

# HUMAN CAPITAL DEVELOPMENT - NEW CHALLENGES IN THE CONTEXT OF KNOWLEDGE-BASED ECONOMY

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**Abstract:** *The new technological, informational and communicational changes we have seen in recent decades have marked the transition from natural resources-based economy to knowledge-based economy. In the new knowledge economy the wealth is based on knowledge acquired and their use and not on material factors of production. In this context, human resources, along with information resources, acquires a special importance and are experiencing upward increasingly strong. Experts now agree that human capital is the fundamental factor of overall progress and long-term investment in human capital development has effects on all levels: individual, organizational, national and global level.*

*This paper presents some aspects on the significance of human capital development in the context of knowledge-based economy, emphasizing the importance of lifelong education and training.*

**Keywords:** *knowledge-based economy, knowledge-based organization, human capital, lifelong education and training, European Union.*

Knowledge-based Economy is a concept used increasingly frequently in the early twenty-first century, to describe a new type of economy. It requires a new approach to describe, explain and understand. In such an economy, the model of natural resource-based organization has become irrelevant. It is therefore necessary to outline a new type of organization, knowledge-based organization, and a new type of management, also based on knowledge.

In the literature, the term knowledge-based economy has no single definition, and is most often defined by describing the features of this type of economy. A relevant definition of the term was given by experts of the Organization for Economic Cooperation and Development, who appreciate the knowledge economy as "economy which is directly based on the production, distribution and use of knowledge and information."<sup>1</sup>

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<sup>1</sup> OCDE, *The Knowledge-Based Economy*, Paris, 1996, p. 7.

In the literature of our country, Professor Ovidiu Nicolescu, defines the knowledge economy by specifying its main characteristics, as follows: "In essence, the knowledge economy is characterized by transforming knowledge into raw materials, capital goods, inputs essential economics and economic processes in which the generation, sale, purchase, learning, storage, development, knowledge sharing and protection become predominant and decisive condition profit and long-term economic sustainability."<sup>2</sup>

Both definitions show, in a summary form, the specificity and the content of the knowledge-based economy, stressing also the role of knowledge in economic processes.

Knowledge-based economy is a goal for the European Union. The EU has set as a strategic objective, since 2000, during the Spring European Council in Lisbon on 23-24 March 2000, becoming the most competitive and dynamic economy in the world, based on knowledge, capable of sustainable economic development with more and better jobs and a greater social cohesion.<sup>3</sup> This objective is reflected in the strategy "*Europe 2020: A European strategy for smart, sustainable and inclusive growth*" which proposes that first priority for the European economy "*smart growth: developing an economy based on knowledge and innovation*".<sup>4</sup>

It can be seen that the action of European forums prioritize information and communication technologies (ICT) role in assisting intelligent learning activities, innovation and knowledge management, supporting the wider adoption of best practices, with special attention to small and medium-sized enterprises (SMEs).

Knowledge economy has a number of implications for business organizations and their management. Thus, the organization is determined not only by their physical asset value, but mainly the value of intangible assets, by human resources and by knowledge or information they hold.<sup>5</sup>

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(<http://www.oecd.org/dataoecd/51/8/1913021.pdf>);

<sup>2</sup> Nicolescu, O., Nicolescu, Luminița, *Economia, firma și managementul bazate pe cunoștințe*, Ed. Economică, București, 2005, p. 48;

<sup>3</sup> Conseil Européen Lisbonne, mars 2000, Conclusions de la Présidence, (<http://www.europarl.europa.eu.htm>);

<sup>4</sup> European Commission, „*Europe 2020. A European strategy for smart, sustainable and inclusive growth*”, 2010, disponibil on-line la adresa:

[http://ec.europa.eu/eu2020/index\\_en.htm](http://ec.europa.eu/eu2020/index_en.htm);

<sup>5</sup> According to a U.S. study, the book value of U.S. companies in 2001, represent 25% of their market value, compared to 95% in 1978 (Useem, J., *The 10 Driven Principles of the New Economy*, Business 2.0 Review, 5/2001.

Speed renewal of knowledge, products and technologies increased significantly, innovations occur more quickly and disseminated with great speed, reducing the importance of time.

Information, valuable ideas and knowledge plays an essential role in the development of current organizations and people that generate them is the main resource of these organization. To attract and retain them, organizations use different ways, and turning them into owners is one of the strategies used frequently in recent years.

Development and economic growth was accelerated by the networking companies in all economic sectors (trade, information technology, industry, etc.). Networks integrate business agents of different sizes. They contribute to enhancing the speed of technical streams, human and economic flows, producing positive effects in the sphere of economic performance. Due to the network, the value and usefulness of products increases exponentially with the value market segment occupied. The swell volume of products of some sort and they have a higher market share, the more they have a higher utility (such as the computers, phones, faxes, etc.). Quickly obtain information about markets, products and services (by complex software), offers several advantages for producers, buyers and sellers. Detailed information on the best quality products, on best prices, it gives buyers a high capacity to choose and buy, in the shortest time, the product or the service they want. Under these conditions, the distance between the desire to buy a product and an effective opportunity to make this purchase is greatly reduced (through e-commerce), tending to reach zero, for many products (music, books, etc.).

On the other hand, information on market situation and requirements of buyers is reflected in the manufacture and in the sale of products according to their explicit requirements. Manufacturers and sellers, thus establishing what to produce, which are the quantities, at what price to sell to increase profitability and what are the market segments to focus on which. This provides customization of products supply. This leads to a substantial reduction in stock and waiting times in the development of economic processes, with multiple implications: the capital for doing business, attract new sources of funding from customers and improving value for money etc.

Branch structure of the knowledge economy is significantly different from that of the industrial economy. In the industrial economy the main

branches were the agriculture and the industry, which prevailed as a share of total employment in the economy, and as a percentage to obtain added value and GDP, etc. In the structure of the knowledge-based economy, services is the main sector of the economy, with the largest share of employment and a significant contribution to creating added value. Within services, trade has a considerable weight, developed largely in the form of e-commerce. It also enhances the development of sectors involving high technology (telecommunications, IT, R & D), the essential role in generating new knowledge and with a weight and a growing impact on the structure and performance of any economy.

### **SIGNIFICANCE OF HUMAN CAPITAL IN THE KNOWLEDGE-BASED ORGANIZATIONS**

Knowledge-based organization represents a new paradigm in business since the beginning of XXI century.

Operation of this type of organization is based on three fundamental processes, designated by the phrase "the three I": innovation (creating new knowledge), learning (assimilation of new knowledge) and interactive partnership for knowledge.<sup>6</sup>

Challenges related to nature and designing organizations post-industrial have attracted a large number of scholars, fact which led to the existence of a plurality of terminology in the literature, consisting of parallel use of notions: "*organization centred on memory*", "*company intellectual-intensive*", "*smart*" organization etc.

The concept of knowledge-based organization has emerged in the years 1984-1988, and has registered, since then, successive phases of crystallization.

After 1995, intensified concerns about organizational problems which have become increasingly more complex, has contributed to the emergence of the first significant results in the creation and functioning of organizations based on knowledge.

Although all organizations are conditioned in one way or the other of knowledge, at least at the level of individual behaviours of their members, specific organizations from the information society is the way in which it is based on knowledge: *in a deeper sense, systematically and expanded the scale of collective behaviour of groups and the Assembly of the organization.*

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<sup>6</sup> Kets de Vries, M., *Leadership. Arta și măiestria de a conduce*, Ed. Codecs, București, 2003, pp. 69-72.

In the new type of organization, the managerial act is based on the priority systems and processes based on intangible assets, focusing on the development of adequate strategies and coordination actions permanent change of creative, competent professionals, capable of self management and self-empowerment actors, with a proactive behaviour and a new attitude toward work, organization and its values.

Information society organizations bring a new vision in the approach and enhance of human resources - considered a strategic asset - and their participation in organizational life. Specific organizational culture of these organizations is performance oriented, promotes confidence in people and their skills, fostering respect for and loyalty to their employees, encourage freedom of action and initiative of employees, taking responsibilities complex orientation towards teamwork, continuous learning and openness to new, to changes. In such an environment, where the creativity and the quality are valued and not the quantity, employees are encouraged and strongly motivated to succeed, to achieve outstanding performance.

In the knowledge-based organizations, and generally, in the information society, human capital is recognized as the fundamental factor of overall progress, and experts agree that long-term investment in human capital has strong drive-propagation effects at the individual, organizational, national and global level.

**The human capital** shows the quality side of human resources: knowledge, skills and abilities of employees in the organization.<sup>7</sup> In M. Armstrong's view, human capital is a component of intellectual capital that is "the accumulation and flow of knowledge available to an organization".<sup>8</sup>

According to Armstrong's conception, intellectual capital has three components: *human capital* - knowledge, skills and abilities of employees in the organization; *social capital* - accumulation and knowledge flows arising from the networks of relationships inside and outside the organization; *organizational capital* (also called structural capital) - institutional knowledge held by an organization, stored in the database, manuals etc. This tripartite concept of the intellectual capital emphasizes, as M. Armstrong noted, that although individuals (human capital) are

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<sup>7</sup> Armstrong, M, *Managementul resurselor umane-manual de practică*, Ed. Codecs, București, 2003, p. 47.

<sup>8</sup> *Idem.*

those who generate, store and retain knowledge, such knowledge is enhanced by interactions between individuals (social capital), generating institutional knowledge that possess the organization (organizational capital). Although knowledge and skills of employees are those that create value, however, organizational effectiveness depends on proper recovery of human knowledge. This knowledge must be developed, collected and traded (knowledge management), to create organizational capital.

In today's society organizations, **knowledge** is a new category of resources, considered to be more complex, difficult to assess, and much more effective compared to other categories of resources. Under the impact of knowledge occur quantitative, qualitative and structural changes in all other categories of resources.<sup>9</sup>

Generation and exploitation of knowledge became, at present, vital sources of increased global welfare and the states and organizations are aware of it. Knowledge is also central to determining competitiveness. Consequently, countries of the world, especially developed ones, are concerned with the systematic generation of knowledge, thus developing national systems and international interactions more sophisticated.

Given these developments and relying on the example of developed countries, we can say that investment in human capital has proven that is the most sustainable and profitable long term investment, with long-term beneficial effects of continuous and sustained growth. At the organizational level, human capital development is critical to achieving the organization's competitiveness. Companies can not afford such an investment will have no chance in global competition, increasingly stiffer.

### **HUMAN CAPITAL DEVELOPMENT TOOLS**

Defining issues, training, development and use of human capital has been a constant concern in economic and social thinking and practice, from classical economics and continuing with post-war approaches.

Since the '60s, the issue of human capital has captured the attention of academics, practitioners and specialists in economic and social policy. Study of human capital has become so, new dimensions and meanings.

The idea of investment in human capital belongs to Adam Smith. He suggested in *The Wealth of Nations* (1776) that the return on investment in vocational skills can be compared with earnings of investment in fixed capital (with the necessary limitations). In Chapter 10 of the book, the

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<sup>9</sup> Nicolescu, O., Nicolescu, Luminița, *op. cit.*

author states that "the person who was educated by a major labour and time expense, it can provide an activity to reimburse the cost of his education, with an ordinary income at least equal to the profit made by a capital of equal value."<sup>10</sup> Therefore, it is noted that education was treated as an investment, and educated person was treated with a form of capital.

Technical and technological developments in the second half of the twentieth century have led to increased need for specialists of different professions in all fields. training was increasingly perceived and treated more as an investment. Consequently, early '60s marked the so-called "human investment revolution in economic thinking." Outlays for education were treated as investment flows that build human capital.

Although the value of human capital or cost includes several components, the essential active component is education and training. The extent of economic and social change in contemporary society - a knowledge-based society - requires a different kind of approach to education and training. This type of society requires a reconsideration of the importance and role of human capital in the society and above all, education and training. Investing in education and training means to promote growth, given that in the new knowledge-based economy the basic factor of wealth is firstly, knowledge acquisition and use and not material factors of production.

**Education and training** is now a global concept under which they are meeting all aspects of education and training in the formal, non-formal and informal system.

In current conditions, education, through its functions, is an important pillar of economic and social development, as far as meeting the requirements of society and to the extent that is capitalized by using the skills and qualifications acquired through learning. For this reason, education and training is enjoying a major concern and a priority position in the development programs, particularly in developed countries, in close relation to economic, demographic, social and political processes.

The right to education is provided in the Universal Declaration of Human Rights.

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<sup>10</sup> Smith, Adam, *Avuția Națiunilor - Cercetare asupra naturii și cauzelor ei*, Ed. Academiei Române, București, 1962.

Over time, content and meaning of this law has qualitative evolved<sup>11</sup>, from initial education, to the **lifelong education and training**, as a result of economic, social, cultural transformation, and also as a result of transition to the knowledge-based society.

The new concept of lifelong education and training appeared as a response, as an alternative to the major problems facing humanity, as a result of globalization, under new requirements imposed by knowledge-based society and knowledge-based economy. In such a society, human capital becomes a strategic asset and the investment in such assets is critical to economic and social development.

Lifelong education and training is one of the major targets of the EU and this actually came as a result of the study and understanding of current economic and social environment and the challenges it posed.

Education and training are central to the Lisbon agenda for growth and jobs and a key element for its follow-up with the 2020 perspective. Creating a well-functioning “knowledge triangle” of education, research and innovation and helping *all* citizens to be better skilled are crucial for growth and jobs, as well as for equity and social inclusion. The economic downturn puts these long-term challenges even more into the spotlight. Public and private budgets are under strong pressure, existing jobs are disappearing, and new ones often require different and higher level skills. Education and training systems should therefore become much more open and relevant to the needs of citizens, and to those of the labour market and society at large.

Policy cooperation at European level in the areas of education and training has, since 2002, provided valuable support to countries’ educational reforms and has contributed to learner and practitioner mobility across Europe. Building on this approach, and fully respecting Member States’ responsibility for their education systems, the Council endorsed a Strategic Framework for European Cooperation in Education and Training in May 2009.

## CONCLUSIONS

Human capital, as a component of human resources, is today considered as the most valuable asset at the organizational and national

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<sup>11</sup> Luț, D. M, *Lifelong Education and Training - Major Condition of Human Capital Development*, Analele Universității Eftimie Murgu Reșița, Fascicola II – Studii Economice, ISSN 1584-0972, pp. 404-412, 2010.



level. Lifelong education and training of human resources is now widely regarded as an essential component of development strategies in the developed states of the world. It is a major factor for continued and sustained economic growth, to improve competitiveness and employment.

The content and meaning of the concept of lifelong education and training, with its specific issues, vary depending on the existing diversity of national policy and markets policy at a time (supply and demand for education and training), and according to other aspects derived from national characteristics and priorities. Long-term goal of these systems is to contribute to full expression of individual personality, by acquiring a high quality training, by highlighting their traits and talents, by stimulating their development.

Education and training are crucial to economic and social change. The flexibility and security needed to achieve more and better jobs depend on ensuring that all citizens acquire key competences and update their skills throughout their lives. Lifelong learning supports creativity and innovation and enables full economic and social participation.

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