of human capital.**

| Elements of the category “human capital”                                                                 | Indicators of effective use of human capital in agricultural production                                      |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| one of the features of human capital is desire and abilities of the individual to continuous self-improvement through self-development and self-education, as well as the use of investments in it to increase its volume; reproduction process of human capital functioning (including investments in health and education, professional development, etc.) lasts practically for the term of life. Hence, it would be more correct to use the concept of "emerging" rather than "formed" human capital; inborn and acquired potential, as well as human abilities become human capital only when they are used in the labor process and provide some benefit to its owner | existence of collective agreements with employees of the enterprises; regulations on trade union work; average monthly and annual payment of labor by the categories of employees of agricultural enterprises; types and amount of additional payments, compensations, bonuses for the quality of work; measures for supporting private farmsteads of employees; state support (levels and forms of support); level of production technologies used. |

Taking into consideration these provisions, human capital can be defined as inborn and acquired during lifetime abilities and potential formed by a person as a result of development (including self-development), a complex of accumulated experience, skills, professional and universal knowledge, abilities, motivations and health, providing benefit to its carrier, economic operator and society as a whole. In our opinion, this definition sufficiently reveals, firstly, the general concept of the category "human capital", its essence, and, secondly, the fundamental possibility of its use in the activity of a person.

Strengthening the food security of the country is impossible without identifying imperfections in the systems of labor motivation of economic operators of the second sphere of agriculture. The current measures for stimulating the employees’ interest in the results of production processes of agricultural enterprises are a weak link in the development of this industry. The most significant in this problem is the conservative nature of the payment system, which often does not provide the relationship between the final finance results and the level of salaries and wages of the personnel. In addition to this problem, it is necessary to single out the difficulties in the introduction of present-day information technologies in the management system of agricultural enterprises.

Comparison of the key characteristics shows that foreign experience in the application of the methods of effective use of human capital differs, first of all, by a qualitatively new paradigm of thinking based on the state policy of support of agriculture in developed countries, as well as innovative approaches to personnel management, combining a complex of measures of material incentives and non-financial recognition [10-12].

The development of new methods for the use of human capital should be based on the provisions of the theory of psycho-sociological approach of F. Herzberg, which can be used to develop legal-regulatory and organizational-economic methods of labor stimulation, and the theory of W. Taylor, on the basis of which it is possible to work out recommendations for the application of system and process approaches in the development of the above mentioned methods. It is necessary to make a statistical-economic assessment of the criteria for the efficiency of production and labor in agriculture and the factors affecting them; to make a correlation analysis of the production profitability, labor efficiency, capital productivity, capital-labor ratio and average payment at agricultural organizations;
4. Conclusions

The study and generalization of theoretical and methodological provisions on the interpretation of the concept "human capital" allowed formulating the following definition. Human capital is a system of inborn qualities, the education received, the way of thinking, acquired and developed capabilities of a person to work, giving the ability to produce values, and as a capital providing benefit. The analysis of the existing methods of stimulation of effective use of labor resources shows the necessity of development of new, more perfect methods of improving efficiency of the use of human capital at agricultural enterprises.
At present, it is important to reorganize the existing and apply new methods of effective use of human capital, as well as the measures for the reproduction of the key production factors based on the principles of efficiency at the level of the agricultural enterprise [8,18]. It should be noted that it is explicitly required to develop a complex of such measures for the second sphere of agribusiness since it is mostly liable to crisis phenomena.

The practical relevance of the results of the study lies in the fact that the proposals formulated in the study can be used by the heads of agricultural enterprises in the areas of improving the personnel management system, as well as the modernization of production.

The proposed methods of effective use of human capital can be recommended for implementation at agricultural enterprises. They will increase the profitability of production by enhancing human resources and sustainable growth of labour efficiency, as well as more efficient use of fixed and current assets.

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