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## ACCOUNTING IN THE SYSTEM OF HUMAN CAPITAL MANAGEMENT AT THE BUSINESS ENTITIES

**Abstract. Introduction.** The world economic experience proves that success of an enterprise depends not only on its material and financial resources, but also on its human capital, which is the basic factor for company's competitiveness increasing. Effective human capital management based on the data provided by accounting, however, remains underdeveloped.

**Purpose.** Improvement of accounting methodology, which demands a number of techniques and instruments that will enable to implement theoretical assertions, transform the functional contents of business entity's management.

**Results.** The economic nature of the category of human capital has been proved via adding the properties concerning its structure, conditions of formation and effectiveness of usage, which defines the methodological grounds for including human capital to the accounting system. The directions of cost classification have been offered with reference to human capital theory in terms of human capital components, which is based on its life cycle phases. This provides relevant information arrangement in the necessary analytical terms and encourages accounting methodology development with reference to these costs representation in accounting documentation. The authors propose the directions of improving the theoretical and organizational basis for integrated reporting procedure formation order, which meets the users' needs in the information concerning the company's human capital.

**Conclusion.** Amplification of the human capital management paradigm changes the role of accounting in the system of enterprise activity management, it acts as the system of information provision for the enterprise's human capital management on the basis of systematizing the accounting information on human capital formation, employment and reproduction, which enhances the information capacity of management data and enables decision-making concerning formation and efficient employment of human capital.

**Keywords:** Human Capital; Accounting; Personnel Management Costs; Sustainable Development; Integrated Reporting.

**JEL Classification:** O15; M41; F15

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### **БУХГАЛТЕРСЬКИЙ ОБЛІК У СИСТЕМІ УПРАВЛІННЯ ЛЮДСЬКИМ КАПІТАЛОМ СУБ'ЄКТІВ ПІДПРИЄМНИЦТВА**

**Анотація.** У статті проаналізовано роль бухгалтерського обліку в системі управління людським капіталом. Запропоновано класифікацію витрат, виходячи із положень теорії людського капіталу, в розрізі складових людського капіталу, в основу якої покладено фази його життєвого циклу (витрати на формування, використання та відтворення). Авторами обґрунтовано необхідність підвищення інформативності даних шляхом розвитку звітної інформаційного забезпечення системи управління людським капіталом суб'єктів підприємництва для підвищення ефективності подальшого реформування інтегрованої звітності з урахуванням вимог користувачів інформації.

**Ключові слова:** людський капітал; бухгалтерський облік; витрати на управління персоналом; концепція стійкого розвитку; інтегрована звітність.

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**БУХГАЛТЕРСКИЙ УЧЕТ В СИСТЕМЕ УПРАВЛЕНИЯ ЧЕЛОВЕЧЕСКИМ КАПИТАЛОМ СУБЪЕКТОВ ПРЕДПРИНИМАТЕЛЬСТВА**

**Аннотация.** В статье проанализирована роль бухгалтерского учета в системе управления человеческим капиталом. Предложена классификация затрат, исходя из положений теории человеческого капитала, в разрезе составляющих человеческого капитала, в основу которой положены фазы его жизненного цикла (затраты на формирование, использование и воспроизведение). Обоснована необходимость повышения информативности данных путем развития отчетного информационного обеспечения системы управления человеческим капиталом субъектов предпринимательства для повышения эффективности дальнейшего реформирования интегрированной отчетности с учетом требований пользователей информации.

**Ключевые слова:** человеческий капитал; бухгалтерский учет; расходы на управление персоналом; концепция устойчивого развития; интегрированная отчетность.

**1. Introduction**

High level and quality of the nation's human capital provide for the sustainable GDP growth, and, thus, living standards improvement. Economic development rates directly depend on the human capital, so countries with a considerable amount of human capital show higher growth ratio. Human capital formation, maintenance and reproduction are fostered at the national economy level.

The National Strategy of Socially-Responsible Business is currently being developed by joint efforts of the public, businesses and the Cabinet of Ministers of Ukraine, which presupposes involvement of the state with the system-based work of Ukrainian companies in the sphere of socially-responsible business being an important direction of human capital formation, which forms the basis for the competitiveness of companies and Ukraine as well.

Successful company development depends on the efficient economic resources management based on the data produced in the accounting system. However, the accounting methodology in the system of human capital management remains underdeveloped. Noncompliance of the content of accounting with the user demands with reference to human capital management paradigm, which gained widespread in response to socio-economic development concepts of the society, has distinguished the topicality of the research.

**2. Brief Literature Review**

Human capital theory formation and amplification are connected with the names of eminent economists: D. Acemoglu, F. A. Gallego, and J. A. Robinson (2014) [1], S. O. Becker, and L. Woessmann [2], A. Ciccone, and E. Papaioannou (2009) [3], D. Cohen, and M. Soto (2007) [4], A. M. de Pleijt, and J. L. Weisdorf (2014) [5], Ch.-T. Hsieh, and P. Klenow (2010) [6], M. A. Sidorin (2007) [7]. In Ukraine, methodological problems of human capital development, reproduction and employment have been studied by such known scientists as O. Amosha, S. Bandur, D. Bogynya, V. Brich, O. Grishnova, B. Danylyshyn, M. Dolishnyi, V. Kutsenko, E. Libanova, N. Lukianchenko, O. Novikova, V. Onienko, A. Chukhno.

«Development of reasonable human capital formation, efficient employment, reproduction and development directions, – as specified by L. Kryvenko, and S. Ovcharenko (2014), – is possible only on condition of the elaborated national strategic priorities, which form the appropriate grounds for increasing the competitiveness of the national economy» [8, p. 26].

The problems concerning accounting theory and methodology of human capital and its reporting have been studied in the works of the following Ukrainian scientists: F. Butynets, N. Golovai, A. Kolosiyuk, N. Koroliuk, P. Kostyrko, L. Osmiatchenko,

M. Pushkar, N. Shulga. However, despite the importance of the given scientific works and their influence on the development of accounting theory, problems concerning transforming the accounting system, stipulated by human capital theory amplification, distinguishing the role of accounting in the human capital management system as well as developing the accounting methodology for human capital formation, employment and reproduction, remain unsolved.

**3. Purpose**

Development of theoretical and methodological grounds for human capital accounting as the basis for information provision of business entities activity management system with reference to the human capital management paradigm.

**4. Result**

The evolution of academic views of the essence of human capital testifies the concentration of research by the representatives of different directions of the economic theory on the issues of human capital as the main national wealth. Human capital refers to the certain supply of health, universal and shop-floor knowledge, skills and competences formed and resulting from investments in education, professional training and accumulated by people, which enable individuals to perform their professional activity and should have practical application in order to obtain a certain result, foster labour and production efficiency growth, and, thus, influence increase in revenue of owners and enterprises as well as national wealth.

The existing human capital management paradigm corresponds to the concept of total human capital management, which, being a complex, multitier process, which extends to the macro-, meso- and micro-level, encompasses human resources reproduction process and meets basic socio-economic requirements of the modern society. Accounting is seen as the integral element of extending human capital management paradigm and as one of the focus areas for studying modern approaches to accounting methodology development. We fully support the view of D. Yadranskiy, who asserted that accounting is currently at the stage, at which the necessity arises to form new accounting methodology [9]. That is why the main task of human capital accounting must be information provision necessary for decision-making concerning the enterprise labour costs.

Complex and science-intensive production processes encourage exclusive standards for employees and, therefore, increased expenses on human capital development on the part of the state as well as business entities. The share of labour costs in total enterprise expenditure shows a steady upward trend in all branches of the economy, in high technology industries in particular, thus, labour costs management based on the accounting data gains fundamental importance.

In the study of labour costs, such classification criteria as funding sources and recipients, the necessity and expedience of spending costs as well as their allocation are widely used. However, the abovementioned factors do not fully reveal the specificity of human capital costs accounting. The suggested cost classification with regard to human capital components according to the phases of their life cycle (formation, employment and reproduction phases) characterizes quantitative and qualitative enterprise human capital gain, provides relevant information systematization from the necessary analytical perspectives and encourages accounting methodology development as to account management (see Figure).

The suggested cost classification demonstrates the specificity of human capital being a particular resource of the enterprise and its advantages are: it allows costs systematization with regard to human capital components in order to manage them; it forms the basis for planning and analysis of human capital costs; it is the instrument of personified human capital costs management with the application of accounting records revealing human capital formation, employment and reproduction costs; it enables coordination of tasks and actions of enterprise branches, which manage personnel.

M. G. Olievska emphasizes the social effect of allocating resources to enterprise workers development and support [10].

Human capital cost composition depends on the peculiarities of the certain enterprise activity, however, their recording in the accounting system is possible in case of their analytical representation, which will encourage workers' pro-activeness and enable integration of their wants with long-term enterprise perspectives in the sphere of personnel management.

Accounting data in the human capital management system will be used to: assess social orientation of the personnel policy, its conformity with the tasks and strategies of the enterprise development; assess the conformity of the planned amount and quality of personnel with the strategic tasks of the enterprise; assess the conformity of personnel search and selection with legal requirements as well as social and economic efficiency; analyze personnel adaptation methods, its conformity with the employees' demands and enterprise development strategy; diagnose the personnel appraisal system with regard to its conformity with social and economic efficiency requirements; evaluate organization of personnel labour remuneration as well as

implementation of its reproductive, social and motivation functions, personnel motivation system assessment; analyze training, professional development and retraining methods and their conformity with current and strategic tasks of the enterprise and employees' interests; distinguish existing problems in all evaluation categories and ways of their solution.

Many enterprises have considerable total expenditure on human capital formation, employment and reproduction, thus, this explains the necessity to plan and control the given factors. Human capital formation, employment and reproduction costs analysis and monitoring can be performed by accounting system, rational organization of which stipulates company functioning. In particular, collective contract terms, basic documents, accounting registers and reports, which contain rates of salaries, bonuses, increments, compensation, material aid, personnel training costs, healthcare and recreational packages as well as other paid fringe benefits are subject to audit.

The basic element of operations accounting organization connected with human capital formation, employment and reproduction is definition of the sub-ledger accounting object. Sub-ledger accounts for homogeneous bodies are offered to be identified in the working chart of accounts for human capital formation, employment and reproduction costs calculation for every employee of the enterprise with regard to the contractual terms of the collective labour agreement on the basis of quantitative and qualitative (age, sex, occupational) enterprise staff structure. Further specification of information on human capital formation, employment and reproduction costs for management purposes may be conducted with regard to structural subdivision of the enterprise, personnel groups etc.

The major part of human capital formation, employment and reproduction costs are demonstrated in accounting in account 39 «Deferred Expenditure», account 65 «Insurance Payments», account 66 «Payments for Employee Benefits», account 94 «Other Expenses on Business Operations», which we offer to specify according to the given directions:

- 1) xxx.1 «Expenses on Human Capital Formation»: xxx.1.1 «Expenses on Career Guidance», xxx.1.2. «Expenses on Personnel Search, Selection and Recruitment», xxx.1.2 «Expenses on Personnel within Adaptation Period», xxx.1.4 «Expenses on Personnel within Training and Career Enhancement with Respect to Enterprise Strategy»;

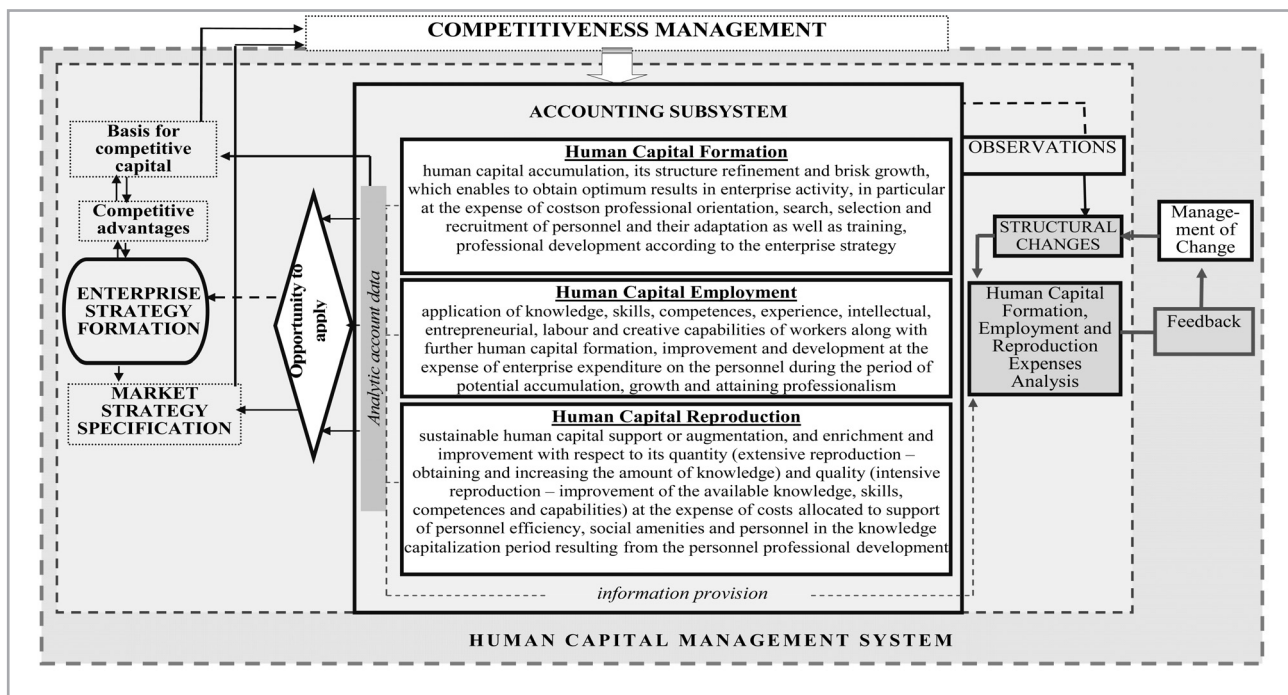


Figure: Accounting Subsystem in the Enterprise Human Capital Management System  
Source: Developed by the authors



2) xxx.2 «Expenses on Human Capital Employment»: xxx.2.1 «Expenses on Personnel within Growth Potential Accumulation», xxx.2.2 «Expenses on Personnel within Professional Competences Attainment Period»;

3) xxx.3 «Expenses on Human Capital Reproduction»: xxx.3.1 «Expenses on Employees Capacity Support», xxx.3.2 «Social Amenities», xxx.3.3 «Expenses on Personnel under Knowledge Capitalisation due to Career Enhancement».

The volume of human capital formation, employment and reproduction costs on at many enterprises is considerable, thus, there exists the necessity in planning and control of these indices. Human capital formation, employment and reproduction cost analysis and control may be performed with the use of the accounting system, on the rational organization of which functioning of the entire enterprise depends. Thus, in particular, the contractual terms of the collective labour agreement, primary accounting documents, accounting register and reporting, which include rates of salaries, bonuses, wage premiums, remuneration, welfare benefits, employee training expenses, employee health improvement or recreation packages, as well as other prepaid perks, travel vouchers, package tours, protective clothing and footwear, are subject to auditing.

Authoritative documentary evidence of these operations enables to disclose in the balance sheet the incurred human capital costs with the application of cost approach to human capital evaluation.

In view of the fact that enterprise human resources are a single collective body, we offer the following way of enterprise human capital cost estimation:

#### 1. Employees Professional Potential Ratio (1):

$$K_{pp} = K_{ed} K_{exp} X (I + C/4 + B/18), \quad (1)$$

where  $K_{pp}$  is the employees professional potential ratio;  $K_{ed}$  is the index of educational level (amounts to: 0.15 – for individuals with incomplete secondary education; 0.40 – for individuals with secondary education; 0.60 – for individuals with vocational and incomplete higher education; 0.75 – for individuals with a degree in a different specialization area; 1.00 – for individuals with a degree in the required specialization area; 1.1 – for individuals with an academic degree in a different specialization area; 1.2 – for individuals with an academic degree in the required specialization area);  $K_{exp}$  is the index of time record for working in the required specialization area (equals 0.25 for individuals with time record of 0-9 years; 0.50 – for individuals with the time record of 9-13 years; 0.75 – for individuals with the time record of 13-17 years; 1.00 – for those with the time record of 17-21 years; 1.25 – for individuals with the time record of 21-29 years; 1.50 – for those with the time record of more than 29 years);  $C$  is the time record for working in the required specialization area (according to the recommendation of the research institute the ratio is divided by 4, as the impact of work experience on labour efficiency is 4 times less in comparison to the impact of education);  $B$  is the age (according to the recommendation of the research institute, the ratio is divided by 18 as the impact of age on labour efficiency is 18 times less than the impact of education with the upper age limit of 62 years for men and 60 years for women).

#### 2. Human Capital Goodwill (2):

$$G_{hc} = I_{rev} + I_{exp} + K_{pp} \quad (2)$$

where  $I_{rev}$  is the index of revenue obtained from human capital, which reveals the yearly change in the correlation of enterprise revenue and rated employees working time fund;  $I_{exp}$  is the index of expenses on human capital, which reflects the yearly change in the correlation of total enterprise expenditure on human capital and rated employees working time fund;  $K_{pp}$  is the employees professional potential ratio.

#### 3. Employees Human Capital Cost (3):

$$Cost_{hc} = B_{emp-hc} G_{hc} + (B_{f-hc} + B_{rep-hc}), \quad (3)$$

where  $Cost_{hc}$  is the employees human capital cost;  $B_{emp-hc}$  is the cost of human capital employment;  $G_{hc}$  is the employees human capital goodwill, which reflects their actual market individual value;  $B_{f-hc}$  is the cost of the employees human capital formation;  $B_{rep-hc}$  is the cost of human capital reproduction.

The enterprise employees human capital cost is influenced by the high value of the human capital cost ratio, professional potential ratio and considerable human capital formation, employment and reproduction cost. Thereat, the low level of enterprise human capital revenue index, which is stipulated by a decrease in revenue, may be offset by the high value of professional potential ratio and human capital cost ratio.

Enterprise human capital cost calculation may be used in enterprise market value estimation with the application of the ROA (Return on Assets) concept, which conforms to the accounting principles. The spread between the enterprise purchase and sale price and its net asset value will be reflected as goodwill in the balance sheet.

#### 5. Conclusion

The research testifies that the problem of creating such an accounting system, which will enable all the concerned parties to be informed regularly of all the aspects of enterprise activity, is acute. Accounting, being the human capital management subsystem, provides for the formation and release of information about the expenses on such unique intellectual and information assets as employees' knowledge, skills and competences.

The human capital management process enables decision-making concerning the necessity and amount of expenses needed for human capital formation, employment and reproduction on the basis of their economic practicality. Cost classification, which was developed, reveals the specificity of the personnel being a specific enterprise asset directly related to its recruitment, employment and development with reference to the phases of its life cycle, and will characterize quantitative and qualitative enterprise human capital gain.

The problem of enterprise reporting form and content as well as the ability of information users to perceive and interpret it remains unsolved. Thus, approaches to integrated reporting preparation concerning its integrity and reliability as well as sufficiency of the information included in reports and necessary for decision-making require reassessment and will be the promising direction of further research.

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