

Improving of Human Capital Assessment Methodology as a Basis for Improving the Management of Human Resources in New Economy

Elena Nikolaevna Chizhova, Tatiana Alexeevna Davydenko and Elena Yuryevna Kazhanova

Federal State Budget Educational Institution, of Higher Professional Education,
"Belgorod State Technological University, Named after V.G. Shukhov,
308600Kostyukovstr, 46Belgorod, Russia

Abstract: This article discusses some of the problems associated with the development of a methodology for assessing of human capital and the effectiveness of the investments in it and some issues actual for Russian organizations concerning human resource management. It is noted the importance of an interdisciplinary approach to the study of the nature, function, mechanism of human capital, because of the need to find ways to make the most efficient use of the capacity of human resources. The attention is paid to the diversity of approaches and methods for the assessment of human capital, none of which can claim to be universal. It has been suggested that the practice of the domestic management of formal social criterion in the evaluation of personnel, both at the stage of selection and appraisal process, reduces the reliability of the information and does not give a realistic picture of the potential employee and of the efficiency of investment in human capital. The article provides a list of factors not taken into account while valuating the human capital. It makes conclusion about the need of further improvements to the methodology for assessing the potential of human resources in an integrated manner, in accordance with the requirements of the new economy, based on innovation and the intellectual type of development. Key words: human capital, human resources, innovation economy, methods of evaluation of human capital, investment in human capital, human resource management.

Key words: Human capital, Human resources, Innovation economy, Methods of evaluation of human capital, Investment in human capital, Human resource management

INTRODUCTION

Today, more than ever, increased attention is paid to scientific thought about the problems of development of human capital theory, using its achievements and findings for the formation of a socially-oriented market economy, the redeployment of existing resources towards improving the level and quality of human capital, which is the basis of creative human activities. Development of human resources demonstrates the movement of theoretical and applied aspects of this concept in the area of qualitative characteristics of their transformation [1].

In an era of innovative modernization of personal, intellectual and human qualities are particularly important. For example, the value of Bill Gates ' Empire of human

capital is at least 50% [2]. In this connection, in theory and in practice qualitative assessments of human resources are actively analyzed. Since its formation the human capital is associated with economic and social investment and there is a need to develop a system of evaluation of their effectiveness. In numerous scientific publications on economic theory, sociology, psychology and management, associated with human capital, a wide variety of interpretations is provided, not only as the concept of human capital, but also by all sorts of classification evaluation criteria of both the capital and the effectiveness of its application. As a result the conceptual framework of human capital theory was expanded and enriched. The study on evaluation methodology of human capital is particularly important,

Corresponding Author: Elena Nikolaevna Chizhova, Federal State Budget Educational Institution of Higher Professional Education, "Belgorod State Technological University, Named after V.G. Shukhov, 308600Kostyukovstr, 46Belgorod, Russia.

since the concept of evaluation is largely determines the quality of the received information, on which management decisions are taken for the effective use of human resources [3]. Let us discuss some problems connected with the possibilities of practical use of human capital assessment methodology in the management of human resources.

The Main Part: In the most general form the human capital can be characterized as an economic resource, that is, the potential ability to create wealth. The modern interpretation also addresses to the ability to provide capital to the owner's personal, social and economic well-being [4]. In early and in late works of scientists on human capital, there is no consensus on the definition and the content of this notion, that can be explained by the complexity and versatility of the phenomenon. Like all other economic resources, it is limited and needs to be used effectively. This is done at all economic levels, therefore, the assessment of human capital requires:

- C Micro-human capital at the individual level and the human capital of enterprises and companies;
- C Meso-human capital of large corporations and regions;
- C Macro-aggregate human capital in the national economy (of society);
- C "mega"-joint human capital in a global world.

Human capital assessment is carried out through the analysis of accumulated investments in education, science, health, security and a certain standard of living. To identify general problems of human capital evaluation, let's take in consider only micro-and macro levels.

That human capital is a key factor for economic growth, it has become increasingly clear, it is not only justified theoretically but also proved empirically. In particular, J. Park found a similar relationship for example 94 of developed and developing countries [5]. At the macro level to evaluate the human capital of the country/region the well-established universal "human development index" (HDI) is used [6]. The intellectual society index (reflects the education levels of the population, the share of education expenditure in GDP, the share of students in the general population, the share of employed in the scientific service in total employment, the share of spending on Science in GDP) and indicator of intelligence production (Education Fund to gross domestic product) are applied. It exit also known methods

of evaluating the cumulative stock of human capital by using indexes proposed by K. B. Malliganom and H. C. Martin [7].

These indexes have status function that allows to judge about the level and quality of life and socio-economic situation of the country as a whole, its ranking in the world economy. As for the determination of effectiveness of use of human capital or investment in it, they do not give the objective presentation of results. For example, by the HDI Russia is ranked 55 in the world and Japan is one of the most successful countries (2012) [8]. The skill level of the Russian population is 1.5 times above than in Japan, but Russia's GDP is less than GDP of Japan to 3.9 times (2008), which indicates the low efficiency of the intellectual potential of Russia [9]. As far as the human capital, the estimated cost per capita in Russia by 2011 year was only 14.5 thousand dollars. It is 87 times smaller than American national human capital per capita and in 39 times less German, 42 times-Japanese, 1.3 times the Chinese [10].

Evaluation of human capital at the micro level has to evaluate it quantitatively (goodwill), qualitative (performance assessment) and by its value. For each type of evaluation its own system of indicators is developed and methodology of the evaluation contains various kinds of methods that are associated with the areas and objects evaluation. With all the variety of methods there are several basic approaches to evaluation of human capital:

- C Calculation of the capitalization impact;
- C Definition of investment in human capital;
- C Analysis of natural indicators (skills, competence, literacy).

Basic approaches to the evaluation of this unique economic resource were formed by the classics of the human capital theory.

By t. Schulz expenses on human capital consist mainly of direct cost of the state and individuals in education and labor students themselves to produce their skills [11]. J. Mintzer suggested one of the easiest ways to measure human capital by taking into account the number of years of general education, vocational training and the employee's age [12]. L. K. Thurow in his human capital assessment model uses a Cobb-Douglas production function, where the variables are the products of human capital; physical capital; investment in human capital; natural resources; economic ability [13]. J. Tobin

proposed to regard in the business sector the utilization of intellectual capacity (ratio of the market value of the asset for its replacement cost). With the same set of assets the companies with high "coefficient of Tobin" demonstrate the competitive advantages of the company's achievements, in particular, at the expense of the quality of human capital [14]. Further research of foreign and domestic scholars the problem of assessment of human capital has got its development.

According to the comparative (competitive) approach, the cost of the employee is determined by the price at which you can hire such worker in the market. Human capital of an enterprise in this case is equal to the sum of the values of all of its employees. The most common value of human capital is calculated through the discounting of net income, which can give an employee of the enterprise. In this case, the value of human capital of any capital cannot be determined by cost of its production but by the economic benefit from its use.

The development of the informational approach to measuring human capital outside the neoclassical methodology of investment process is new phenomena in the domestic economic theory. [15]. It focuses on the intellectual component of the human capital and the possibility of determining intellectual capacity (and innovative aspect) of an individual and of the company.

In each approach, there are a number of contradictions and complexities, that is noted in scientific publications on this subject [16]. Valuing only on the basis of the cost of education is only one part of the total accumulated human capital. When evaluating human capital through investment, many scholars are of the view that its formation requires all costs which are aimed at the maintenance of human life. In addition, the productivity of people with roughly the same education can vary considerably. This may be due to different reasons: physical and psychological characteristics of employees, as well as their motivation. Moreover, such an approach does not take into account intangible benefits that may come from a company employee. For example, his client base. Therefore, in practice, such an assessment would not fully reproduce all the real volume of human capital.

The lack of a comparative approach is that the labor market does not always reflect the real value of people. Wages of one and the same person can be significantly different depending on industry, business type, region or country, where operates its human capital. Therefore, this method cannot be used quite correct, as well as it is difficult to assess the impact of human capital on the productivity of the company, if it applies, for example, outsourcing.

The list of methods of the theory can be continued on and on, but this is enough to conclude that there is a multiplicity of approaches to the assessment of human capital and the methods of evaluation. And this aspect is developed not only in economic science, but also in psychology, sociology, management. Seemingly, the enterprises have all opportunities for choice of a technique of an estimation of human capital, inadequate to their characteristics and status of the internal and external environment. But few of them actually switched to measuring the efficiency of staff and really working on its improvement.

The reasons are more than enough:

- C Lack of motivation management, based on the use of cheap labor;
- C Lack of staff specialists able to perform appropriate evaluation procedure;
- C Few number of enterprises oriented to innovative development and interested in the development of the human potential of their companies;
- C High market value of valuation services of consulting and factoring companies;
- C The lack of a single, simple and affordable method of evaluation, etc.

As a result, at best, companies are limited when evaluating human capital cost method by the summation of all costs incurred for staff (search, recruitment, adaptation, learning, development, etc.). In addition there is a certification, which allows on the basis of tests and interviews to assess the quality of human capital. However, despite the requirements of the labor legislation, this procedure is carried out in most organizations from case to case and some don't do it at all. The same attestation forms are copied from Internet sites, while their content may not be universal for all organizations with differences in the type of activity, structure, personnel, human resources management policy.

Existing methodologies for the evaluation of human capital are widely used in domestic practice and valuation of enterprises, though they only allow to predict the individual cost of an employee. However, for internal management they help to define quality characteristics of evaluation of human capital, for example, some competencies, including knowledge, abilities, skills, personal qualities and attitudes, motivations for action.

One of the elements of human capital is the motivation, which plays a very important role in the process of formation and use of human capital. In practice, western companies for estimating it use composite indicator "employee satisfaction", which is defined by a set of parameters, mainly through questionnaires [17]. In domestic enterprises, such examples are rare. The use of this type of social criteria when evaluating human capital serves as a feedback between the two interested in improving the quality of human capital labor parties: the employee and the employer. The degree of loyalty of employees of a company may not be reflected in the value of its human capital. But, on the other hand, it is problematic to assess monetary benefits associated with reduced risk of unemployment, the prospect of career growth and almost impossible to give a market assessment of the level of satisfaction with the content and conditions of work.

As the general shortcomings of the various indicators to measure human capital proposed by authors, it should be noted inadequate accounting effect on the amount and quality of human capital caused by the following factors:

- C The type of organizational structure (degree of subsidiarity);
- C The nature and direction of internal communications (transmission of information);
- C Management style (delegation of authority);
- C Personnel policies (possibility of staff training and development within the company management motivation to invest in the human potential of the organization);
- C Motivation for the exchange of business information among employees (skills, influence the adoption of effective management decisions).

In connection with the above, we believe that a comprehensive approach to the valuation of human capital is obligatory and support the views of those who propose to use the matrix methods [18]. They will reliably install and evaluate existing at the enterprise the relationship between elements of the value of human capital, labor, technology, organizational culture and a number of other important factors, based on both financial and non-financial indicators. As a result, it would be possible not only to assess the dynamics of quantitative indicators, but also to manage effectively human capital enterprise.

In the meantime, businesses in the countries with transitive economy could try to use any of the available methodologies for evaluating their human capital, though imperfect, with flaws. In any case, the analysis of data on the state of the human capital, will determine the trends of its development and thus reduce the risk of making wrong decisions on the use of all the economic resources of the organization. The problem is to choose the most appropriate option valuation, in accordance with the objectives and the real opportunities.

If the organization implements the concept of management of a man, it has to use anyway the comprehensive assessment. Despite the high complexity, such an approach helps to ensure a qualitative breakthrough in the innovative development and gives an undeniable competitive advantages in the long term. After all, not formally, but really organization is interested in developing an employee because it is learning and developing socio-economic system, therefore, the management carries out the general policy objectives and development needs.

CONCLUSION

Human capital is the object of study of various branches of science, there are many variants of its study, its interpretation is ambiguous and there are different interpretations that determines the differentiation of approaches to evaluation. The lack of a unified methodology for assessing the main economic resource is a manifestation of wealth of scientific thought and not its limitations, so each significant stage in the development of economic systems added to the emergence of new ideas in the development of methodologies for the assessment of human capital.

With the entry of modern society in the era of the new economy, there is a need for a comprehensive assessment of the capacity of human resources in general, not just of individual structural elements of human capital. The success of this promotion is inextricably linked to the need to further deep and creative development of human capital theory, practical recommendations to find and the best use of social investment, innovative opportunities, creation of favorable conditions to enhance the human dimension in all sectors of society.

Inference: The particular importance of human capital assessment is for the countries of the post-Soviet space. To take its rightful place in the global economy of the

twenty-first century, it is necessary to move away from the domination of the resource advantages in determining their competitiveness to technological benefits. These include the technologies of formation, evaluation and utilization of human capital.

REFERENCES

1. Buzgalin, A. and A. Kolganov, 2006. People, capital and the market economy of the twenty-first century. *Questions of Economics*, 3: 125-141.
2. How to determine the value of human resources? Date of 13.07.2013 <http://www.msfofm.ru/transformation/137-cost-of-employees>.
3. Spender, J.C. and B. Marr, 2006. How a knowledge-based approach might illuminate the notion of human capital and its measurement. *Expert Systems with Applications*, 30(2): 265-271.
4. Buranshina, N.A., 2011. Human capital in modern intersubject researches. *Creative economy*, 10(58): 74-79.
5. Park, J., 2006. Dispersion of Human Capital and Economic Growth. *Journal of Macroeconomics*, 28(3): 520-539.
6. Desai, M., 1991. Human Development. Concepts and Measurement. *European Economic Review*, 35: 350-357.
7. Mulligan, C.B. and X. Sala-i-Martin, 1995. Measuring Aggregate Human Capital. — Working Paper of the NBER, #5016.
8. Colin, K.K., 2008. Human intelligence in the information society. *Labour and social Relations*, 9(8): 20-25.
9. Human development report 2013 Date of 2012 http://hdr.undp.org/en/media/HDR_2013_RU.pdf.
10. Russia in 2012 year. <http://www.rb.ru>.
11. Schultz, T., 1971. *Investment in Human Capital*. N.Y.; London, pp: 306.
12. Mincer, J., 1994. The Production of Human Capital and The Life of Earnings: Variations on a Theme. Working Paper of the NBER, pp: 4838.
13. Thurow, L., 1970. *Investment in Human Capital*. Belmont, pp: 324.
14. Zgonnik, L.W., 2008. Evaluation of human capital. *Management in Russia and abroad*, 1: 5-9.
15. Loseva, O.V., 2012. The concept of evaluation of the human capital in the innovation economy. Herald Financial University. Issue 5. (Date of 12.07.2013) <http://framestar.ru/anglijskij-s-nositelem-yazyka-novosti/anglijskij-s-nositelem-yazyka-vestnik-finansovogo-universiteta>.
16. Kiryanov, D.A. 2011. Methods of evaluation of human capital: an analysis of the fairness and adequacy of the source data. Date: 27.06.2013. URL: <http://teoria-practica.ru/-3-2011/ekonomika/kiryanovsukhareva.pdf>.
17. Kritsky, M.M., 2000. Human capital in the market economy. Human capital in today' strans forming economy, pp: 6-46.
18. Ostrouhov, V., 2013. Methodology of coordination and motivation of human capital. Modern science: actual problems of theory and practice. A series of economy and law, 01-02. Date of 12.07.2013. <http://www.nauteh-journal.ru/index.php/---ep13-01/774-a>.