

SOME PROBLEMS OF CAPITAL MEASUREMENT AND ACCOUNTING IN INNOVATIVE ECONOMY

It is a well-known fact, that to achieve competitive advantages of any economic system, an innovative orientation is needed. Innovative activity means activities related to the development and implementation of innovation. From the viewpoint of the effect on the economic state, systems of any type (from business unit to business environment) are called key system, the rest of the types are classified as related systems. The efficiency of innovative activity (IA) depends on quality of human capital and abilities, governmental support (to obtain the necessary financial resources on basis of the institutional platform), financial interest from business structures. Thus, human capital has been recognized as a factor of production and has been considered as the main component that distinguishes it from the scientific and corporate character from other forms of the aggregate capital of the business units.

The measurement of the capital has always been the subject to discuss at the level of different economic theories. One of the models of capital valuation, recognized in modern accounting methodology, is the concept of maintaining the financial capital of J. Hicks. Although, in the framework of this concept, human capital was not a subject of study, however, the scientist pointed out the need for separate evaluation of each factor of production of the capital. In the theory of human capital, the issue of evaluation focuses mainly on the possibility of the value measurement of the share in the joint resources of a business unit on the base of two options: unadjusted goodwill method and current value method, which are unacceptable in accounting methodology. In this context, it should be noted that International Financial Reporting Standards (IFRS) 2 «Share-based payments» points to the need to assess the change in capital due to corporate actions by applying one of the models of business valuation.

As from the perspective of the accounting methodology capital is an element of financial reporting, the problems that require the solution for recognition of the human capital within the equity capital are its identification, reliable valuation and the mechanism of reflection. We will open the author's vision of solving these problems consistently and applicable for organizations engaged in innovative business. For the purpose of the human capital identification (the first problem) there is a need in the analysis of events which results in fact that organization receives control over economic resources. Economic events take place at certain stages of the life cycle of the company. The main stages in the implementation of innovation are the early stage, the stages of growth and redemption. At its first stage, a part of the capital, which is identified as human capital (knowledge, research, abilities) is shaped. And at the following stages another type of capital, which, according to the resource concept, is identified as organizational capital (goodwill, structural relations, and the culture of the relations) is

shaped. They are the result of corporate actions. Thus, by the time of initial recognition, the company's equity capital engaged in the development of innovative activity will consist of two components: financial and human, and as the innovation business develops, organizational capital will also be added.

According to the theory of human capital, the evaluation should focus on the **aggregate expenditures** associated with the qualitative component and the economic effect (the quantitative component) and of its use over time. Therefore, the basis of the evaluation of human capital is assumed by the economic impact of its two characteristic features: future orientation (the strategic nature of scientific knowledge) and divided right of ownership (corporate nature), which predetermines the consistency of the cost evaluation process. As from the accounting perspective, the second problem is reliable estimation of human capital. The practice developed 4 mathematical models for evaluation of the innovative project: «the decision tree method», the Black-Scholes-Merton, binomial and Monte-Carlo models. The choice of a particular evaluation model (the third problem) is influenced by the risks, uncertainties, possible outcomes of the predictable event, which depend of the stage of innovation activity. Thus, at the first stage of innovation, when the risks of losses are high and there is a permanent market uncertainty for evaluation of the human capital, it is effective to apply the binomial model, known as the real options method. It should be noted that innovative activity, which at all stages of its formation and development is characterized by high risks of losses, has received the name of venture activity. In this case, at the stages of the formation of the organizational capital, the use of the binominal model is more appropriate. According to authors, by applying the IFRS 2, which regulate the procedure of recognition and evaluation of the rewards for corporate services (on the basis of the Black-Scholes-Merton, binomial and Monte-Carlo models), but in economic terms – evaluation of the organizational capital, we can adequately solve the problem of human capital.

The development of an accounting mechanism for transactions related to the reflection of human capital is indicated by another problem, but which is solved together with the problem of valuation, and is a derivative in comparison with it. The authors studied the aspects of modeling of the accounting transactions in the implementation of innovation activities. The procedure for accounting of the organizational capital on the basis of the provisions of the International Financial Reporting Standards is described in details and it is appropriate to use it on this issue.