

HUMAN CAPITAL COST ACCOUNTING IN THE COMPANY MANAGEMENT SYSTEM

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ABSTRACT

The article covers methodological aspects of human capital cost accounting, taking into account the Resource Utility Model and Alternative Costs Theory. The comparative characteristic of the models of human capital costs accounting covers Asset Model ("costs", chronological cost model) and Resource Utility Model. The choice of the model for human capital cost accounting is justified depending on the scope of powers and responsibilities of managers. The features for choosing human capital cost accounting model are considered depending on the classification of responsibility centers.

Keywords: Human Capital, Responsibility Centers, Cost Accounting Model, Intangible Assets, Profitability.

JEL Classifications: M21, O16

INTRODUCTION

Human capital is a priority inexhaustible capital of business entity that creates added value, ensures and realises strategic mission which is the survival in global competitive markets. The choice of innovative way of development requires the improvement of the mechanism of human capital formation and use, all of its components: accounting, analysis, motivation, control, etc.

Insufficient justification for accounting, formation and management, alongside with profitability definition, including human capital as the element of intangible assets in reports leads to inability to measure market capitalization of the enterprise. The paradigm "human capital is company's expenses provokes management of the company to reduce the cost of staff renewal (primarily, social and professional development) while developing cost minimization strategy, in particular in the context of crisis phenomena.

Relevance of the topic is determined by the necessity of developing scientifically based recommendations to improve human capital accounting theory and practice, taking into account the developments of the world theory and accounting practices.

The study aims at synthesis and systematisation of theoretical, methodological and practical recommendations to introduce Human Capital Accounting and Assessment Model and form the strategy of business development under preventive anti-crisis management.

In accordance with the purpose the following main objectives are set: to explore the features of two models of human capital accounting and assessment: assets ("costs", chronological one) and resource utility; to build organizational models for human capital costs accounting within the system of managerial accounting; to justify the choice of the human

capital cost accounting model, depending on the scope of managers' powers and responsibilities.

REVIEW OF PREVIOUS STUDIES

Modern economic schools present numerous directions of research on the issues of methodology of human capital accounting and assessment. In particular, Hendricks & Schoellman (2017) designed process model for human capital cost management taking into account the phases of process of investments into formation and renewal of human capital expenses. Kassouf (2017) suggests using the reflection method in human capital costs accounting linked to phases of reproduction process, which may be the foundation for combining investment and cost-reflective approaches to showing staff costs. Lagakos et al. (2018) developed organizational and methodological approach to accounting human resources of business entity as accounting category. Levenson & Fink (2017) study the peculiarities of '*Employee Replacement Cost Accounting Model*' which, in contrast to the chronological one, additionally takes into account: losses from reduction of production volumes as a result of vacant post; losses from the productivity of the worker himself and his colleagues as a result of the reduction of labor "morality" in the period prior to dismissal; low labor productivity of new worker in the period of work adaptation, etc.

However, most of the issues related to stating human capital in accounting remain unresolved and require further research, in particular: justification of human capital definition as accounting category, development of conceptual peculiarities of human capital accounting, improvement of human capital accounting estimation, methods of human capital accounting and control in the context of modern information and computer technologies.

METHODOLOGY

Validity and reliability of the results obtained are ensured by the modern methodology of research. Methodological foundation of the work is a complex of methods of scientific knowledge in the form of general scientific and specific research methods. In order to achieve the goal and realize the specified objectives, the following research methods were applied: methods of generalization, grouping and comparison (induction and deduction methods were applied in the study of theoretical issues of human capital accounting in order to determine and clarify the essence of the concepts); methods of analogy, system approach (to improve the methodology of human capital accounting). Historical and logical methods were applied while studying historical aspect of human capital accounting.

RESULTS AND DISCUSSIONS

Global change of the economic management paradigm focused on sustainable development requires business entities to transform management system and its constituent functions, in particular accounting. The most valuable asset in the information society is the qualifying staff interested in maximizing the profit of the company. Accounting as the foundation for information support for business management needs to be reformed for several reasons: first, it is concentrated on the property retention (objects are only property resources controlled by business), and second, it is focused on the past (as a result of past events). At the same time, while calculating human-related expenditures (reduction of economic benefits in the form of assets exclusion or increase in liabilities that result in decrease of private assets exception capital decrease due to its exclusion or distribution by owners), the characteristics of the asset is almost not considered in the future perspective and its impact to getting

economic benefits in the future, in the methodological aspect it is the economic essence of a special resource of the enterprise the staff.

There are two principal approaches to human capital accounting and assessment in the world practice: Asset Model ("*cost*", chronological) (Novas et al., 2017) and Utility Model (Hilorme et al., 2019).

Stages of implementation of the "*cost*" model into management of company's staff. At the first stage, an appropriate methodological platform for human capital accounting and assessment is created (estimate of amortization normative term, estimate of net investments, cost estimate), herewith general and specific scientific principles, methods, tools and toolkit are applied.

At the second stage, additional accounts are introduced in the internal system of managerial accounting, wherein double entry principle is applied in the accounts. Three accounts are set: the effective account "*Human capital expenses*" (using balance method on sub-accounts the expenses are assigned for development (professional, social), adaptation (professional, social), motivation and other costs related to human capital formation, usage and renewal; those corresponding to asset account "*Net investment in human resources*" / "*Human capital as intangible asset*" and liability one "*Transfer funds for investing in human resources*".

At the last stage, internal (corporate) social reporting on human capital is developed. In our opinion, reporting here should be formed in two vectors: human resources balance and general social reporting. The items and sections "*Formation*", "*Use*", "*Development*" should be separated in human resources balance. The general social reporting for business entities may be presented as a separate report (Social Report, Social Responsibility Report, Corporate Social Responsibility Report) or the component of corporate report "*Report on General Progress*", "*Sustainable Development Report*". Herein, there should be evaluation of the economic and social efficiency of human capital investments as foundation for designing General Business Development Strategy within preventive anti-crisis management.

But the paradigm "*human capital is business expenses*" provokes management of the company to reduce the costs for staff renewal (primarily, social and professional development) while developing the strategy for overall costs minimisation, especially in the context of crisis phenomena. To balance the negative effects of the "*cost*" Human Capital Accounting and Assessment Model there is the second model based on the resource utility the model of resource utility in staff management of business entity.

The inability of the accounting system to aggregate human capital objects, and of the financial reporting with modern standardization to provide formalized estimate to market institutions along with the company's cost characteristic, leads to applying poorly formalized information models.

The peculiarities of the stages the Resource Utility Model implementation into business staff management are as follows: at the first stage, the method of calculation is introduced: the effect of staff investments, the evaluation of the payback period of investments in human resources, rate estimates of return on investment in human resources, etc. depending on the goals of the business development and existing programs of staff development. At the second stage, the additional account is set "*Income from human capital productive use*" with the corresponding subaccounts: "*Economic consequences of employee behavior changes*", "*Income from investments in human resources*", etc. At the last stage, the balance of investments and income in human capital is made in our opinion, it is appropriate to introduce 3 sections here: investments, incomes and indicators of investment efficiency, according to the methodology at the first stage.

In particular, in the context of anti-crisis management, the crucial importance is given to Responsibility Accounting Theory (Hilorme, 2016), which is based on the concept of "responsibility centers", first developed by Higgins.

Table 1 presents the justification for choosing Human Capital Cost Accounting Model depending on the scope of managers' powers and responsibilities.

Table 1 JUSTIFICATION FOR CHOOSING HUMAN CAPITAL COST ACCOUNTING MODEL DEPENDING ON THE SCOPE OF MANAGERS' POWERS AND RESPONSIBILITIES (AUTHOR'S WORK)				
Business Entity Segment	Business Entity Segment General Criteria	Indicators of Influence of Responsibility Centers		Human Capital Cost Accounting Model
		Main	Additional (related to human resources)	
Cost Center (CC)	Profitability	Costs	Salary capacity, relation to the type of expenses	Asset Model ("costs" / chronological cost model)
Income Center (IC)		Income	Labor productivity	
Profit Center (PC)		Profit, income, expenses	Staff profitability	
Investment Center (InvC)	Structure of cash flows, solvency	Use of profit (investing in own assets)	The payback period of development programs, return on investment in human resources, increase of market value of the business entity	Resource Utility Model

Defining the type of responsibility center depends on the organizational structure of the enterprise. Thus, for the linear-functional one centers related to the profitability of business entity (CC, IC, PC) are applicable. While for the divisional companies, PC (provided the operation of the subdivision is stable, staff is used efficiently) and InvC (porvided there are human resources development programs, especially when the payback period of the development project has not been reached yet) ones.

The selection of human capital cost accounting general model for business entity should depend on several factors in addition to the organizational structure. Tetiana et al., 2018: the stage of the enterprise life cycle, the requirements of management information users, the need for obtaining not only relevant accounting information on the cost of human resources, etc.

The results of our study are verified by the following studies. On the other hand, Boudreau & Cascio (2017) provide reasonable statements. They believe that the creation of "fake" funds will let avoiding taxes the higher a company evaluates its capital, the more funds will be written off. Implementing such accounting model, the company will eventually get fictitious loss, because it did not actually buy anything, but just took to the state some staff and estimated them. We agree with the author's view related to the fact that the inclusion of human resources in assets will require monthly damping, which will ultimately lead to unjustified increase of the cost of services rendered.

RECOMMENDATIONS

The results of the author's research propose to record staff costs of the business enity, depending on the life cycles of staff and company, to develop the theoretical and methodological principles for corporate social reports on human capital, to improve the methodology for estimating the value of the person (especially residual and liquidation value), etc.

We consider it advisable to recommend separate sub-accounts for accounting operations related to the staff development and retention. With these accounts present,

analytics of human capital expenditures become more profound and the list of accounting objects expands, allowing to avoid contradictions in the formation of financial results.

In our opinion, the analytical structure of accounts and the work plan of accounting accounts in the company will allow: to increase the informativeness of the credentials for the adoption of effective management decisions; to clearly segregate and analyze the cost of human capital components per an individual employee and the cost of human capital in the enterprise as a whole by aggregating information on analytical accounts; stating human capital in the assets will bring the book value of the company closer to its market value.

CONCLUSIONS

More and more scientists agree that human capital is a special intangible asset of business entity. It affects the market value of a company, is a key dominant factor in competitiveness, economic security, and so on. Distinctive feature of business value nowadays is that it is often associated with business reputation, staff, intellectual activity, image, brand, and other intangible assets, rather than with material component (buildings, equipment, etc.). Therefore, companies are purchased at a price that exceeds the value of their fixed capital several times. Such a significant gap between the value of companies and the value of their fixed assets characterizes the impact of intangible assets on the growth of the cost of business entity.

It is important to note a number of indicators of the company's activity that can not be identified and shown in balance sheet and other regulatory documents, since they do not meet the recognition criteria set by standards, but affect significantly the efficiency of enterprises, including the formation and growth of their value.

They may include qualified personnel, promising and long-term relationships with customers, loyalty of buyers, methods of company management, as well as internally generated goodwill. Internally generated goodwill is not recognized as an asset, since it is not an identified resource (i.e., is not an allocation and does not arise from contractual and other legal rights), which is controlled by the enterprise and can be measured reliably at net cost.

Due to the peculiarities of its activities and individual organizational structure a subject of economic activity may build Human Capital Accounting and Assessment Model on its own, and on that basis further build strategies for enterprise development in crisis phenomena.

REFERENCES

- Boudreau, J., & Cascio, W. (2017). Human capital analytics: Why are we not there? *Journal of Organizational Effectiveness: People and Performance*, 4(2), 119-126.
- Hendricks, L., & Schoellman, T. (2017). Human capital and development accounting: New evidence from wage gains at migration. *The Quarterly Journal of Economics*, 133(2), 665-700.
- Hilorme, T. (2016). Human capital assets as a specific intangible asset of the enterprise. *University Economic Bulletin*, (29/1), 73-80.
- Hilorme, T., Shurpenkova, R., Kundrya-Vysotska, O., Sarakhman, O., Lyzunova, O. (2019). Model of energy saving forecasting in entrepreneurship. *Journal of Entrepreneurship Education*, 22(1S), 1-6.
- Kassouf, A.L. (2017). Accounting for education, experience and health as investments in human capital. In *Revival: Structure and Structural Change in the Brazilian Economy*, 219-246. Retrieved from <https://www.emeraldinsight.com/doi/abs/10.1108/S0147-9121%282010%290000031010>
- Lagakos, D., Moll, B., Porzio, T., Qian, N., & Schoellman, T. (2018). Life-cycle human capital accumulation across countries: lessons from US Immigrants. *Journal of Human Capital*, 12(2), 305-342.
- Levenson, A., & Fink, A. (2017). Human capital analytics: too much data and analysis, not enough models and business insights. *Journal of Organizational Effectiveness: People and Performance*, 4(2), 145-156.
- Novas, J.C., Alves, M.D.C.G., & Sousa, A. (2017). The role of management accounting systems in the development of intellectual capital. *Journal of Intellectual Capital*, 18(2), 286-315.

Tetiana, H., Chorna M., Karpenko L., Milyavskiy M. & Drobyazko S. (2018). Innovative model of enterprises personnel incentives evaluation. *Academy of Strategic Management Journal*, 17(3),

This article was originally published in a Special Issue 2, entitled: "**Transformation of Accounting, Auditing, Reporting, Finance**", Edited by **Dr. Svetlana Drobyazko**