

## INTELLECTUAL CAPITAL - KEY FACTOR IN ORGANIZATION DEVELOPMENT

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**Abstract:** *Intellectual Capital (IC) is an important component of an organization's capital, being the primary resource of development and also of value creation in almost all sectors of economic life. In order to be used and explored with maximum efficiency, intellectual capital must be an integral part of the organization's strategic development plan. In the literature, the concept of intellectual capital was accepted, in fact designating the triumph of economic reasons. The emergence and development of this concept increasingly emphasizes the correlation with the technological progress and the continuous development. The purpose of this paper is to highlight the value and importance of intellectual capital - competitive advantage in any organization.*

**Key words:** intellectual capital, organization, organization development, human resource.

### 1. INTRODUCTION

In contemporary society, the importance of knowledge and the emergence of a global economy are some of the most up-to-date topics debated in recent years. Increasing the level of knowledge is often associated with performance and economic growth, knowledge becoming a catalyst for competitive advantage and innovation, in the context of complex systems subject to change, novelty and ongoing transformation.

A key factor of this continuous transformation is intellectual capital, which has become a strategic element in all spheres of activity of organizations, in order to obtain or increase profits and competitiveness. Consequently, more and more attention is directed to the management of knowledge, of intangible (*intellectual*) capital.

Organizations must therefore exploit all the resources they have in order to ensure their success and know how to capitalize on them.

## 2. HUMAN CAPITAL – AN ORGANISATION’S ASSET

The concept of *human capital* is frequently used to refer to human resources and represents productive resources concentrated in labor resources, skills and knowledge. Hence its components are:

a) *biological capital* - physical abilities, mostly innate, of individuals;

b) *educational capital* - skills acquired by individuals in the training process.

Other subcategories of IC that occur frequently but differently in the different conceptual classifications are: *customer capital, stakeholder capital, cultural capital, organizational capital, process capital* and *economic capital*. It is important to specify that not the sum of these components that make up the

whole is the most important, but the way they are interconnected.

In turn, the educational capital takes on two forms: on the one hand, the skills and competences acquired in the school through the educational process, education and attested by diplomas, and on the other hand, the skills and knowledge acquired during the existence of the individual, through individual efforts of study and reflection or through contact with the environment.

Therefore, human capital is developing progressively, requiring state-funded investments, employers, families and adult individuals, concerned about their professional-scientific training, the ability to adapt to the changes imposed by technical-scientific progress, their career.

Figure 1 shows how human capital manifests itself (Brooking: 1996):

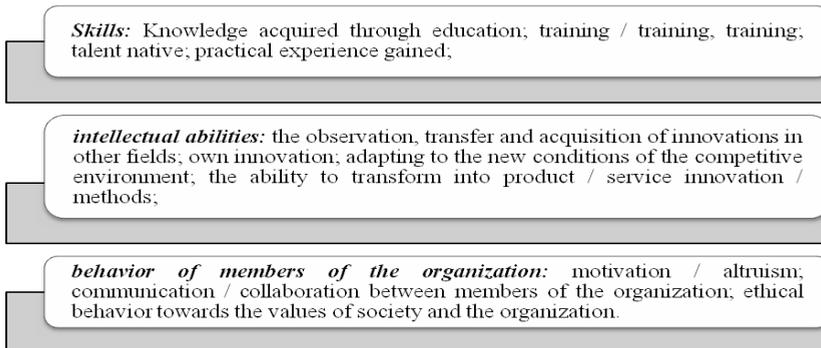


Figure 1. Manifestation of human capital.

**Table 1. Synthesis of Human Capital Approaches.**

The essence of the approaches	Author
<ul style="list-style-type: none"> <li><input type="checkbox"/> The monetary value of human capital</li> <li><input type="checkbox"/> Individual development is fixed capital</li> </ul>	William Petty
<ul style="list-style-type: none"> <li><input type="checkbox"/> The division and specialization of work increase the skill of individuals</li> <li><input type="checkbox"/> The individual's capacities are vocations of the nation</li> <li><input type="checkbox"/> Investment in education is considered to be a future source of income</li> <li><input type="checkbox"/> Knowledge and experience are elements of fixed capital</li> </ul>	Adam Smith
<ul style="list-style-type: none"> <li><input type="checkbox"/> The role of education in the formation of knowledge and experience</li> </ul>	Leon Walras
<ul style="list-style-type: none"> <li><input type="checkbox"/> National wealth is the result of investment in education and vocational training</li> </ul>	Friederich List
<ul style="list-style-type: none"> <li><input type="checkbox"/> Education is the basis for adaptability and professional mobility of the workforce</li> <li><input type="checkbox"/> The most valuable of all capitals is the one invested in the human being</li> </ul>	Alfred Marshall
<ul style="list-style-type: none"> <li><input type="checkbox"/> The production capacities of the individual are circulating capital</li> <li><input type="checkbox"/> The distinction between simple and complex work appears</li> <li><input type="checkbox"/> The relationship between training and pay</li> <li><input type="checkbox"/> The role of intellectual capital in the formation of technical capital</li> </ul>	Karl Marx
<ul style="list-style-type: none"> <li><input type="checkbox"/> Education is the investment that influences future incomes and is included in the notion of capital</li> </ul>	Irving Fischer
<ul style="list-style-type: none"> <li><input type="checkbox"/> The role of human capital in economic growth</li> <li><input type="checkbox"/> Human capital comprises the stock of abilities and knowledge</li> <li><input type="checkbox"/> The role of investment in health is emphasized;</li> <li><input type="checkbox"/> The relationship between education, workplace training and income arises</li> </ul>	Jacob Mincer
<ul style="list-style-type: none"> <li><input type="checkbox"/> Defines the concept of human capital as a form of capital</li> <li><input type="checkbox"/> Health and investment expenses are costs that increase the individual's income</li> </ul>	Theodore Schultz
<ul style="list-style-type: none"> <li><input type="checkbox"/> Human capital is indivisible by the bearer</li> <li><input type="checkbox"/> has the lowest liquidity</li> <li><input type="checkbox"/> investment in education is long-lasting</li> <li><input type="checkbox"/> Investments in human capital are very risky</li> </ul>	Lester C. Thurow
<ul style="list-style-type: none"> <li><input type="checkbox"/> The concepts of general training and specific training are explained</li> <li><input type="checkbox"/> Education and training are investments that increase the individual's income</li> <li><input type="checkbox"/> The role of investment efficiency is demonstrated</li> <li><input type="checkbox"/> Establishes the relationship between human capital and income distribution</li> </ul>	Gary Becker
<ul style="list-style-type: none"> <li><input type="checkbox"/> estimating the value of the human being through the "production cost procedure and capitalized gains"</li> </ul>	B. Kiker

The essence of the approaches	Author
<input type="checkbox"/> Investments in human capital determine productivity growth and economic growth respectively <input type="checkbox"/> Human capital is the "engine of economic growth"	R. Lucas, Uzawa, Azaridis, Drazen, P. Barro, P. Romer, Weill, J. Crawford
<input type="checkbox"/> Individuals are investors and owners of human capital	Thomas Davenport

The theory of human capital has not always succeeded in meeting the expectations of solving problems in the field. Such a problem is that the elements of human capital theory can be used only in scale production processes to differentiate pay to skill levels. In the author's view there are a number of shortcomings in the human capital theory: human capital theory is limited to the study of functional dependencies, respectively to the neoclassical paradigm reflecting unilaterally the reality. The adherents of the human capital theory did not reveal the formal character of the neoclassical model. The theory of human capital is specific to the microeconomic analysis, according to which the increase of the human capital ensures a proportional increase of the incomes. People with ideas, talent, with a contribution to the development of

culture have not always been correctly evaluated.

By synthesizing the basic approaches of human capital theory, we can state: human capital is the measure of the capacities and qualities of the individual formulated as a result of investments which, being actually used, lead to the increase of labor productivity and income.

### **3. INTELLECTUAL CAPITAL AND ORGANIZATION DEVELOPMENT**

The concept of intellectual capital is relatively new, it emerged in the last decade of the 20th century. The concept was first defined and argued by Thomas A. Stewart, (Stewart & Ruckdeschel: 1998) editor of the American magazine *Fortune*, and then taken over and developed by other

specialists, especially in the field of human resource management.

Before attempting to truly define the intellectual capital, its importance must be emphasized from the point of view of the general definition of the capital of an organization: Capital, (Oprean: 2008, pp. 28-30) means broadly the goods produced by an economic system to be used as resources at producing other future goods and services. The resources that make up the capital of an organization can be divided into two generic categories:

a) *tangible or physical resources / assets* - equipment and machinery, construction structures, inventory stocks, etc.;

b) *intangible resources / assets* - the human resource.

The term *intangible assets* is specific to accounting, and *intellectual capital* (a term used predominantly in management) is generally assimilated to intellectual property. For a long time, the measurement of the capital of organizations was made from an accounting point of view, with the emphasis on tangible resources, known, easily to be inventoried and measured. From a historical point of view, the period between 1959 and 1999 was marked by a series of researches

that opened new perspectives on the efficient use of resources. Thus, the idea has emerged and reinforced that organizations have differentiated or even unique resources, capabilities and facilities, and skills-related issues, knowledge management and learning processes at the organizational level become fundamental strategic issues.

Intellectual capital research has been expanding since the 1980s, since its interest in the socio-economic field has been identified since the OECD initiatives when observations have been made on intangible investments such as vocational training, scientific research, patents and the development of new technologies emerged for the purpose of rapidly increasing tangible investments.

The beginnings of the CI study are marked by a number of reference events, including the 1980 publication of Hiroyuki Itami's paper, suggestively called *Mobilizing Invisible Assets*, dedicated to the effects of so-called invisible assets on Japanese corporations' management; the publication in 1987 by Karl-Erik Sveiby of paper entitled *The Know-How Company*, which emphasizes how the rapid spread of companies that are not based on

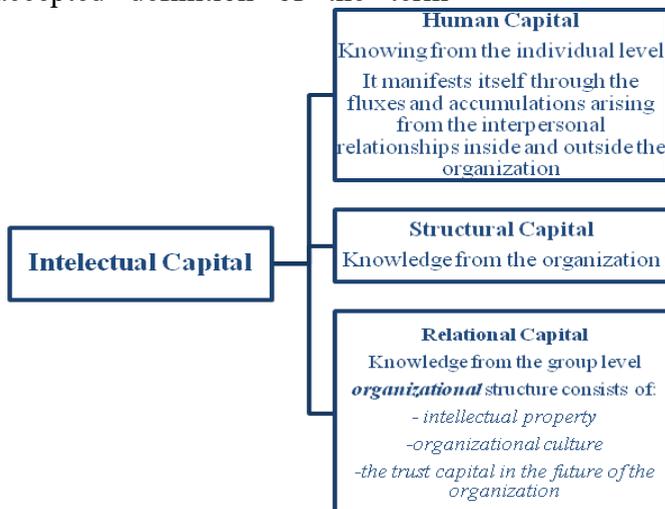
traditional production can be managed, but based on the creativity and knowledge of employees.

In 1991, for the first time, the term *intellectual capital*, used by Thomas Stewart in the Brainpower article, (Stewart & Kirsch: 1991) published in the Fortune magazine, appears for the first time. Also, in 1991, Skandia established the first CI leadership position, calling Leif Edvinsson as an *intellectual capital manager*. Skandia also marks the beginnings of CI's measurement tests, developing its first method of measurement (IC Navigator) in 1993 and the first *IC report* in 1995.

Although there is no generally accepted definition of the term

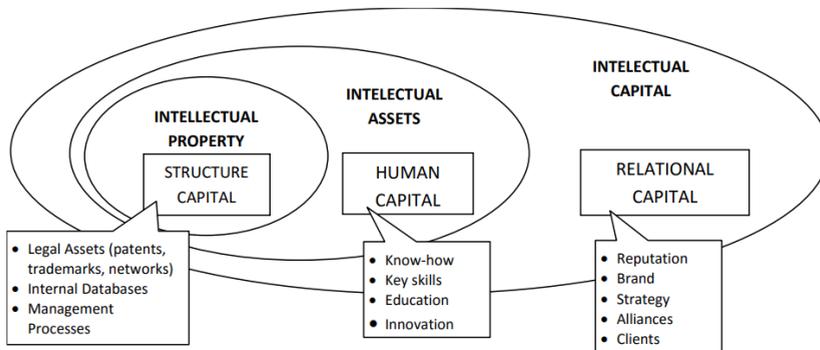
*intellectual capital*; however, several perspectives have led to a general outline of the term, by using associated concepts such as: *skills, capabilities, expertise, patents, customer information, etc.*

Regarding the scientific literature and the methodological perspective of operationalization, there are several ways to operationalize the IC, but after more than a decade of study of the phenomenon in question, most authors who have approached the intellectual capital indicate three constituent elements for the evaluation of this intangible asset (Armstrong: 2003): *human capital, relational / social capital* and *organizational capital*. (Figure 2)



**Figure 2.** General Operational Scheme of IC (Source: Emerald Journal of Intellectual Capital).

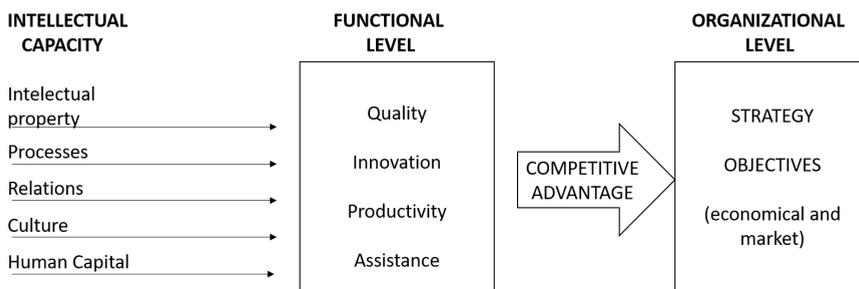
The considerations presented support the assertion that intellectual capital is formed by the fluxes and accumulations of knowledge and constitutes the intangible assets of the organization.



**Figure 3.** Intellectual’s Capital Structure.

For an organization's success in assessing the impact of intellectual capital, a complex approach to the sources of this type of capital is needed. For example, intellectual capacity that is not synonymous with human capital must be analyzed, but it

also includes elements related to intellectual property (and more specifically its protection), processes associated with the preservation and dissemination of knowledge, and organizational culture (Figure 4).



**Figure 4.** Scheme of intellectual capital capacity (Source: Fitz-Enzi., 2009)

Also, intellectual capital needs to be evaluated both in terms of its impact on the functional level and the impact on the global organizational level. Although, mistakenly, intellectual capital and, above all, the human capital component are perceived as a source of costs, it must be considered as a strategic investment.

Brooking provides a comprehensive definition of IC, claiming that this concept is attributed to the combined intangible assets that allow an organization to function. It is also Brooking that refers to the need for an efficient *management of intellectual assets*. (Brooking: 1996)

The conceptual development of intellectual capital was made in two different but convergent directions. A first direction was generated by the need to increase the organizational capability of the organization and to achieve the strategic advantage on increasingly competitive markets by intensive capitalization of intangible resources. Among these resources, emphasis was placed on information and knowledge, trademarks and patents, organizational behavior and

organizational culture geared towards excellence. In other words, the problem is how to manage the intangible resources of a company as efficiently as possible to increase its competitiveness. The second direction was generated by the obvious trend of consolidating success with organizations that have the relationship between market value and the ever-increasing financial value of the balance sheet. This situation, which is also characteristic of the new economy, has led to the idea of developing new tools to assess the organization's intangible resources that cannot be measured by financial instruments used for tangible resources. The first direction can be called strategic because it comes from the strategic management area, while the second direction can be called evaluation because it comes from the area of the metrics used in assessing the management performance of a company.

The two directions are convergent because "what you can measure can be managed and what you want to manage you have to be able to measure." Intellectual capital is a fusion between these two currents of thinking.

Intellectual capital ultimately means how you can measure and better realize the management of knowledge and other intangible resources in the organization.

The intellectual capital (Sveiby, f.a.) comprises of:

*Market assets* are those that derive from a beneficial relationship of the organization with the market and with customers. Market assets reflect the potential of an organization due to intangible assets linked to the market. Examples may include: customers and their loyalty, distribution channels, different contracts and agreements, etc.

*Intellectual property assets* include know-how, marketing secrets, copyright, patents or other rights. Intellectual property is the legal mechanism to protect many of the assets of organizations.

*Human resources* focus on ability and creativity in problem solving as well as leadership, entrepreneur, and manager skills that employees of an organization have. An individual is not empowered to perform only a certain activity, but rather has to prove a dynamic person who can carry out a variety of activities over time. As they become more competent in their work, people

learn more and become more and more valuable.

*Infrastructure specific assets* represent those technologies, methods and processes that enable an organization to function efficiently in the long run. Examples include: organization culture, management methods, financial structure, databases and market or customer information, communication systems such as e-mail and modern teleconferencing systems.

#### 4. CONCLUSIONS

We can conclude that the transformations of the present society require different approaches in managing the activity of organizations and the exploitation of human capital, implicitly new approaches to management thinking and practice that are subject to unpredictable external environment challenges, which are becoming more turbulent and more competitive.

From the mere analysis of the elements of human capital, we understand how much investment and attention to its development is necessary. In fact, the management of modern organizations has understood that, in order to ensure their success, in the conditions of amplifying the process of

globalization and enhancing competitiveness on a highly competitive market, human resources must be approached as strategic investments.

#### REFERENCES

- [1] Brooking, A., 1996, *Intellectual Capital*, Cengage Learning EMEA.
- [2] Stewart, T., Ruckdeschel, C., (1998), *Intellectual capital: The new wealth of organizations*, Wiley Periodicals, Inc., A Wiley Company, *Version of record online*: 7 February 2007.
- [3] Oprean, C., 2008, *Tendințe actuale în managementul capitalurilor organizațiilor modern*, Departamentul Editorial-

Poligrafic al ASEM, Chișinău, pp. 28-30.

- [4] Stewart, T.A. Reporter Associate, Kirsch, S.L., Brainpower, 1991, *Intellectual capital is becoming corporate America's most valuable asset and can be its sharpest competitive weapon. The challenge is to find what you have -- and use it*, June 3.
- [5] Armstrong, M., 2003, *A Handbook of Human Resource Management Practice*, Kogan Page.
- [6] Brooking, A., 1996, *Intellectual Capital*, Cengage Learning EMEA.
- [7] Sveiby, K.E., *Intellectual capital knowledge management*. <http://sveiby.com>, accessed at 27.06.2018