

Human capital: valuation and management

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Abstrakt. The article considers approaches to the assessment of human capital taking into account the concept of value-oriented corporate management, which has become the methodological basis of the study. The tools of synthetic and analytical accounting in accordance with RAS and the tax legislation of the Russian Federation were used to disclose the content and comprehension of the studied financial notions. The methods of relative values of economic analysis, quantitative methods of evaluation, cost-based (property), revenue and market (comparative) approaches are used in relation to determining the value of human capital. A more specific definition of the human capital utilization coefficient and quantitative estimates of individual human capital, goodwill of human capital are proposed. A universal methodology has been developed for assessing human capital in proportion to the business qualities and labor contribution of employees to the capitalization of the enterprise and the increase in its value. The proposed methodology integrates revenue, cost-based (property) and market approaches. The quantitative relationship between the goodwill of individual human capital and the goodwill of the entire enterprise is revealed. For practitioners in the field of business valuation, researchers in the development of value-oriented corporate management, teachers and students of economics in the study of financial methods of corporate valuation.

Keywords: human capital assessment; labor market; unity of goals structure; labor contribution, business reputation; intangible assets; spread.

1 Introduction

The assessment of the value of human capital is becoming increasingly important in achieving sustainable innovative business development. It is human capital that most determines the development of entrepreneurship [1, pp. 513-533; 2, pp. 54-56; 3, pp. 64-76]. According to the hypothesis of the study, the valuation of human capital has fundamental differences from the valuation of the property of an enterprise in the context of the concept of value-oriented management of a corporation, disclosed in the sources [4; 5; 6, pp. 22-32].

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When revealing the definition of human capital by many authors, this concept has not found an unambiguous, only correct definition. In this regard, there is a variety of approaches to its measurement and evaluation, which cannot be considered complex or systematic. Therefore, there is no single theoretical and methodological approach or generally accepted methodology for measuring the effectiveness of investing in human capital or assessing its value [7, pp. 89-90].

In substantiating the concept of human capital, we proceed from the following assumptions. Capital is a set of resources used in production for the purpose of making a profit, which corresponds to the concept of capital, disclosed by K. Marx, as a value that brings surplus value. This use of capital is the main purpose of the business. In this regard, human capital includes those human (labor) resources that are used for commercial purposes – making a profit.

Let's consider the possibilities of implementing the concept of value-oriented management of a corporation to human capital management.

The company's value comprehensively integrates the company's performance indicators. Its value is affected by changes in market conditions, profitability indicators, output, solvency of the organization, investment risk and other parameters. Therefore, for many companies abroad, the cost of business has become the most important object of management [8]. The change in the value of the company over a certain period becomes for them the main goal of activity, and maximizing the market value at minimal cost is the criterion for the efficiency of the corporation's economic activities. At the same time, targets should be taken into account the projected changes in the financial market, the industry structure, etc. [4, p. 16].

However, management aimed solely at increasing the value of the company should not be overestimated. Such actions are not always aimed at improving the quality, useful properties of manufactured products, improving designs and production technologies. Such achievements are often replaced by speculative operations in the market. To do this, promoters, advertisers, activists of BTL events use sophisticated methods of advertising, neuromarketing, PR methods that do not lead to an improvement in production, quality, and an increase in the useful consumer properties of goods. And then, in order to determine the efficiency of the economy, it will be necessary to isolate the production (socially useful) and speculative components from the business value assessment indicator.

The most important task of value-oriented management is the interested involvement of personnel in achieving a single strategic goal, solving general corporate tasks. To do this, it is necessary to ensure the unity of the structure of the goals of owners, management and performers in production, the financial and legal ways of achieving which are disclosed in the sources [9, pp. 12-39; 22].

When the material remuneration of employees directly depends on the performance indicators of their work, they become financially interested in optimizing these indicators, and therefore in maximizing the value created in their "areas of responsibility", and, consequently, in maximizing the value of the entire company [4, p. 15]. At the same time, the leadership needs to give its aspirations and attitudes a measurable form [4, p. 16].

The main indicator of the company's performance is the net cash income generated by the company and forming its value [4, pp. 12; 11]. For owners, investors, creditors, one of the main positive indicators of the return of the company's capital is the spread (spread) - the difference between the profitability of invested capital and the costs per unit of invested capital (the cost intensity of invested capital). With a negative value of this indicator, the company's value decreases and the company will not be able to attract the necessary capital for development [4, p. 13].

The main purpose of the study is to develop a methodology for calculating wages, the

amount of which varies in direct proportion to the employee's labor contribution to increasing cash flows, profits, capitalization and increasing the value of the enterprise, providing an increase in the payoff on capital - spread.

2 Materials methods

The cost of human capital is formed from the costs of reproducing human capital and increasing its economic activity, the costs of creating, maintaining, training, improving professional level, creating favorable working conditions, implementing motivation policies [7, p. 89; 10, p. 35-52].

In certain cases, human capital is estimated in terms of future earnings minus personal costs of existence. This technique of V. Petit, improved by William Farr, is designed to assess the employee's investments in his professional growth in terms of the benefits received. It consisted in calculating the present value of an individual's future net earnings [11; 12, pp. 333-371]. The results in the labor market are also closely interrelated with the state of the physical and mental health of the employee, which also require investments [13; pp. 1-31].

Human capital is also estimated on the basis of the expenditures of the state and individuals on education and the labor costs of the students themselves for the production of their qualifications [7, p. 91]. But at the same time, it is important that the costs are productive, productive, and therefore socially useful. The assessment of human capital by its productivity also consists of the value of intellectual assets created by it, research works performed and their efficient [14, pp. 45-54; 15, pp. 6-28; 16].

To attract the most valuable personnel, a talent search is carried out by linking data from social networks with the employer's branding in personnel management [17, pp. 1-12].

The productive usefulness of human capital expenditures can be characterized by the demand or demand for its labor force in the labor market [18, pp. 461-487], as well as their impact on the capitalization of the enterprise. The value of human capital formed in this way is subject to evaluation.

Capital assessment provides for three approaches with relevant concepts and their constituent methods:

- Cost-based (property) [2, p. 54-56];
- Revenue;
- Market (comparative) [18, pp. 461-487] taking into account the fundamental laws of the market disclosed in the source [19, pp. 124-133].

As a basis for the calculations carried out, Y.M. Kastrulina offers an assessment of investments in the development of human capital, capitalization of the return on these investments, as well as natural indicators. At the same time, she considers the approach based on investment accounting to be the most adequate, although the amount of investment spent does not always have a direct impact on the level of human capital [20, p. 23; 21, p. 12-23]. The market value of human capital also depends on the degree of saturation of the labor market with labor with a certain level of professional training of employees [22, pp. 183-232; 18, p. 461-468].

3. Results and discussion

The management of enterprises, based on the specifics of their activities, personnel structure, organizational features, independently forms approaches, directions, a system of indicators for calculating human capital, as well as their combinations and sequence. For

example, a combination of costly, profitable and comparative approaches is possible, expressed in the formula [11]:

$$W = K_h(W_e + W_{inc}) \tag{1}$$

where W is the cost of human capital,
 K_h – human capital usage coefficient,
 W_e – human capital formation costs,
 W_{inc} – profit from the use of human capital.

The author of the formula does not give recommendations for calculating the human capital usage coefficient.

The use of human capital can be assessed by various criteria and indicators of efficiency, effectiveness. We propose to determine the human capital usage coefficient with the ratio:

$$K_h = \frac{W_{inc}}{W_e} - \overline{K_h} \tag{2}$$

where $\overline{K_h}$ is the average value of the human capital usage coefficient among analogous enterprises.

Thus, this coefficient is determined by comparing the level of use of human capital with a similar indicator of analogous enterprises using the expression:

$$\overline{K_h} = \frac{\sum_i^n W_{inc\ i}}{\sum_i^n W_{e\ i}} \tag{3}$$

where i is the number of the analog 's enterprise in ascending order of numbers,
 n – the number of studying enterprises analogues

This technique is associated with difficulties in obtaining the necessary statistical information of analog enterprises. But we can get a more accurate indicator of the evaluation of the result of the use of human capital if we include in the calculation the individual contribution of the employee to the increase in the final financial result – the profit of the enterprise.

Such remuneration of labor makes it possible to evaluate it using a combination of a cost-based and revenue approach, in which income from the use of human capital is considered as the main factor in determining its value. In this case, the indicator of the average value of the human capital usage coefficient among analogous enterprises $\overline{K_h}$ should be excluded from formula (2). And the assessment of the conformity of the value of

human capital to its assessment by analogous enterprises should be carried out by comparing this indicator with the average values of this indicator for analogous enterprises using the difference:

$$\Delta W = W - \overline{W} \tag{4}$$

If $\Delta W \approx 0$ is accurate to the specified rounding numbers, then the cost of human capital at this enterprise is estimated identically with similar enterprises.

If $\Delta W \gg 0$, then the human capital at this enterprise is estimated higher than that of similar enterprises.

If $\Delta W \ll 0$, then the human capital at this enterprise is estimated lower than that of analogous enterprises.

These comparisons reflect the competitiveness of the enterprise in the labor market, which are mentioned in the source [23, pp. 64-81; 24].

Like the positive reputation of an enterprise, highly qualified employees form a positive business reputation of their own professional qualities. At the same time, according to its structure, human capital is related to part of the intellectual capital of the enterprise, which acts as a generating force for innovative development and increasing labor productivity [25, pp. 53-71]. In this regard, it is proposed to consider human capital mainly within the framework of the concept of intangible assets of the enterprise [11]. The value of intangible assets is reflected in accounting [26, pp. 19-24, 433-434; 27, pp. 48-63].

To measure the individual value of an employee as part of intangible assets, it is proposed to use the goodwill indicator [11]. In relation to the assessment of individual human capital, goodwill is an intangible asset in the form of a monetary assessment of an employee's business reputation, his activities from the point of view of business qualities. The business reputation of an employee is the difference between the market price of individual labour power and its own capital.

For such an assessment of the employee's business reputation, the authors Alaverdyan V. and Tuguskina G. N. suggest using the goodwill of the employee's personnel potential in the form of the G_{HR} coefficient [11]. This indicator reflects the real, market value of a particular individual who is able to perform certain functions and solve relevant tasks in the interests of business. In this case, the estimated value of the employee is determined by the product of numbers:

$$E = R \cdot G_{HR} \tag{5}$$

where E is the valuation price of the employee, rub.,

..... R — Expected paid salary to an employee, rub.,

..... G_{HR} — The goodwill coefficient of the employee's human potential. Estimated value.

This assessment does not fully take into account the real end results of each employee's activity. To take into account the result of work on the contribution to the capitalization of the enterprise, we propose to define it as the ratio:

$$G_{HR} = \frac{W_{inc}}{W_e} \quad (6)$$

Among the existing methods of assessing human capital, accounting for the goodwill of an employee's human resource potential makes it possible to determine its fair value most accurately.

For a more complete, detailed, concrete understanding of the financial content of the definition of goodwill of human capital, let us turn to accounting tools in the relationship between the functions of enterprise management and taxation. This will give us the basis for conclusions about the possibility of reflecting the goodwill of human capital as a separate article in accounting and reporting.

As it was noted, the business reputation of an employee is equal to the difference between the market price of individual labor and its own capital. Such a difference can be used in relation to other, inanimate assets when they are sold, since they are the property of the entrepreneur. The employee is not the property of the employer. And the workforce belongs to the employee, not the employer. Therefore, an employer cannot sell employee to another employer, as he does with other types of assets.

All investments in human capital at the enterprise are reflected in accounting and reporting. All income received from the use of labor is also reflected in accounting and in the liabilities side of the balance-sheet. Moreover, each income item in the balance sheet liability corresponds to a certain asset item. Therefore, the introduction of an additional intangible asset to account for goodwill of human capital will lead to an account without an appropriate source of financing in liabilities side of the balance-sheet. Consequently, the introduction of such an additional asset item will only lead to a violation of the equality of the asset and liability of the balance sheet and will not correspond to the real value of the company's property.

The goodwill of individual human capital, as well as the goodwill coefficient of the employee's human potential, can be considered at the enterprise as separate indicators of the analysis of the efficiency, effectiveness of the use of labor without their reflection in a separate article in the accounting statements. They are factors affecting the business reputation of the entire enterprise, reflected under the article "goodwill" as part of the intangible assets of the entire enterprise. From the components of the goodwill of individual human capital, the total goodwill of human capital is formed as part of the goodwill of the entire enterprise.

The business reputation (goodwill) of the entire enterprise reflects its market value minus the book value of assets (liabilities) [28, pp. 101-107]. It is taken into account as part of the intangible assets of the balance sheet. Business activity, business qualities and business reputation undoubtedly consist of the quality, efficiency, and effectiveness of the company's employees. Therefore, the goodwill of the entire enterprise consists of the goodwill of the individual human capital of individual employees of the enterprise. In this regard, the share of goodwill of individual human capital in the total goodwill of the entire enterprise is equal to the share of the individual contribution of the employee to the business reputation of the enterprise.

According to the conducted research, the problem of obtaining a reliable estimate of human capital in the value of enterprises remains unresolved due to insufficient provision of calculations with authentic data. When assessing human resources, the focus is usually on financial indicators of human capital and indicators based on personal human data are not considered. New approaches to assessing the human capital of enterprises are needed [11].

The cost-based (property), revenue and market (comparative) approaches have

significant drawbacks that do not allow for a realistic assessment of the human capital of the enterprise, and, consequently, the results of its assessment make it difficult to make high-quality management decisions [29, p. 165]. To eliminate these shortcomings, a universal approach is required, which is able to bring the assessment of the human capital of an enterprise as close as possible to its real value for making informed management decisions [29, p. 165].

The most universal, comprehensive, more accurate and concrete assessment of human capital, capable of overcoming these shortcomings, seems to be the form of payment for labor contribution as a share of profit proposed by us [9, pp. 12-39]. In it, we recommend systemic using: a cost-based approach using the subaccount 70-1 "Settlements with personnel on labor contribution", a profitable approach using the subaccount 70-2 "Settlements with a personnel in a share of profit" and a separate transaction profit (TP). The rationale and conditions for opening these sub-accounts will be discussed further. The market approach in this form is involved in the form of tariff rates, piece rates expressing the market value of labor.

To provide more reliable information, the goodwill of an employee's human resources potential should be determined in proportion to the share of profit allocated to pay for his work in proportion to the employee's contribution to the capitalization of the business. The share of profit attributable to a particular employee is determined in proportion to his contribution to the increase in the value of the company based on the results of physical, intellectual activity and research work. The profit indicator is chosen as a criterion for assessing the labor contribution as the most significant source of growth in the value of the company. There are no more precise and specific indicators that determine the increase in cash flow, capitalization and value of the corporation. It is the increase in profit that directly contributes to the growth of the return on capital spread, as the most significant from the point of view of cost-oriented management of the company.

The method of calculating payment for labor contribution as a share of profit is disclosed in the source [9, pp. 12-22, 36-38]. It begins with the calculation of wages in accordance with the existing forms of remuneration at the enterprise (time-based, based on tariff rates or monthly salaries; piece rates, etc.). Allowances for individual labor merits are added to the payment using the labor participation coefficient (KTU), the labor quality coefficient; a point-rating system and other ways of accounting for employee achievements in improving product quality (including innovations), increasing production, sales, profits, cash flows, capitalization, return on capital spread, etc., for which a quantitative assessment and a corresponding surcharge are provided.

The amount of payment for the labor contribution can be determined taking into account discounting, which evaluates the employee in terms of the expected future income of this employee. In addition, in the assessment of individual human capital, it is possible to use the current and forecast conjuncture in the labor market due to the growth in the number of professional personnel [18, pp. 461-487], the transformation of the current human resource management (HRM), its structure and tools [30, pp. 1-14], as well as the acquisition of resources, the identification of additional opportunities and reduction of labor costs [1, pp. 513-533] taking into account the fundamental laws of the market [19, pp. 124-133].

From the amount of these accruals to all employees, the wage fund (WF) is formed. Then the specific weight of accruals to each individual employee in the total WF is determined. The resulting specific gravity can be used as a multiplier in further calculations. In accordance with Russian Accounting Standards (RAS), this amount is included in production costs. They are attributing to the debit of the account 90 "Sales" from the credit of production accounts.

By correlating debit and credit turnover, we get a preliminary balance on the "Sales"

account, which will show the intermediate profit from sales, which we will give the name "transactional profit" (TP). From this TP, the management of the enterprise in management accounting will allocate a premium fund from profit (PFP). The size of the fund should correspond to a constant interest rate from the TP, set in advance by the management. Thus, the rest on the account of "Sales" will be preliminary.

In management accounting, the received PFP is subject to distribution among employees in proportion to the specific weight of accruals to each individual employee from the WF (multiplier).

In order for these redistributed amounts to be attributed to expenses with a corresponding reduction in the income tax base, the accruals made from the PFP are also debited to the debit of the "Sales" account from the credit of production cost accounting accounts. To do this, as noted earlier, a separate sub-account can be allocated to the account 70 "Settlements with personnel on remuneration", for example 70-2 "Settlements with a personnel in a share of profit". And a sub-account 70-1 "Settlements with personnel on labor contribution" is also allocated from the WF. After these operations, the balance on the account "Sales" will show the profit from sales in accounting and for tax purposes.

To calculate the human capital utilization coefficient K_h in formula (2), as well as for the goodwill coefficient of the employee's human potential G_{HR} in formula (5), it is better to include transactional profit (TP) in the profit from the use of human capital W_{inc} . And then the capitalization of the enterprise from the employee's labor contribution will be taken into account in the assessment of the value of human capital (W) and in the goodwill coefficient of the employee's human potential. And the specific weight of his salary in the WF (sub-account 70-1 "Settlements with personnel on labor contribution") will reflect the relative value of the employee's labor capital at the enterprise where he works.

And so we came to the conclusion that the goodwill of individual human capital can be taken into account as the difference between the costs of its payment for labor contribution (sub-account 70-1 "Settlements with personnel for labor contribution") and of the amount of pay that has developed in the labor market. At the same time, the goodwill of human capital is not accounted for separately as part of intangible assets, but is an integral part of the goodwill of the entire company. And the goodwill of individual human capital can be determined from the total amount of the company's goodwill, recorded as part of intangible assets, in proportion to the multiplier (its specific weight in the WF), the monetary expression of which is given on the proposed sub-account 70-1 "Settlements with personnel on labor contribution".

4. Conclusion

And so, we explored the possibilities of implementing the concept of value-oriented corporate management in relation to human capital.

In the content of the article, the differences between the possibilities of reflecting the business reputation of the company and human capital in accounting and reporting are considered. Recommendations on the use of goodwill in the assessment of human capital in are interrelated to the goodwill of the enterprise are given.

The conducted research allowed us to develop a method that integrates cost-based, revenue, and market approaches in assessing the cost of human capital. This method allows you to take into account the value of human capital, taking into account the individual contribution of the employee to increasing profits, cash flows, capitalization, the value of the corporation, increasing the return on capital – spread.

The results of the study can be used to assess the value of human capital and its business

reputation – goodwill, including the goodwill of individual human capital in the international practice of value-oriented corporate management.
The results of the study can be used to assess the value of human capital and its business reputation – goodwill, including the goodwill of individual human capital in the international practice of value-oriented corporate management.

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