



DOI: [https://doi.org/10.14505/jarle.v10.4\(42\).05](https://doi.org/10.14505/jarle.v10.4(42).05)

## Human Capital Accounting: Problem Status and Suggestions

Ramzan JANSHANLO

Department of Accounting and Audit, Higher School of Economics and Business,  
Al-Farabi Kazakh National University, Kazakhstan  
[Ramazan1951@mail.ru](mailto:Ramazan1951@mail.ru)

Adilya BAIDILDINA

Department of Educational Programs Design,  
Abay Kazakh National Pedagogical University, Kazakhstan  
[adilya\\_11@mail.ru](mailto:adilya_11@mail.ru)

Oksana KOGUT

Department of Accounting and Audit, Higher School of Economics and Business,  
Al-Farabi Kazakh National University, Kazakhstan  
[kogut.1108@gmail.com](mailto:kogut.1108@gmail.com)

Bakyt SULTANOVA

Department of Accounting and Audit, Higher School of Economics and Business,  
Al-Farabi Kazakh National University, Kazakhstan  
[Bbakyt\\_sul@mail.ru](mailto:Bbakyt_sul@mail.ru)

Karylgash AKIMBAEVA

Department of Accounting and Audit, Higher School of Economics and Business,  
Al-Farabi Kazakh National University, Kazakhstan  
[Karla74@inbox.ru](mailto:Karla74@inbox.ru)

### Suggested Citation:

Janshanlo, R., *et al.* 2019. Human Capital Accounting: Problem Status and Suggestions. *Journal of Advanced Research in Law and Economics*, Volume X, Summer, 4(42): 1032 – 1045. DOI: [10.14505/jarle.v10.4\(42\).05](https://doi.org/10.14505/jarle.v10.4(42).05). Available from: <http://journals.aserspublishing.eu/jarle/index>

### Article's History:

Received 5<sup>th</sup> of January, 2019; Received in revised form 30<sup>th</sup> of January, 2019; Accepted 25<sup>th</sup> of February, 2019;  
Published 30<sup>th</sup> of March, 2019.  
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### Abstract:

The article considers the theoretical content of the category of human capital, its significance for the development of areas of science and practice. The necessity of reflecting human capital in the accounting and reporting system of Kazakhstani organizations has been substantiated. The main problems of recognition of this most important factor of production are identified, and directions for their further solution are defined. The scientific and practical necessity of introducing a new object of accounting and analysis of 'human capital' is substantiated. The problems of accounting for human capital and possible solutions are given, the features of the existing models of human capital assessment are considered. Accounting accounts are recommended, typical accounting records and information regarding human capital are considered, which will need to be disclosed in the financial statements. It was noted that there is no analysis of the formation and efficiency of the use of human capital at the corporate level. The article contains information and conclusions that have practical interest for organizations.

**Keywords:** human capital; level of education; intangible asset; accounting; financial reporting; assessment; depreciation.

**JEL Classification:** H83; J24; K31; O15.

## Introduction

Throughout almost the entire history of mankind, until the early 60th. of the last century, physical capital played the main role in the production process: means of production, material conditions, *etc.* The requirements for labor were minimal: it was enough to have muscular, 'animal', natural strength, which was used as one of the resources, as well as an appendage to technology. Man's creative abilities have not yet played a decisive role in economic development, and problems relating to the formation of the labor force did not arouse much interest among economists.

Traditionally it was believed that the labor market has an unlimited supply of workers. In the event of a shortage in any of the sectors of the economy, it is sufficient to raise wage rates in it. This will ensure the overflow of labor from other industries and thereby obtain the required number of workers of any qualification. In the world, the trend was gaining momentum, within which the winner in the 21st century. It will not be the one who has more natural resources or basic production assets, but the one who has the higher quality of human capital. For example, employees from public services in the perspective of innovative digital services need to think beyond legislation, to be open to experimentations in order to achieve desired policy outcomes. To produce public value the management should know how to use better its employees, their capabilities, their professional and soft skills in an organizational environment appropriate to innovative digital public services, ready to 'anticipate societal challenges and address them proactively in order to reduce shocks for citizens and business' (Lincaru *et al.* 2018).

Unlike the means of production, human capital is not the property of the organization. Human capital is embodied in the identity of its owner. The peculiarity of human capital is that it is inseparable from the person himself. Human capital cannot be the subject of sale, it can only be rented by signing a contract of employment - an employment contract. For the period of employment, the employer buys the right to use the services of the employee's labor, and not the labor itself, which continues to be owned by the employee. Therefore, when developing strategic plans for the development of an organization, it is necessary to take into account the size and structure of investments in human capital. From the point of view of an organization, investment in human capital represents the costs that it incurs for the purpose of searching, selecting and training personnel, as well as their subsequent professional retraining.

However, the modern practice of accounting for human capital is not taken into account in the balance sheet of the organization. The controversy surrounding the recognition and appraisal of human capital as an asset is based on the subjective interpretation of the traditional foundations of accounting theory, without taking into account the main thing - business needs, which historically predetermined the development of accounting practice. Against this background, there is an underestimation of the human factor in the activities of modern organizations, including the underestimation of the need to create transparent accounting and analytical support for human potential. This explains the interest in the human factor and the results of its intellectual work in terms of developing the theoretical foundations of accounting and analyzing human capital.

## 1. Literature Review

### 1.1. Human Capital as an Economic Category

The sources of studying human capital as an economic category originate in the works of such classics of political economy as W. Petty, A. Smith, D. Ricardo, A. Marshall, and K. Marx. Later, the concept of human capital was studied by economists L. Walras, J.M. Clark, F. Liszt, I. Fisher, T. Schulz, G. Becker and others. Important contributions were made by such Russian scientists as M.M. Cretan, N.N. Koshel, S.A. Dyatlov, I.V. Ilinsky, V. Maksimovich, A.I. Dobrynin, E.D. Tsyrenkov and others. Human capital issues involved and Kazakhstani economists K.A. Sagadiyev, I.V. Onyusheva, J.S. Bulkhairova, G.N. Dzhaksybekova and others (Baidildina *et al.* 2018).

One of the first formulations of human capital is found in 'Political Arithmetic' (Petty 1676), who substantiated the category as 'living acting human forces' and proposed to consider them as an integral part of national wealth. At the scientific level, the first study of the problems of human capital belongs to Smith (1962) In his well-known work, *A Study on the Nature and Causes of the Wealth of Nations*, he proved that the differences between the possibilities of people with different levels of education and training reflect the differences in their income necessary to pay for the acquisition of these skills. Therefore, the income from investments in professional knowledge can be compared with the income from investments in tangible assets. This comparison, however, has its limitations. Organizations possess material resources, but not their employees, unless, of course, talking about the slave system.

Ricardo (1817) confirmed this idea, explaining the lag of countries in economic development by the lack of education in all segments of the people. He identified the reproduction of labor with the reproduction of the population and noted the importance of quality labor for production efficiency.

Marx and Engels (1961) contributed to the further improvement of the theory of the human factor, which meant by the term 'labor force' the useful capabilities of the individual. At the same time, Marx comes to the conclusion that the worker, entering into labor relations with production, offers his own labor force, and not labor. On the basis of Marx's theory, it can be concluded that labor is sold, not labor. For example, in accordance with the law of the market, a manufacturer, buying labor at its price, receives significantly more than he advanced. In addition to the above, it should be noted that Karl Marx distinguishes two acts for the exchange between labor and capital, which reflect the human capacity for labor (Marx and Engels 1961).

At the beginning of the XX century, Marshall, A., one of the greatest authorities of the neoclassical direction of the time, made a noticeable impact and scientific contribution to the theory of human resources. In his work *Principles of Economic Science*, he notes that the main goal of economic research is 'the qualitative development of humanity - increasing its population, improving its health and strength, increasing its knowledge and capabilities, enriching the qualitative aspects of its character' (Marshall 1993). In this regard, the role of the human factor in the formation and development of socio-economic processes is revealed.

The theory of human capital was created by the Nobel Prize laureates in economics Schulz (1979) and Becker (1992). By calculation, for the first time, they showed the advantages of people with special education over people with general secondary education in terms of income and raised the cost of education to the level of productive investment, and education to the level of the most important development factor (The emergence and development of the concept of socio-economic category 'human capital' 2016). The coefficient level of education (IE), is determined by the ratio of the share of workers with secondary and higher professional education in the total number of employees (Sharafutdinov *et al.* 2017).

A significant contribution to the development of a general theory of development and human capital, in particular, was made by the Nobel Prize winner in economics Kuznets (1971) who came from Russia. Among all the necessary and sufficient factors of development, it is as the primary level of accumulated national human capital. And he argued that there is a certain threshold value of the accumulated national human capital, without the achievement of which the transition to the next technological structure of the economy is impossible.

Modern economists treat the concept of human capital differently. But they agree that human capital is the main driving force of society, and that the state, and not only the individual, should pay special attention to the formation of human capital.

In the economic literature one can find many definitions of the concept 'human capital'. The most common definitions are: Becker (1993) 'Human capital is a combination of innate abilities and acquired knowledge, skills and motivations, the effective use of which contributes to an increase in income and other benefits' (Canning 1929); Dobrynin, Dyatlov and Tsyrenova (2002) 'Human capital is a stock of health, knowledge and skills that contribute to the growth of labor productivity and affect the growth of income'; Maksimovich (2011) 'Human capital is a combination of existing, accumulated and developed abilities and qualities of a person, which are used in the process of production and consumption of economic benefits, bring profit to its owner, as well as effect at the place of use and contribute to the growth of the state'.

The concepts of human and intellectual capital in the writings of several authors are used interchangeably. The problems of intellectual capital raised by Kuzmenko and Masyuk (2013) and Volkov (2005), who turned to this category as the intellectual wealth of an organization, predetermining its creative abilities to create and sell intellectual and innovative products.

Thus, human capital appears as any other factor of production that requires systematic investment, but unlike other resources, it is capable of creating added value even more. At the same time, in the above definitions, human capital acts as both the goal of economic development, and as the main productive resource, without which any expedient activity in general is impossible.

'Human capital' is a concept that fully falls within the standard definition of capital developed by economics. Investing in it, like any other investment, suggests that a person sacrifices something less today to get something bigger tomorrow. But he will do so only if he expects that his expenses will pay off and return with a return. In this sense, investing in a person is one of the forms of resource allocation over time, when real benefits in one or another proportion are 'exchanged' for the future.

According to Mc Connell and Brue (1992) they note that 'Investing in human capital is any action that enhances the skills and abilities, and thus the productivity of workers. Costs that contribute to improving one's productivity can be considered as investments, because current expenses or costs are realized with the expectation

that these costs will be repeatedly compensated by the increased flow of income in the future'. Investments in intellectual capital carrier, which is a person, have a number of features that distinguish them from other types of investments (Kamaev 2002):

- the return on investment in intellectual capital directly depends on the duration of the working period of its carrier. The earlier investments are made in a person, the faster they begin to give returns. But it must be borne in mind that higher-quality and long-term investments bring a higher and longer-lasting effect;
- as intellectual capital is accumulated, its profitability rises to a certain limit, limited to the upper limit of active labor activity (active working age), and then sharply decreases;
- not all investments in humans can be recognized as investments in intellectual capital, but only those that are socially viable and cost-effective;
- the nature and types of investments in a person due to historical, national, cultural characteristics and traditions;
- in comparison with investments in other various forms of capital, investments in intellectual capital are the most profitable, both from the point of view of one person and the point of view of the whole society.

The discussion that human capital should be evaluated and displayed in the accounting system has been going on for quite some time. Increasingly, in foreign and Russian economic science justify the need for its accounting display.

Questions related to the study of the problems of formation and use of accounting information in the human resource management system have always caused scientific interest among specialists. Studies aimed at the development of the concept of accounting for human resources are the works of foreign economists: Flamholz (1985); Fitzien (2006); Armstrong (2010); *etc.*

Flamholtz (1985), the founder of the concept of accounting for human resources, believed that human capital is the most valuable resource of the organization, and therefore it must be taken into account as an asset of the organization. Human resource accounting information is essential in making strategic decisions. He singled out three main criteria for recognizing human capital as an asset: potential future economic benefit, the existence of rights of ownership or control by an economic entity, measurability in monetary terms (Kulikov 2010).

Fitzien (2006) considered human capital as an asset, a powerful financial lever, the most valuable and productive resource of an organization. Armstrong (2010) in his definition of the concept of human capital, spoke of him as a key element of the organization's market value. In his opinion, 'its price should be included in the calculation as an indicator for investors or those who are considering the possibility of merging or acquiring an organization'. To introduce the article 'Investments in personnel' into the balance sheet and to reflect these investments as an asset of the organization was also proposed by R. Likert, who was engaged in the theory of human capital management' (Kulikov 2010).

Russian economists as Dobrynin, Dyatlov, Tsyrenova (2002), in his monograph 'Human capital in a transitive economy', proposed to display in accounting human resources as an integral part of intangible assets at a rate of full value for the entire period of use, and the annual amount of depreciation to determine based on the annual amount of wages of workers, including payments for social insurance. Their statement was not supported by a conceptual justification and, accordingly, did not find adequate support in the scientific community.

Goshunova (2014a) considers the possibility of accounting for human capital, summarizing the experience of foreign professional football clubs. The costs of acquiring the rights to own or use the registrations of professional athletes are recorded as intangible assets in the 'Investments in human capital' account. Pre-costs are collected on the account 'Investments in non-current assets', subaccount 'Capitalization of costs for the acquisition (creation) of the rights of possession and use of player registrations'.

Meyriev (2006) offers the most valuable human resources taken into account in the composition of intangible assets. The initial cost is determined by capitalizing on all costs associated with hiring and training employees. Management accounts are used. Alternatively, it is proposed to use off-balance sheet accounting by analogy with tax accounting using double entry.

In recent years, interest in the accounting interpretation of human capital as an accounting category has only increased. This is evidenced by appearing in 2010 – 2014. scientific studies of a number of authors, including Chaykovskaya and Bystrov (2011); Rasskazova-Nikolaeva and *et al.* (2013); Tonkoshkurova (2010).

So, Chaykovskaya and Bystrov (2011) investigated the issues of accounting and valuation of elements of intellectual capital in general and human capital in particular. In their opinion, the possibility of accounting for human capital in the composition of intangible assets exists and depends on the conditions of the contract concluded with the employee.



## 1.2. Researches for the Human Capital Recognition

Rasskazova-Nikolaeva, Shebek, and Nikolaev (2013), considering the criteria for recognizing a resource as an asset, argued that human capital can and should be considered as an intangible asset of the organization. Sokolov (2003) strongly opposed the reflection of the value of the human capital of an organization in its financial statements. In his opinion, the organization has no guarantee of receiving economic benefits from human capital. In addition, it is almost impossible to make an objective assessment. Thus, the best solution, according to this scientist, is the disclosure of information in the explanatory note about the most qualified personnel.

Bontis (2003) highlighted the main reasons why accountants and financial analysts rejected the idea of accounting for human capital. The reason for such a skepticism about the scientific concept is that all models for evaluating human capital, to one degree or another, are subjective and uncertain, which does not give confidence in the accuracy of measurement. In addition, the moral aspect of the issue plays an important role (Goshunova 2014b).

Subsequent research focused mainly on the idea of recognizing human capital as an asset to the organization. Opponents of the concept of accounting for human capital believe that since the organization does not have the right of ownership to a person, human capital should not be reflected in the accounting and balance sheet as an asset. For example, Ageeva (2006) believes that human capital cannot be reflected in accounting as an asset because 'people are free, no control over these resources.' Therefore, according to this concept, human capital is only a temporarily attracted means, attributed in accordance with the rules of traditional accounting to liabilities like debt obligations. It can be used in the activities of the organization, but due to the lack of a legal base it cannot be recognized in accounting.

Kouter (1977) noted the importance of human capital as the organization's most valuable resource, but at the same time believed that it cannot be attributed to the objects subject to accounting due to the impossibility of reliable assessment and the lack of property rights.

Tonkoshkurova (2010) also does not consider it right to recognize human capital as tangible and intangible assets due to the fact that the organization has no right to dispose of human capital (tacit knowledge). But at the same time, the author believes that a resource in the form of 'knowledge' as an independent asset can be recognized in the accounting process in determining the specific conditions for its recognition.

However, these arguments are not unambiguous, they do not correspond to the realities and the level of development of economic thought, therefore, they are criticized by supporters of another position. They believe that human capital is an object of accounting, as it is used in the economic activities of the organization, is a key success factor and source of future economic benefits.

For example, Shikhverdiev (2012) believes that 'human capital as an asset is not the property of the organization, but the employee himself, but the totality of workers who work in the organization is quite possible to consider as its human capital. Its scale depends on a complex of factors: the ability of employees, their work and life experience, level of education and qualifications, health status (especially if this work is responsible and requires endurance, *etc.*), motivation (for the work itself, advanced training), costs the organization provides for the training and education of personnel, recruitment, *etc.* The accumulated potential of intra-corporate traditions of corporate culture, being a kind of asset of an organization, in essence, one of the components of its human capital, contributes to increasing the competitiveness of an organization 'in the long run'. Modern managers should create conditions that enhance the efficiency of the company's personnel and its involvement in the implementation of corporate tasks ensuring the transparency of approaches to management and motivation (Akhmetshin *et al.* 2018).

The study of issues related to the assessment of human resources, deal with many economists. Among the names of Western economists who considered the issues of assessing the value of human capital can be called such well-known in the history of Western economic thought authors: Petty (1967), Schulz (1979), Becker (1992) and others. Petty was one of the first to apply value estimates to measure the value of an able-bodied person. In his works, he proposed a method for calculating the value of each person. In his opinion, the value of the majority of people is equal to twenty times the annual income that they bring. Schulz calculated the value of US human capital using the following method: the cost of one year of study at each level was multiplied by the number of person-years of education accumulated by the population at one time or another. The number of person-years of education was determined by adjusting for the unequal duration of the school year. Estimates of the educational fund are calculated on the basis not of initial, but of replacement cost, *i.e.* The basis is the value of the cost of education, relating not to the time of its receipt, but to the year of counting (Tuguskina 2015). Becker suggests that each person be considered as a combination of one unit of simple labor and a known amount of human capital embodied in it. Consequently, the wages received by any employee can also be viewed as a combination of the

market price of his 'flesh' and rental income from the human capital invested in this 'flesh'. The assessment of human capital in this approach is as follows:

$$V_a = \sum_{i=1}^n (B - C) \times (1 + i)^{-t} \quad i = a \dots n \quad (1)$$

Where:  $V_a$  - evaluation of the human capital of an employee at age  $a$ ;  $B$  - total wages;  $C$  - part of the wage attributable to labor;  $n$  - the age at which the active labor activity of a person ends;  $i$  - interest rate.

It should also be noted the method of assessing the individual cost of an employee of the company, proposed by Tsarev and Yevstratovy (2008). This technique, like the approach of Becker (1992), is based on discounting cash flows. In our opinion, in evaluating human capital, a reverse operation of discounting should be applied – compounding.

Currently, there are several approaches, among which human capital is proposed to be recognized as an expense of the current period, an obligation, an asset, a separate type of intangible assets, considered as an integral part of the business reputation of an organization. Proposals are made on accounting for human capital as one of the types of long-term assets of the organization. At the same time, researchers propose spending on the formation and development of human capital to depreciate and include in the cost of the created product, and to display the expenses on the development of human capital in the context of the following stages: vocational guidance, search, hiring, adaptation of personnel, accumulation of growth potential, achievement of professionalism, study and advanced training, capitalization of knowledge as a result of advanced training, reduction and 'moral aging' of professionalism. However, this method of calculation is rather laborious and cannot be used in all organizations without exception.

In addition, it is proposed to take into account all investments in human capital according to the chronological cost model, which provides for the use of the usual accounting procedure for fixed assets modified to fit the characteristics of human capital. In this case, the authors propose to use invoices to display expenses in the following areas: 'Recruitment and selection of personnel', 'Introduction to the position', 'Primary education', 'Study during work' and others, and the display of investments in staff training on the account 'Net investment in human capital' (Davidyuk 2011).

The overwhelming majority of Ukrainian researchers propose to display human capital in off-balance sheet accounts. This can be commented on as follows. Human capital in all respects cannot be attributed to the property of the organization. In Ukrainian practice, only the property that covers the property rights of the organization is displayed in the balance sheet. According to Petruk (2000), this is an objective action of the Roman-Germanic legal system, to which Ukraine belongs. Therefore, off-balance accounts are used to display accounting information of all management information and more specific information of a legal and economic nature in Ukraine. For countries subject to Anglo-American influence, balance sheet accounting opportunities are much broader, which is provided for by IFRS, according to which assets are resources controlled by the organization as a result of past events that the company expects to receive future economic benefits.

The display in accounting of objects that belong to or do not belong to him as property rights, depends solely on the accepted methodology of accounting. In the Anglo-American countries, the entire capital of the enterprise and the sources of its formation are displayed in accounting, in the post-socialist countries - the property (property) of the enterprise and the sources of its formation.

According to Legenchuk (2006), the main difference from the generally accepted approach to objects that are displayed on off-balance sheet accounts (off-balance accounts are designed to take into account the presence and movement of property and sources of its formation, which are not owned by this organization, but are at a certain time at its disposal), that, taking into account intellectual assets that are not owned by the organization as property rights (non-proprietary intellectual assets), we do not reflect the act of 'strangers' (belonging to another person) you, and those on the right of property does not belong 'to anyone' (there is a distribution of property rights), but we exercise control over them.

However, such an approach to recognizing human capital as an asset to an organization causes controversy among economists. One of the stumbling blocks is the problem of objective confirmation of the expected economic benefits from human resources, presented in the form of an asset.

The perception of assets as sources of potential economic benefits is characteristic of many foreign authors. One of the first definition of assets in terms of obtaining future economic benefits was given in 1929 by professor at Stanford University, Canning, J. (1929). In his opinion, assets are 'any future service expressed in money or converted into money ... a right that lawfully and equitably guarantees income to some person or group of persons'

(Canning 1929). 'Assets,' noted B. Needles, H. Anderson, and D. Cowell, 'are potential incomes possible as a result of the use of acquired or controlled assets acquired by the legal entity as a result of previous operations or past events' (Needles 1993).

Summarizing the results of research on the reform of methodological approaches to accounting for human capital, we can conclude that the inability to demonstrate control over these resources is considered as a central problem that prevents the reflection of human capital. However, according to Paliy (2011) principle of prudence applied to the identification and recognition of human capital is interpreted in such a way that the organization cannot fully control the loyalty of the staff, continuing its work in the foreseeable future. This is true only for an individual employee (one of many) in the organization's team. The loss of a certain part of the individual carriers of human capital does not deprive the working capacity of the remaining team, which continues to function as an organizational system. As long as the organization exists, human capital continues to exist, as a group of employees controlled by this organization.

Accounting is a popular information subsystem of the economic management of an organization. Without diminishing the importance of the work of foreign and Russian scientists in this branch of economic science, it should be noted that at the moment there are no comprehensive studies aimed at developing methods of accounting for human capital that meet the current needs of information users. This impedes the development, effective application and further study of this most important modern competitive resource.

## **2. Results and Reasoning**

### **2.1. The Main Characteristics of Human Capital**

According to Schulz (1979), 'one of the forms of capital is education, it is called human because this form becomes part of a person, and capital is due to the fact that it is a source of future satisfaction or future earnings, or both'. Later, Schulz supplemented his theory as follows: 'Consider all human abilities either as innate or as acquired properties ... that are valuable and that can be developed with the help of appropriate investments, will be human capital' (The concept of 'human capital').

The current trends of the world economy reflect the transformation of the role of man, which is not only the goal of social production, but also the most important resource of socio-economic progress. A person becomes a significant factor and a driving force of production, because he has unique abilities not only to be reproduced, but also to 'add new value' due to his physical and intellectual potential. If we turn to the experience of technologically developed countries, the transition to the knowledge economy is based primarily on a person's ability to create innovations that save traditional resources and generate huge profits. In fact, the competitive struggle in the global economy turns into a competition of new knowledge, the carrier of which is a person. This understanding of its role is growing all over the world, and there is a gradual reversal of politics towards global strengthening and increasing human potential due to increasing investments in its quality.

Given the above, human capital is a set of competences, knowledge, skills, used to meet the diverse needs of the person and society as a whole, as well as the social attributes of the individual, including creative, cognitive abilities, embodied in labor abilities. Human capital is considered as an activity that cannot be delegated to third parties. Human capital can be created as a result of vocational training or accumulated production activities. It is subject to technological or moral depreciation, as well as tangible assets. However, it cannot be sold or transferred to another person, and therefore cannot serve as a guarantee to secure a loan.

Functioning like physical capital, human capital has some fundamental differences, the most important of which is its inseparability from the name of its carrier. As a result, only prices for the 'rent' of human capital (in the form of wage rates) are set on the market, while prices for its assets are absent. This seriously complicates the analysis. Secondly, human capital is able to increase the efficiency of activities in both the market and non-market sectors of the economy. At the same time, the income from it can take both monetary and non-monetary forms.

The main characteristics of human capital as part of human resources and as an object of accounting include the following (Kuznetsova 2016):

- the dependence of the functioning of human capital on the life expectancy of its carrier;
- the possibility of transforming the potential of human capital into concrete scientific and technological developments;
- in many respects the human capital's desire to integrate with production as confirming its innovative nature;
- human capital dependence on physical and moral depreciation;
- the complexity of calculating the economic benefits of investing in human capital until the moment of real income.

Traditional accounting science and practice do not consider human capital as an object of accounting, so this generally accepted economic category is not subject to registration in the accounting system of accounts and disclosure in the financial statements. The main argument of Yasinskaya (2015) believes that the organization has no ownership of the carrier of human capital, and traditional accounting does not recognize assets and does not reflect resources in the accounting registers if the right of ownership does not apply to them.

Hence, at present, the idea of recognizing human capital as an asset to the organization looks problematic. Among the weightiest arguments against the recognition of human capital as an asset is the absence of ownership of the use or possession of it. Property as an economic category is manifested in the form of relations between people about various means, products of production, material goods through unhindered use, possession and disposal. As an economic category, it is not the means of production or their products themselves, not the attitude of an individual or a group of people to the means of production and their products, but the relationship between people about the means of production and the material goods they produce.

In international accounting practice in determining the existence of an asset ownership is not paramount. Most of the assets are under the economic control of the organization, when assets are managed not on the basis of legal ownership, but from the position of ownership of the economic benefits obtained. A similar point of view adheres to Sokolov (2003): '... if there is a contradiction between the legal and economic understanding of the fact of economic life, the accountant should choose an economic interpretation of the fact of economic life'. This position is consistent with the accounting principle of 'priority of content over form', according to which transactions and other events should be reflected in accordance with their economic reality, and not just their legal form.

This approach is implemented in IAS 17 'Leases', according to which the tenant's leased property is recorded on the tenant's balance sheet. At the same time, the entity acquires financial benefits from the use of the leased asset for most of its economic life. At the same time, in order to objectively reflect the level of economic resources and liabilities, financial leasing in the balance sheet of a tenant should be reflected as an obligation to pay future lease payments.

International Financial Reporting Standards treat assets as resources controlled by an organization, from which the organization expects economic benefits in the future. *Signs of an asset* (Obushchenko 2016):

- *an asset brings economic benefits.* Labor power is a production factor that allows an employer to produce and sell products (works, services) produced by workers. The organization has the opportunity to receive future economic benefits from the use of human capital as an asset throughout the term of the employment contract;
- *the presence of control over the asset.* The acquisition of the organization of the workforce is the process of hiring, executed by the employment contract and the order to work. The organization has authority over human capital as an asset, has the ability to influence income through the exercise of its authority. The employer has the right to impose requirements on the level of education, work experience, experience in the specialty and other requirements. Set the date of commencement of work, place of work, working hours and rest time, the size and order of payment of wages. The employer assigns the employee specific work, monitors its implementation, in the event of non-compliance, the employee is disciplined. Thus, the employer controls the human capital;
- *asset valuation.* At the stage when labor activity has not yet begun, the person directs his efforts towards receiving upbringing and education. In order to adapt to the constantly changing conditions of the labor process, the employee repeatedly improves skills, improves skills and abilities. Assessment of human capital is a monetary expression of the accumulated knowledge of the skills and abilities of an individual to obtain a summary of the organization in the preparation of financial statements.

If human capital is able to bring economic benefits in the future, the organization has the right to control, the initial value is determined, it can be considered as an asset and be singled out as an object of accounting. The study of human capital as an accounting category in business management allows you to pay due attention to the development of concepts of accounting and analysis of the organization, to use the hidden potentials of intangible resources.

Human capital accounting is an orderly system for collecting, registering and summarizing information in monetary terms by means of complete, continuous and documentary accounting. The organization discloses in accounting policy the methods of accounting for human capital, namely: primary observation, cost measurement, current grouping, final synthesis.

When a person got a job after graduation, for the first time an employment record is made in the workbook, a new employee appears in the organization's staff, and a new human capital appears in the organization's balance sheet. On the basis of the certificate, diploma of education, an employee is identified, in the automated accounting



system, an account is made in the card for accounting for human capital by the level and stage of education, the amount of education received. During the work of an employee, data on the newly created human capital, increase (decrease) in capital as a result of the revaluation, other data are entered into the card. You can check the completeness and accuracy of records in the inventory of human capital.

Human capital is classified as intangible assets, which has no physical form, but at the same time has a certain value for the organization. Human capital is transformed into an organization's assets. Human capital is not interchangeable. In an organization, individual human capital forms the corporate culture, environment. Human capital is inherent in people and cannot be owned by an organization.

An intangible asset is an identifiable, non-monetary asset that has no physical form, which is used in the production or provision of goods or services, for renting out to other parties or for administrative purposes. Intangible assets are currently a problematic issue in the accounting methodology for both Kazakhstani and foreign organizations, which is primarily related to the complexity of the subject itself, the definition of criteria for the classification and recognition of intangible assets. If I turn to IAS 38 Intangible Assets and several provisions of IFRS 3 Business Combinations, IAS 36 Impairment of Assets and others, it can be traced that the international approach to determining intangible assets is based on a list of criteria for identifying them from the rest of the assets, based on forms of asset and research objectives.

However, human capital in terms of the development of innovations, becoming, undoubtedly, the main economic resource, should be provided with accounting methods and methods of its accounting, methods of transforming accounting results in financial statements. The complexity of updating the theory of accounting for human capital is enhanced by the fact that not only is the way to form human capital as a carrier of knowledge, but also the process of its transformation into technological innovations, is lengthy. It is human potential that, in contrast to other forms of assets, is distinguished by the fact that its creation takes a long time and is based on human mental activity, which personifies the time and resources spent, but which is difficult to account for and evaluate in the subject's information system (Kaplan 2003).

As defined by the American Association of Accountants, 'the process of accounting for human capital consists in its identification, measurement, and transfer of information to interested parties'. The need for accounting and analysis of human capital for an organization is determined by the fact that people are valuable because they produce material values and services that can be quantified. However, unlike other types of assets, this value cannot be owned by anyone. An organization cannot assign it. In addition, the value of a person as a production resource depends largely on how the production process is organized and what are the human relations that are formed in the organization. The latter fact is not taken into account by classical microeconomic theory. He ignored the traditional practice of accounting and analysis of financial and economic activities. In the discussion on the qualitative and quantitative presentation of information in the organization's statements, it is relevant to ask whether it is appropriate and to what extent to present information in the financial statements about human capital, which, in essence, is capital in the form of intellectual abilities and practical skills acquired in the educational process. and the implementation of practical human activities (Mirzoyan 2005).

The only document regulating the procedure for accounting of intangible assets is IAS 38 Intangible Assets. But the international standard does not contain special emphasis on the reflection in the reporting of such an indicator as human capital. Therefore, there is a need to develop new classification items for account 2700 'Intangible assets'. As one of the options, we recommend the following scheme: open sub-account 2701 'The right to use the knowledge and skills of employees' to the account 2700 (analytical accounting is organized for each employee).

At the same time, personnel information can be presented in non-financial reporting. According to IFRS 1 'Presentation of financial statements', an organization may submit additional information accompanying financial statements if the executive considers it to be useful for interested users when making economic decisions. In modern conditions, such additional information may be information about human capital.

## **2.2. Evaluation of Human Capital**

The process of accounting for human capital consists in its identification and evaluation, *i.e.* determining the cost, which depends on the category of the employee (unqualified and skilled workers, creative professionals, managers, etc.). The cost of human capital of an organization is influenced by: high professional competence, intellectual and creative potential, the ability to perceive innovations and be a participant in innovations, adaptability to rapidly changing production conditions, possession of several specialties, professional mobility, responsibility, personal characteristics. The cost of human capital of an organization is probabilistic in nature (Kuzmenko and Masyuk, 2013).

Despite the existence of various approaches to the assessment of human capital, however, a clear methodology for its integrated assessment has not yet been developed. This is explained by the fact that research in this area has not been conducted in our country; therefore, it is often necessary to turn to foreign experience, which does not allow fully taking into account Kazakhstan's specificity. At the same time, the focus is on financial indicators of human capital and does not take into account indicators based on human data. In this regard, it is necessary to look for new approaches to assessing the human capital of organizations.

The incremental cost of the human capital of an individual employee is calculated by the formula:

$$HKI = \sum_{t=1}^m ET_t(1 + r_t)^t + \sum_{t=1}^m EAd_t(1 + r_t)^t \quad t = 1 \dots m \quad (2)$$

Where:  $ET_t$  – employee's cash expenditures during the training period  $t$ ,  $EAd_t$  – the cost of employee cash in advanced training for the period  $t$ ,  $r_t$  – discount rate in time period  $t$ .

The total human capital of the organization will be equal to:

$$THK = \sum^n \sum_{t=1}^m ET_{it}(1 + r_t)^t + \sum^n \sum_{t=1}^m EAd_{it}(1 + r_t)^t \quad t = 1 \dots m \quad (3)$$

Where:  $ET_{it}$  – the cost of funds of the  $i$ -th employee for the period of study  $t$ ,  $EAd_{it}$  – the cost of cash  $i$ -th employee in advanced training for the period  $t$ .

### 2.3. Staff Costs and Worn Human Capital

Wages are regarded as the price of labor, and not as the value of a human asset. Remuneration, contributions to social insurance funds, the cost of medical care, food, the cost of hiring and evaluating staff, the maintenance of the personnel department, *etc.* the value of a human asset is not treated and capitalized. These amounts relate to current costs in accordance with the provision on the composition of the costs of production and sales of products included in the cost of production, taking into account industry characteristics.

Depreciation of human capital means the loss of utility, and hence the value of the object. Indicators of wear, the actual period of employment and the period of employment are in a certain ratio, which can be expressed by the formula (Tonoshkurova 2010):

$$WI = \left[ \frac{AT_{ofE}}{(AT_{ofE} + RWL)} \right] \times 100\% \quad (4)$$

Where:  $WI$  – degree of depreciation of a human asset, %;  $AT_{ofE}$  – actual term of employment;  $RWL$  – remaining work life.

Simple reproduction of human capital should be based on its depreciation. Therefore, we propose the following mechanism for the distribution of surplus value in the context of the depreciation of human capital:

- during the labor period for the work performed, the employee receives part of the surplus value in the form of wages, and the remainder in the form of depreciation for the year from the net profit of the organization. This provision should be legislated in the country.
- by the time of the conclusion of the employment contract, the employee agrees with the employer the value of his human capital in monetary terms.
- The annual depreciation of the human capital of an individual worker is determined by the formula:

$$D = \frac{HKI \times NP}{THK} \quad (5)$$

Where:  $NP$  – net annual profit of the company.

### 2.4. Revaluation of Human Capital and Accounting Accounts

In the balance of human capital is reflected at the notional calculated initial cost with simultaneous mapping of the amount of depreciation charged behind the balance. The revaluation of an asset is carried out by the index method and the method of direct conversion. The index method provides that the recalculation of the value of human capital is based on deflator indices calculated by the Statistics Agency of Kazakhstan. When applying the method of direct

recalculation, data on current norms and standards of tuition fees are used. To assess human capital, an organization is entitled to engage independent appraisers.

In the chart of accounts for the account 'Long-term financial investments' and about 'Intangible assets' of section 2 'Long-term assets' are proposed to enter: Account 'Investments in human capital'; Account 'Human Capital'. In section 5 'Capital and reserves' in the existing account 'Authorized capital' it is proposed to enter account 'Contribution to human capital'. In the 'Off-balance sheet accounts' section, a new 'Human capital depreciation' account is introduced. Account 'Human Capital' is intended to summarize information on the availability and movement of human capital. The debit of the account reflects the notional estimated initial value of the human capital received; on a loan - write-off of retired human capital. Account 'Contribution to human capital' is intended to summarize information about the human capital of an organization. The credit of the account reflects: the value of the received human capital; human capital gains identified by revaluation results; increase in human capital over the period of work in the organization. Debit records on the account are made in the case of the disposal of human capital, reduction of human capital as a result of revaluation. Account 'Investments in human capital': the debit of the account reflects the actual expenses of the employer for personnel training, and the loan of the account records the write-off of amounts to current expenses of the organization. 'Human capital depreciation' account - an off-balance account is intended to summarize information on the movement of depreciation amounts on human capital objects. Depreciation is made at the end of the reporting period, as well as at the date of disposal of the asset.

Accounting records:

- *Adoption of human capital for accounting.* Human capital arises from the organization at the conclusion of an employment contract with an employee. When an employee is hired, the notional estimated initial value of the received human asset is determined. Receipt of human capital is reflected in the posting:
  - Dt accounts 'Human capital';
  - Kt accounts 'Contribution to human capital'.
- *Acceptance of newly created human capital.* On the basis of a certificate of advanced training, the organization's accounting department makes an entry to increase the human capital of an employee in a regulatory assessment:
  - Dt accounts 'Human capital';
  - Kt accounts 'Contribution to human capital'.
- *Accounting for the organization's own investment in internally created human capital.*
  - Training under an agreement with an educational institution: Dt accounts 'Investments in human capital'; Kt of the account 'Calculations with suppliers and contractors'.
  - Training is organized in the organization itself. The cost of training - payment of teachers, the calculation of contributions to social insurance agencies, depreciation of the room, computers, consumption of materials, etc.: Dt accounts 'Investments in human capital'; Kt accounts 'Short-term wage arrears', account 'Social tax', account 'Depreciation of fixed assets', account 'Raw materials' and others.
- *Write-off of own investments in human capital.* The actual training costs collected on the debit of account 2050 'Investments in human capital' are capitalized and charged to the expenses of the organization over the useful life period, for example, within 5 years. The beginning of the write-off falls on the month following the month when the object is taken into account:
  - Dt accounts 'Primary production', accounts 'General expenses' and other accounts of expenses.
  - Dt accounts 'Investments in human capital'.
- *Depreciation.* Earlier it was determined that depreciation is taken into account on the off-balance account. Accounting for accrued depreciation amounts: Dt accounts 'depreciation of human capital.'
- *Disposal of human capital.* The cost of the retiring human capital is subject to write-off from accounting accounts.
  - Upon termination of the employment contract and dismissal of the employee, the amount of the conditional estimated initial (replacement) cost of the outgoing object is charged to the correspondence: Dt accounts 'Contribution to human capital' and Kt accounts 'Human capital'.
  - Simultaneously with the off-balance accounting, depreciation on retiring human capital is removed: Kt of the 'wear and tear of human capital'.
- The costs of raising the qualifications of paid organizations, if an employee leaves after less than 5 years, are reimbursed to the employer, or the employer takes on expenses: Dt account 'Calculations with staff for other operations' and Kt of account 'Investments in human capital'.

With the advent of human capital information, all capital will be reflected in the balance sheet, which will allow to form a complete picture of the resources that influence the creation of the value of the organization.

The formation of human capital and its effective use contribute to creating conditions for economic growth and improving the efficiency of management as a whole. Having a significant impact on the majority of intermediate and final performance indicators, human capital is influenced by various factors (investments in human capital, education level, labor protection, public health, corporate social responsibility of business, pensions, *etc.*). It should be noted that there are really few works aimed at conducting a deep economic analysis of the formation and efficiency of using human capital at the corporate level. The main task of analyzing the use of human capital in an organization is to identify all the factors hindering the growth of labor productivity, leading to loss of working time and reducing staff salaries.

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### Conclusions

Human capital is recognized as the most important factor in the development of a modern innovative society. However, this object of economic reality is not reflected in the traditional accounting system. Consequently, not all the facts of modern economic life are subject to registration, which violates the principle of objectivity.

Therefore, there is an urgent need to take into account human capital in accounting, with a reflection of investments in this asset, as well as to analyze their effectiveness. The emergence of a new facility requires making changes and additions to the standard chart of accounts and the development of methods for reflecting business operations related to investing in human capital in accounting. The method of accounting for these investments requires justifying the choice of synthetic accounts, building a system of analytical accounts and developing a typical model of their relationship with other accounts using double-entry. Accounting for these costs will improve the applicability of existing cost models and the creation of more reliable reporting on the asset.

The conclusions and justifications formulated in the course of the study, as well as the proposed accounting models, will make it possible to organize accounting for human capital in organizations, to increase the reliability of accounting information about its availability and movement to assess the effectiveness of organizations.

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