Intellectual Capital Measurement

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INTRODUCTION

In the contemporary knowledge-based economy the importance of assets related to human, his knowledge and abilities is on the rise. Nowadays Intellectual capital (IC) and intangibles as wealth production factors take precedence compared to physical assets. Especially in the ICT industry, in which Intellectual capital has its origin, IC is perceived as the driver of innovation, growth and competitive advantage of the companies. Moreover in the ICT industry it is the Intellectual capital mostly responsible for the value creation. ICT is being created by Intellectual capital, while at the same time ICT enable efficient Intellectual capital management.

The aim of the article is to present the current state of knowledge concerning Intellectual capital and its measurement methods. Although IC may be identified and calculated on the micro, macro and industry level, this paper deals with the IC measurement on the enterprise level solely. First part of the article is concentrated on the introduction to the IC notion and its main forms, second presents the most common IC measurement methods, while the third part is the analysis of controversies and usability of chosen method to provide a general vision of IC measurement concept.

BACKGROUND

First use of the term *Intellectual capital* took place in 1958 when two financial analysts recognized as the most important element in the information technology companies their *Intellectual capital*. As a result of changes in the structure of economies in many countries, the term has become a subject of interest and study of a wider group of researchers.

Abeysekera (2006, pp. 61) recognizes Intellectual capital as a form of knowledge that is not posted in the traditional financial reporting. Brooking (1998, pp. 12) believes that Intellectual capital are combined intangible resources that allow organizations to function. Stowe (2001, pp. 86), in turn, argues that Intellectual capital is the ability to use the knowledge possessed by a person or a company to make better use of human and natural resources. In the discussion on the importance of Intellectual capital it is often emphasized that it may have a significant impact on achieving and maintaining a competitive advantage. Stewart (2003, pp. 32) considers the Intellectual capital as a sum of all knowledge the company staff has and what can provide a competitive advantage, manifested in market value which excesses book value. Edvinsson and Malone (2001, pp. 17) argue that Intellectual capital may be recognized as the difference between the market value and the book value. Intellectual capital may include: patents, processes, people skills and experience, technologies, information about customers and suppliers (Stewart, 1997, pp. 71).

To sum up IC shall be perceived as intangible assets created by human and his knowledge that have not been entirely disclosed in the balance sheet but play a crucial role in the contemporary business environment in terms of enterprises competitive advantage. Moreover, there shall be stated the difference between the commonly used terms of: Intellectual capital and intangibles. IC is a broader notion than Intangibles - Intangibles shall be associated with these knowledge-based

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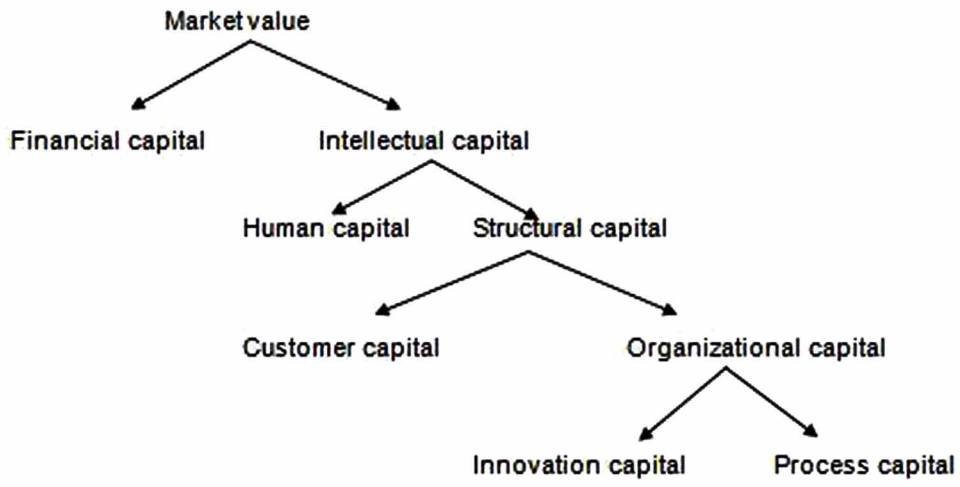
Figure 1. Forms of Intellectual capital (Edvinsson & Malone, 2001, p. 45)



assets that can be reported and valued in the financial statements of the enterprises. In this sense Intangibles are part of IC.

Defining Intellectual capital is a complex activity, as it has several dimensions and may be presented in many ways. Figure 1 provides one of the most common and widely accepted classification of IC.

Intellectual capital has two main forms, which are human capital and structural capital. Human capital includes employee's collective knowledge, competence, abilities and the power of brain. Structural capital, however, is divided into customer capital and organizational capital. Customer capital encompasses relationships with customers, suppliers, industry associations and market channels. Organizational capital, that may be further divided into innovation and process capital, are enterprise policy and procedures, software applications, research and development programs, patents and training courses (Seetharaman, Sooria, & Saravanan, 2002, pp. 130).

Researchers argue that knowledge and consciousness about the IC existence is solely not the ultimate goal of analyzing this complex phenomena. Far more useful is the identification and measurement of IC and its components, as it is crucial for the proper valuation of the enterprises (especially stock exchange companies). In this sense it helps investors to take strategic decisions concerning portfolio structure. Moreover, proper measurement of IC can provide a better view on the entity assets what plays a significant role in the mergers and acquisition transactions.

The most well-known and at the same time basic classification of measurement methods of Intellectual capital is the division proposed by Sveiby (2001), consisting of four groups:

1. Direct Intellectual capital Methods that focus on the study of certain (chosen) intangible assets.
2. Market Capitalization Methods which are basing on the difference between the market value and the book value, representing the value of Intellectual capital.
3. Return on Assets Methods, which examine the profitability of individual assets (including intangibles) involved in the company during the analyzed period.
4. Scorecard Methods, that, similarly to the direct measurement methods focus on the determination of individual components of Intellectual capital with such a difference that they rarely allow for estimating their monetary value.