

## INVESTMENTS IN HUMAN CAPITAL. ACCOUNTING ASPECT

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**Abstract.** Basic scientific approaches to determining the nature and structure of investments in human capital of the enterprise employees are considered. Current state of accounting recording of investments in human resources at the domestic enterprises is analyzed. It has been found that one of the reasons that adversely affects the scale of investments in human capital of the enterprise is a current accounting system, which due to its traditionalism does not allow to treat human resources as an object of investments. Economic feasibility of recording in the enterprise accounting system of investments in the human capital through the integration of the cost and investment approaches is proved. The necessity to change existing principles of accounting policy regarding investments in human capital caused by the growing information needs of internal users has been established.

**Key words:** human capital, nature and structure of investment, accounting system

### INTRODUCTION

In a post-industrial society employees are becoming the most important productive factor of any enterprise, as their professionalism and competence are drivers of the development of economic entities. However, active involvement in the production process of results of the scientific and technological progress accelerates objective and inevitable process of 'aging' of professional knowledge. Hence, a crucial task that confronts modern enterprises is support and constant improvement of qualification of the employees, i.e. formation of the skills that would enable

them to adapt quickly to advanced technologies and complex realities of the global economy. The only possible way to solve this problem is to invest in the recruitment and training of human resources.

Investing in the professional development of the employees is carried out in order to enhance returns, increase labour productivity, minimize losses of working time, thereby strengthening competitive position of the enterprise in the market.

Focusing on the development of labour potential and treating employees as a key factor of economic growth, business executives should be able both to organize the process of investing in human resources efficiently and to display it in cost-effective way in the accounting system of the enterprise. Accounting of investments in personnel is to provide users with reliable management information, which in its turn will allow to evaluate the effectiveness of investments in employees.

## RESEARCH METHODS

Issues related to the study of human capital theory and investment processes involved in its formation, use and recording has always been paid much attention to by the scientists. Researches aimed at developing human capital theory and, in particular, its accounting recording are represented in the works of such foreign scholars as G. Becker, M. Dobia, L.J. Fitz-enz, Edvinson, W. Marcinkiewicz, M. Malone, W. Thomas, E. Flamholts, T. Schultz et al.

In Ukraine, human capital theory has been studied by the scientists since 1992 up to 1993s. Thorough and significant researches on the human capital theory and methods of its accounting recording at the enterprises have been carried out by such Ukrainian researchers as D.P. Bogynya, O.A. Grishnova, T.V. Davydyuk, N.M. Korolyuk, S.F. Legenchuk, P.M. Maydanevych et al.

The results of these researches are essential for the development of human capital theory and its accounting. However, accumulated scientific potential is not sufficient to elaborate a common universal procedure that would be implemented in the international and domestic accounting standards. Therefore, there are debates among scientists concerning the development of the optimal model of accounting of investments in human capital, which would fully take into account interests of the users of accounting data in the process of management of knowledge, abilities and skills of employees.

The aim of the paper is to outline possible areas of investments in human capital and to research existing procedure of their accounting recording at the domestic enterprises.

## RESULTS

Development of human capital theory became one of significant achievements of the economic science in the second half of the XX century. That was time of transition of economically developed countries from the industrial stage of economic development to post-industrial one characterized by the dominant role of human potential in economic growth: education, knowledge and human intelligence became a primary productive force of that time. 'People are the value of the company. If you burn all your plants, but leave people and documents, we can quickly get on our feet. Take away our people and we will never be able to raise' – W. Thomas aptly stressed the importance of human factors in the modern economy [1996, p. 65].

Many large companies have realized the importance of human resources for their own prosperity. Their role in the formation of human capital by investing in staff selection and training of employees is growing. Thus, world-known famous company DuPont has announced investments in their employees to be one of four key strategic areas of the development. French company Yunistel believes that socially responsible business, healthcare and investments in the development of its employees are the most effective ways to support sustainable development. Lukoil invests a lot in training and development of its staff, ensuring safe working conditions and healthy lifestyle. In 2008 System Capital Management, a leading financial and industrial group in Ukraine, noted in its social responsibility report about payments to employees in wages and bonuses, including pension amounting to USD 1.513 million. In 2008 the structure of social package was the following: financial aid – 39%, health protection – 16%, improvement of living conditions of workers – 15%, support of pensioners, veterans – 12%, health insurance – 8%, promotion – 6%, corporate events – 2%, other benefits – 2% [Davydyuk 2011, pp. 339–341].

Thus, human resources are getting special attention of managers being one of the main investment objects of the enterprise. Today, companies act as the most effective generators of human capital providing staff training in accordance with current and future production demands. Corporate human capital is formed by the accession of individual human capital of workers to it.

Before we start studying investment processes associated with human resources and their accounting recording, it is appropriate to consider key points of human capital theory.

The first scientist who both introduced the term 'human capital' and was an author of a large number of scientific achievements in this area is an American economist and Nobel Prize winner in economics T. Schultz. The scientist noted, 'All human abilities are either natural or acquired. Everyone is born with an individual set of genes that determines his natural abilities. Acquired valuable human qualities that can be enhanced by appropriate investments are called human capital' [1975, p. 69].



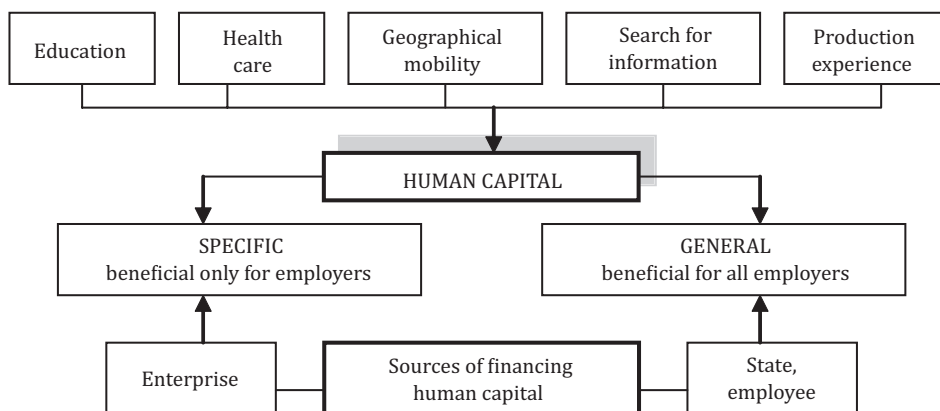
The researcher treated human capital as a factor of national economy development. Society is improved due to development of science, access to information, acquired professional and life experience [Butynets, Dobia 2010, p. 107].

T. Schultz was one of the first to treat material costs for the development of human capital as an investment. At the plenary meeting of the American Economic Association in 1960 the researcher used the term ‘investments in people’ for the first time. In 1962, a special issue of Chicago Journal of Political Economy was edited under this heading with the scientific papers of D. Mincer, T. Schultz and G. Becker [Marcinkiewicz 2005, p. 36].

T. Schultz’s follower G. Becker made an important contribution to promoting the ideas of human capital in general and, in particular, understanding investment in it. His key idea is that investments in education will bring high profit in the future [Dobia 2012, p. 54].

The economist treated education, accumulation of work experience, health care, geographic mobility, and search for information as components of investments. The costs of human capital formation, as the scientists noted, are investments, as they involve transition of resources from the present to the future: investor donates a part of the income today for the sake of higher income tomorrow. In addition, differentiation of general and specific investments in human capital that was introduced by H. Becker appeared to be of significant theoretical and practical value. As the researcher argued, an employee having specific human capital is of a higher value for the enterprise than a new one with general human capital [2003, p. 649].

Summing up of the content and types of human capital according to H. Becker is represented in Figure 1.



**FIGURE 1.** Content and types of human capital

Source: Systematized according to data [Becker 2003, pp. 649–650].

According to the definition of American scientists K. McConnell and S. Brue, investment in human capital is any action that improves skills and abilities and, thus, productivity of employees. Scientists argue that the costs that contribute to productivity increase can be viewed as investments, as current costs are incurred with the expectation that they will be compensated many times by the increased income in the future [McConnell, Brue 1992, p. 171].

Some studies on human capital theory have been conducted by the Ukrainian scientists. Thus, according to O. Grishnova, all types of costs that can be measured in monetary or another form that contribute to the growth of future performance and earnings of the employee must be treated as investments in human capital [2006, p. 370]. Another Ukrainian scientist T. Davydyuk, expert in the field of human capital accounting, argues that for the enterprise investments in human capital are mainly represented by the costs for education and health care of employees, partly – for the culture [2009, p. 33]. We should agree with this, as investments include only contributions from which the company will receive economic benefits in the future. Other funds spent on personnel (salaries, social security etc.) are costs by their economic content, they are out of the investment process.

American economists L. Edvinson and M. Malone have noted that the basis of the so-called economy of knowledge is a large-scale investment in human capital and information technologies, but nothing of these is reflected in the traditional accounting [1997, s. 34].

The problem of accounting reporting of investments in human capital of the enterprise employees is controversial and remains practically unresolved both at the level of international accounting standards and at the level of the national accounting methodology. American researchers J. Grayson and K. Odell consider the problem of accounting of investments in human resources, that is based on ignoring investments in people as investments in capital, to be one of five problems facing modern accounting system [Grayson, O'Dell 1991, p. 193].

Today there are two approaches to accounting of investments in human capital – cost accounting and investment accounting. At the domestic enterprises accounting of investments in human capital is based on the statistical recording of money spent on recruitment, professional training, employees' education and the like. In other words, investments in the formation, use and reproduction of human capital are treated only as current costs and have to be written off to determine financial results.

The system of national accounting which provides cost approach to accounting of investments in human capital is based on P(S)A 26 – Payments to Employees. According to it, personnel costs include [Order of the Ministry... 2003]:

- current payments to employees,
- dismissal payment,



- retirement payment,
- payment by the equity instruments,
- other long-term payments to employees.

Thus, according to the above-mentioned regulatory document, investments in human capital are limited to the costs of wages and social events. These costs are made in the process of using labour resources; they are personalized and reflected in the settlement and expense accounts of the financial accounting. However, they are only a part of all money spent on personnel. In particular, the International Conference of Labour Statisticians and national instructive documents have recommended classification of labour cost, which also includes other personnel costs (Table 1).

**TABLE 1.** Comparative characteristic of the components of labour costs according to the international and national regulatory documents

International standard classification of labour costs	Components of labour costs according to the domestic regulatory acts
1. Direct wages and salaries	1. Direct wages and salaries
2. Payment for underworked time	2. Payment for underworked time
3. Bonus and cash rewards	3. Bonuses and irregular payments
4. Food, fuel and other benefits in natural form	4. Wages in natural form, benefits, services, assistance in natural form and cash
5. The cost of housing for workers	5. Costs of the companies on housing for workers
6. Costs of employers for social security	6. Costs of the companies on social security of workers
7. Cost of professional training	7. Costs for professional training
8. Cost of cultural and consumer services	8. Costs for the public services
9. Labour cost that is not included in the former groups	9. Labour costs that are not included in other groups
10. Taxes treated as labour cost	10. Taxes related to labour costs

Source: Davydyuk 2009, p. 34 and Instructions for determining the cost of labour [Order of the Ministry.. 1997].

According to the definition of the International Labour Organization, costs reflected in paragraphs 1–4 are direct labour costs, costs in paragraphs 5–10 are indirect labour costs.

It is clear that such unified classification of labour costs was created to ensure comparability of results of statistical monitoring both within the country and in comparison with other states. However, this information does not meet all the needs of personnel management and cannot be a basis for making sound management decisions regarding the efficiency of personnel use.

In this regard, in order to obtain detailed analytical information about personnel costs it is recommended to implement grouping of costs according to certain classification criteria. Classification of personnel costs can be based on the classification offered by T. Davydyuk [2011, pp. 346–347], which is extended and supplemented by certain classification criteria (Table 2).

**TABLE 2.** Classification of costs of human capital of the enterprise

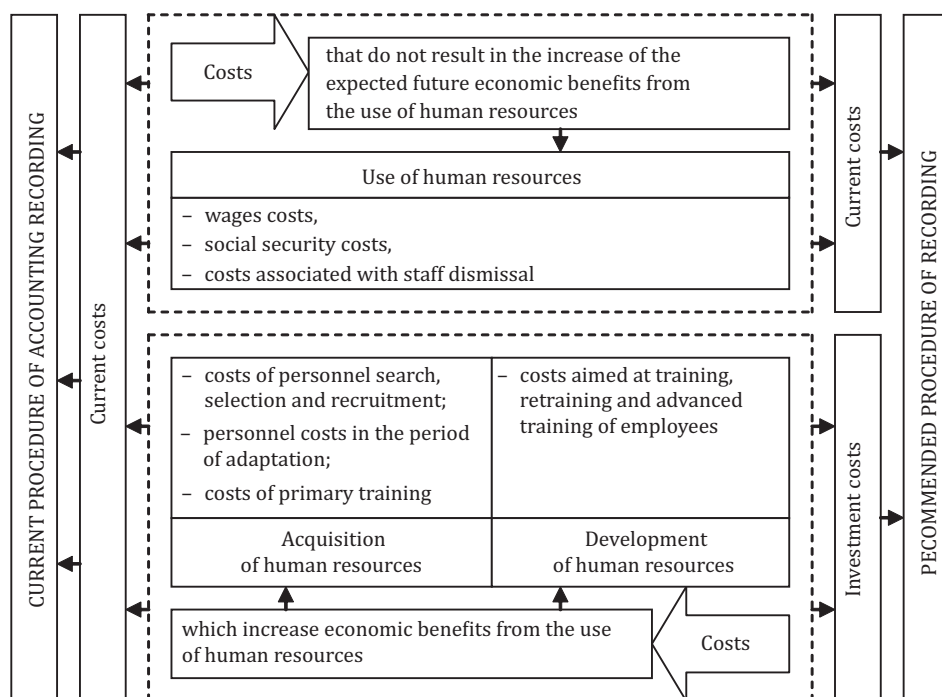
Classification feature	Costs of human capital
Phases of the process of recording of labour	For the production of labour (associated with the acquisition, training, development of personnel) For the distribution of labour (transition of employees into other structural geographically distant subdivisions, involvement of employees from other companies (travel costs, travelling allowance, per diem subsistence etc.) For the use of labour (wages fund, payments and benefits from inducement funds, costs associated with maintenance of labour capacity (for health care, safety, welfare services etc.) as well as social protection and social insurance)
Purpose	To purchase employees For salaries and bonuses For personnel development For training, retraining and advanced training of employees For social services For social protection and social security For improvement of working conditions, health service
Sources of funding	Funds of social organizations State: state budget, extrabudgetary sources Company: production costs, profit Employee
Nature of costs	Direct Indirect
Obligatoriness of costs	Obligatory Non-obligatory (social)
Calendar period	Current costs (related to wages, welfare of employees etc.) One-off payments (costs of staff training, education and advanced training etc.)
Place of origin	For each accounting area (subdivisions of the enterprise)
Impact on the economic results	Costs associated with the increase of the expected economic benefits (cost of acquisition and development of staff) Costs that do not lead to increase of economic benefits (costs of the use of human resources)
Medium of costs	Personalized (wages costs, welfare costs, costs of training and education and training of the staff etc.) Impersonal (social security costs and social insurance costs, costs of organizing corporate events, costs of social objects etc.)



Thus, the following classification features are mostly used concerning personnel costs: phase of the process of recording, source and objects of funding, nature of costs, obligatoriness of costs and feasibility of their reduction. However, listed classification features do not completely reflect peculiarities of accounting of personnel costs as a functional subsystem of the system of personnel management. It seems more appropriate to consider such classification feature as impact on economic result.

Proposed criterion is the basis for the division of funds invested in personnel of the enterprise into investment costs and current costs. By its economic content costs of acquisition and development of personnel are long-term investments in human capital. Such investments have a certain similarity with investments in physical capital, because they increase productive potential of employees and act as a source for the enterprise economic benefits. Personnel costs including those included in payroll costs and social costs as well as the dismissal costs should be recorded according to the cost approach.

Approaches to accounting recording of the investment-related costs and current costs in human capital are shown in Figure 2.



**FIGURE 2.** Integrated approach to accounting recording of investments in human capital based on the investment and cost approaches

Source: Formed by the authors.



The main criterion is their impact on future benefits. Costs associated with the acquisition and development of human capital are capitalized and recorded as an increase of the value of the appropriate assets. Current costs are the costs of the use of human capital.

However, existing methodological principles of accounting, which do not allow to treat human capital as assets of the enterprise, are the obstacles to implementation of the proposed procedure of accounting of investments in employees. In accounting practice, there is no investment object – human capital which prevents capitalization of costs related to the acquisition and development of personnel.

Neglect of human capital accounting, according to Professor Medvedev, 'is connected with unsolved problems of accounting' [2004, p. 94]. Thus, development of conceptual principles of accounting recording of human capital (at least within management accounting) is a perspective research goal.

## CONCLUSIONS

Studying the problem of investments in human capital, their structure and procedure of their accounting recording at the domestic enterprises, we can draw the following conclusions.

Modern economic development causes a growing demand of enterprises for highly educated staff capable of generating profitable growth and ensuring competitiveness in the market. Today, human capital is the main productive factor; a new kind of capital resources, in which investments are significant expenditures of the enterprises.

In order to obtain necessary analytical information and satisfy the needs of managers concerning the investments in human capital, it is necessary to work out detailed costs according to specific classification features (phase of the use of human capital, purpose, obligatoriness, nature of costs etc.). Besides, labour costs should be distinguished into investments and costs that would correspond to economic nature of incurred expenses.

Application of the procedure of recording personnel costs in accounting combining investment and cost approach will promote intensive growth of the human capital of the enterprise.



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## INWESTOWANIE W KAPITAŁ LUDZKI: ASPEKT RACHUNKOWOŚCI

**Abstrakt.** Przedstawiono główne podejścia naukowców do wyznaczenia charakteru i struktury inwestycji w kapitał ludzki pracowników przedsiębiorstwa. Analizie poddano współczesną politykę ewidencjonowania inwestycji w kapitał ludzki krajowych przedsiębiorstw. Stwierdzono, że jedną z przyczyn, negatywnie wpływająca na poziom inwestycji w kapitał ludzki, jest obecny system rachunkowości, uniemożliwiający traktowanie kapitału ludzkiego jako przedmiotu inwestycji. Uzasadniono racjonalność odzwierciedlenia w systemie rachunkowości przedsiębiorstwa inwestycji w kapitał ludzki przez integrację podejścia kosztowego i inwestycyjnego. Podkreślono konieczność zmiany zasad aktualnej polityki rachunkowości w zakresie inwestycji w kapitał ludzki, wynikającej z rosnących potrzeb informacyjnych wewnętrznych interesariuszy.

**Słowa kluczowe:** kapitał ludzki, charakter i struktura inwestycji, system rachunkowości



