KNOWLEDGE – INNOVATION – COMPETITIVENESS AN INTEGRATED APPROACH

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Abstract:

The economy based on knowledge uses the knowledge and the innovation as main engines of the economic growth and development.

The organization must not only develop and expand their knowledge but also to use the mechanisms and procedures to transform knowledge into assets. Innovation involves the transformation of this knowledge into products / services and is essential for competitiveness. To remain competitive companies must invest in innovation so as to adapt changes taking place in business.

In this paper we propose dealing with issues relating to knowledge, innovation and competitiveness as an integrated approach.

Key words: knowledge, innovation, competitiveness

JEL classification codes: D83

Introduction

This article aims to bring attention to an integrated approach about three key concepts treated interrelated. The goal is to identify and demonstrate the role of knowledge and innovation within an organization and how they ensure competitiveness. Knowledge and new technologies available to organizations enables employees to collaborate, work and innovate for effective leadership. In the new economy knowledge is the main strategic resource of the organization and the organization led by knowledge brings innovation. Knowledge process involves addressing new issues, changes and by its nature is a process of innovation. Innovation is a challenge for organizations and researchers because it is seen as a catalyst for competitiveness in an increasingly competitive world. It sits in the center of economic and social development, as is reflected in the products and services that support the development and gives a lasting nature.

From information to knowledge

Knowledge is the most valuable treasure of humanity and is based on the need to understand reality. The desire to know is deep in the genetic code of the human being and manifest since early childhood. Information, experience and learning stand at the base of knowledge, Thus, we can talk about knowledge as a process, a phenomenon or a product of human activity.

Knowledge process requires the existence of three basic elements (a cognitive object, a cognitive subject and cognitive relationship between subject and object) and carried on three levels:

- observational knowledge level, which starts at objects, phenomena, different processes. In this level, the exterior and individual features of the object are perceived using senses;
- empirical knowledge level, where it performed the analysis and description of identical objects class. Data processing is done by using a set of logical operations such as comparison, synthesis, abstraction, generalization;
- theoretical knowledge level, where it monitors the development of concepts and theoretical laws setting. This is the level where the creativity of the knowledge subject has a very important role. (Porumbeanu, O. L. (2004), pp. 127 - 128)

Knowledge is not just a mere accumulation of information, getting them is the result of a whole chain logically and psychologically. Starting from the signal - sign - date - information - knowledge, come to knowledge, as shown in the figure below.

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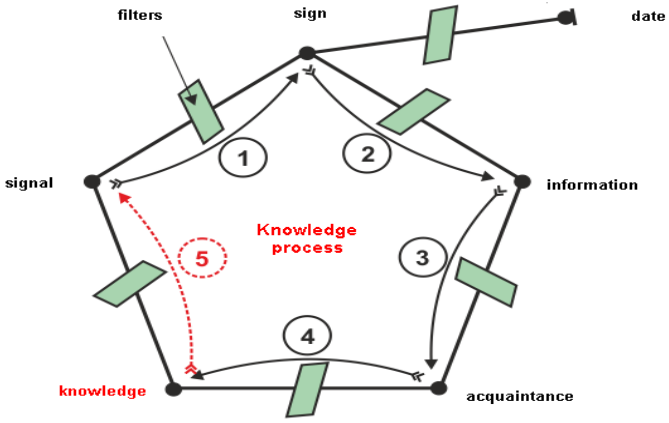
Figure 1 - Logical flow of knowledge acquisition



Source: PhD Prof. Emil Dinga

By signal we mean any physical phenomenon that impresses one or more of the natural senses of cognitive subject.

The signal is the sign carrier, i.e., the signal has significance for receiver signal. Recognition signal as a sign presupposes the existence of codes of symbolization, on which to recognize that the signal has significance not only for himself but for a referent (denoted). Symbology codes (which may be either individual or from the experience thinking individual and social, surging experience or social thinking) is essentially paintings correlation between signals and referents associated with those codes. For example, we can consider the noise of a waterfall (sign), which stands for the one who hears the existence of water (referent). Thus, the signal referent identification turns signal in sign.

The date represents the sign which does not affect the uncertainties or incompleteness of that sign receiver referent, having just an acknowledgment role. We can say, therefore, that the data brings nothing new to the subject receiver.

Unlike date the information is the sign which reduce, modify or remove an uncertainty or incompleteness.

Knowledge is that information which received, finds into the receiver subject's cognitive background information of the same nature, backgrounded. For example, if a chemist receives information about an amino acid that information turns into knowledge, because it already has a cognitive storage in this area. If information is received by a historian who does not have prior knowledge of chemistry, it will not become knowledge.

Knowledge is the set of cognitive domains wich have cognitive storages formed in a subject. That set is not only logical sum of the individual cognitive deposits, contributing fully to it the synergistic effect produced by their relationship manifested by mutual causal action.

Knowledge, according to neoclassical models of economic growth, represents a category of objects that obey the operation of the market rules, with perfect competition. Knowledge is private goods that are traded on a market subject to competition rules. Knowledge can be commercialized and then, just as producers of knowledge, consider the following rules:

- there is a demand for that knowledge;
- payback and profit-tempting to investors;
- stimulate researchers so that their work become attractive and profitable.

Knowledge can be bought and sold like any other property, whether in the form of goods or services or as capital. The price is determined by the market, including the stock market.

Integrated approach

Nicolescu O. and Nicolescu L. believe that "knowledge economy is characterized by transforming knowledge into raw materials, capital, goods, essential inputs in the economy, and also by economic processes in which the generation, selling, buying, learning, storage development, knowledge sharing and protection become more prevalent and decisive, for profit and long-term economic sustainability." (Nicolescu, O., Nicolescu. L., 2005, p.21)

The new economy is a knowledge-based economy, in which the main factor is the degree of implementation of ideas, innovation and technology.

OECD defines the knowledge economy as an economy based on production, distribution and use of knowledge and information. According to OECD experts are four categories of knowledge: to know-what, to know why, to know how and to know who. (Nicolescu, O.,Nicolescu, C., 2011, p.24)

Literature assigned four essential economic functions to the knowledge: raw materials, capital product and production factor.

Know-how knowledge are those based on applied research, improvement, modernization of processes, products, etc. As raw material they have an essential role in achieving modern products and participate in the implementation of all stages of production processes. When applied research type was completed pass to technological research, but there are situations where this transition is not directly possible, being necessary to achieve fundamental technology research.

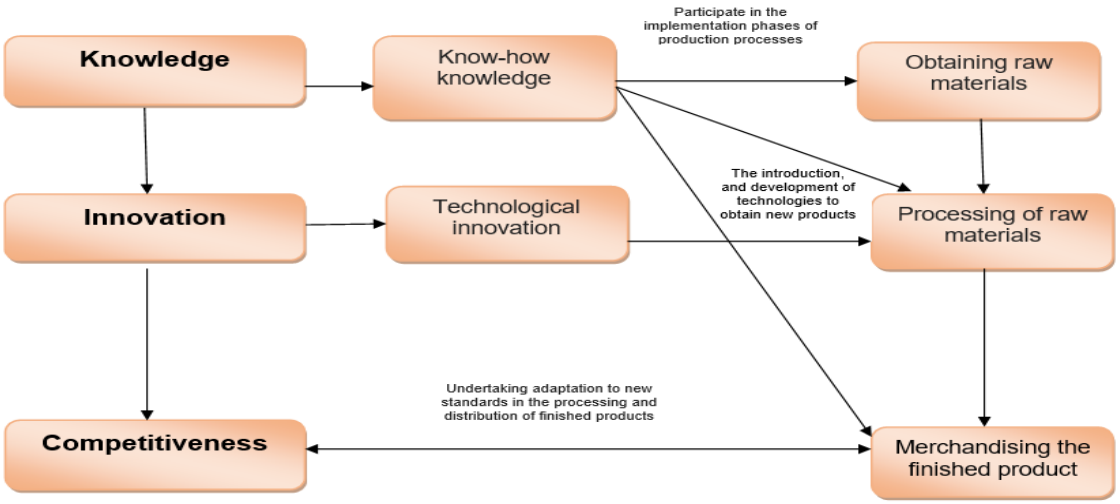
So, preparing for production has resulted in the concept of innovation, thus elaborating technological project. This project consists of decisions relating to raw materials and technologies required.

Raising the technological prerequisite for development organizations in the future, so that should put emphasis on innovation, transfer of technology and know-how, in order to ensure the adaptation of the organization to the demands of the present technological progress and increase their competitiveness on the international markets.

It becomes evident that the organization is more modern as more greater is the weight and role of knowledge as a factor of production. Continued use of knowledge does not diminish their value, but rather with how they are used by both develop and increase their value. Therefore it is important for organization to develop logical mechanisms and find ways to develop and disseminate existing knowledge. The main force of economic growth is the process through the changing disseminated in the economic sphere. Knowledge changes and generate inventions in the areas of scientific and technological research. In these circumstances innovation is a vital essential requirement. (European Commission, 2002, p.6).

Summarizing aspects of the concept of knowledge and innovation processes we present in figure 2 the above processes and the links between them to ensure increased competitiveness.

Figure 2 - Increasing competitiveness through knowledge and innovation



Source: developed by authors

As we can noticed, the type scheme highlights the importance of know-how knowledge and the fact that they are indispensable both for obtaining and processing of raw materials and for merchandising the finished product. The new position of the innovation in relation with competitiveness is resulting from the transition process to the knowledge driven organization.

Conclusions

The knowledge that materializes in new processes and products represent key competitive factor playing a crucial role in opening up new perspectives. But the success of an enterprise depends directly on the ability to exploit this knowledge.

New challenge for businesses is the best use of knowledge, but an effective use and realization requires solutions that combine specialized technologies with the informational ones. An optimal use involves developing existing knowledge and generate new and innovative products and services.

To ensure continued competitiveness innovation process should focus on knowledge not entailing the use of only knowledge but also their capture and transfer by platforms based on knowledge. Businesses can thus advantageously use this knowledge and can respond quickly to changes in the business environment.

Bibliography

I. Books

1. CHIVU, I., (2011),”Manualul învățării organizaționale în economia bazată pe cunoaștere”, Ed. ASE, București.

2. GLODEANU, I., (2009), ”Noile paradigme ale inovării”, Ed. Expert, București.

3. NICOLESCU, O., NICOLESCU. L., (2005), ”Economia, firma și managementul bazate pe cunoștințe”, Ed. Economică, București, p.21.

4. NICOLESCU, O., NICOLESCU, C., (2011), ”Organizația și managementul bazate pe cunoștințe”, Ed. Pro Universitaria, București, 2011, p.24.

5. PORUMBEANU, O. L. (2006), ”Managementul cunoaşterii şi structurile infodocumentare”, Editura Universităţii din Bucureşti, Bucureşti.

6. REPANOVICI, A., REGNEALĂ, M., (2012), ”Ghid de cultura informaţiei”, Ed. ABR, [Bucureşti].

7. RUSSU, C., (1996), ”Management. Concepte, metode, tehnici”, Ed. Expert, București

8. *** (2002), European Commission, ”Innovate or Die”, Euroabstracts, nr.3, Brussels, p.6.

II. Articles

1. PORUMBEANU, Octavia-Luciana, Despre conceptul de cunoaştere, în: Studii de Bibliologie şi Ştiinţa Informării, nr.7/2003, Editura Universităţii din Bucureşti, 2004, p.127-138

III. Web resources:

1. DINGA, E., ”Cunoaștere, acțiune și ordine economică” http://emildinga.ro/category/carti/carti-aflate-in-lucru/ (accessed in on june 12, 2016)