

Knowledge Economy – the Economy of the Future

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Abstract: In these times with strong changes, a so called “knowledge revolution” is on the way and this designates the evolution from the primarily physical labour based economy to a predominantly knowledge economy. The entire world is dealing, in the dawn of this new century, the 21st one, with a series of major changes: social, economic and technological. Consequently, if the 2nd industrial revolution was initiated in the industry based on intensive production labour “by the pioneers of automobiles such as Ford, it is clear that the 3rd revolution will take place in the economic sector of the knowledge based services.”¹

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Jel Classification: D8, D83

Of great novelty is the knowledge phenomenon, considered as being “*the miracle of the human universe*”, that has had a long and complex history and it will have a similar future. In this new society, an information society, the basic economic resources are no longer investment, real estate or physical labour, instead it is and will be knowledge - the knowledge that has acquired, comparing to classic and modern knowledge philosophies, new and complex meanings and significations. It is no longer considered just “a mental human process, but as well one of artificial intelligence systems, of industrial, economic and social corporations, of organizations composed of people dealing with software, intelligent robots and the

¹ Bohn, R., *Measuring and Managing Technological Knowledge*, quoted by Drăgănescu, M., in the study for the SI-SC Project of The Romanian Academy, *Societatea Informațională a Cunoașterii. Vectorii Societății Cunoașterii*, 2001.

Internet, of intelligent and conscious artefacts (in perspective)”¹ that are dealing with or without human intervention.

In the past, fortune and power depended on one’s ability of controlling different physical resources, and the production factors were predominantly physical, and all the aforementioned together cause a reduced need to own, develop and use knowledge. The fortune and the power of the third millennium will surely be mostly produced due to intangible intellectual resources, due to the knowledge assets.

Experts define knowledge as “cumulative stocks of information and abilities produced as a consequence of the information use of the receiver. Knowledge always contains information that is not only an input for knowledge development, but also a knowledge communication form.”²

Generally in organizations, knowledge has also been found in the *human assets* (work force), *client assets* (in the client requests and preferences), concerning *structural capital* (concerning its products, processes, capabilities and systems) which means that knowledge value (intangible) can significantly surpass the value of tangible assets.

Experts believe that, on an organizational level, three *major processes*³, knowledge related, are developing, which should be treated with the same consideration:

- *Acquire and obtaining knowledge* – that takes places through organization employees learning processes;
- *Creating knowledge*, as inventions, innovations etc;
- *Using knowledge*, throughout all decision taking activities and actions, which have as end product goods, services, and new knowledge ready to be marketed profitably.

In theory, organizations are or at least used to be, until recently, concerned only with the use of knowledge, however, experts have shown that knowledge use is significantly conditioned by creating and acquiring knowledge, which are equally important, and in the absence of which using knowledge is out of the question.

Peter F. Drucker stated in his paper “Post-capitalist Society” that: “The new society – and this is already a reality - is a post-capitalist society, and this new

¹ Drucker, P., *Societatea postcapitalistă*, București, Ed. Image, 1999.

² Nicolescu, O., Plumb, I., Pricop, M., Vasilescu, I., Verboncu, I., (coord.), *Abordări moderne în managementul și economia organizației*, Ed. Economică, București, 2004, vol. 1, p. 33.

³ *Ibidem*; OECD, *The Knowledge-Based Economy*, Paris, 1996.

society will make use of the free market as of a certified economic integration mechanism. It will be an “anti-capitalist society the basic economic resource, “the production means” – is neither capital nor natural resources, nor “labour”. It is and it will be knowledge.”¹

The new society, specialist claim, will be an era of advanced information and technology, a world of specialists, of *knowledge workers* – the ones possessing, disseminating, protecting and using information and knowledge, vital to the new society – a knowledge based society. In this society more and more knowledge accumulates, knowledge that is one of the main sources of power.

Trying to define a knowledge economy is a difficult undertaking even for experts due to the wide variety of successful concept implementation, but also due to the typology of the countries that have witnessed certified and important progresses.

Debates during the **WASME** World Organization for Small and Medium Enterprises, organized in Bucharest, between the 15th and the 18th of May 2005, dealt with “Internationalizing and switching over to a knowledge economy” and have reaffirmed that at the present time, on a world scale and especially in developed countries, the knowledge revolution is taking place. “*Studies and analysis prove that the knowledge revolution has deep and complex economic, social and political inference, just as the industrial revolution had, that led to the widely spread industrial economy and democracy nowadays.*”² The result of this new revolution is the new knowledge economy that radically distinguishes it from previous economy types known to mankind.

Basically, this new economy type, *knowledge economy*, has as a feature converting knowledge to raw materials, capital, produce – essential production factors of economy – and to economic processes where “*producing, selling, buying, learning, depositing, developing, dividing and protecting knowledge grow predominant and condition profitability and ensuring company sustainability in the long run.*”³

World Bank experts, trying to give form to transition strategies to a knowledge economy have developed a ***compulsory framework*** applicable to any country, ***which requires***⁴:

¹ Drucker, P., *op. cit.*

² Nicolescu, O., Plumb, I., Pricop, M., Vasilescu, I., Verboncu, I., *op. cit.*, p. 13.

³ Nanoka, I., *The Knowledge Creating Company*, Oxford University Press, New York, 1995.

⁴ Convenția Mondială WASME a IMM – București, 15-18 mai, 2005.

- *An economic and institutional regime* relatively stable that stimulates the efficient use of existing knowledge and innovations and promotes free initiative;
- *An educated and experienced population* that may create, share and use knowledge;
- *A dynamic informational infrastructure*, which ensures effective communication, dissemination and information processing;
- *An efficient system promoting innovation* in enterprises, research centres, in schools and universities, among consultants, to assimilate the knowledge stock required, to adapt it to the existing needs and to develop new technologies.

Knowledge economy is categorically *a new economy type*, totally different from the industrial or post-industrial economy, an economy functioning during the last decades in developed countries.

OCDE members have stated the following definition for knowledge economy, “*the economy based primarily on the production, distribution and use of knowledge and information*”¹, a definition adopted by many developed countries, used to predict the economic future and that has triggered numerous debates about the new economy type.

Knowledge economy presents *features*² that essentially set it apart from other economy types previously known:

- The primordial importance of knowledge in all domains of the economic activity, due to its vital impact that these have on functionality and performance;
- Focusing economic activities on processing information, acquiring knowledge and producing knowledge;
- Transferring the economic activities’ basis from intangible resources to the tangible ones, partially represented by the knowledge and intellectual resources;
- The knowledge capital is a special, intangible, fluid capital that generally is not exclusively owned, but that may be assumed and reused;

¹ Torriel, P., *Nouvelle Economie et Financement*, I. T., Ottawa 1994, pp.1-2, www.oecd.org, accessed in December, 2006.

² Nicolescu, O., Plumb, I., Pricop, M., Vasilescu, I., Verboncu, I., (coord.), *op. cit.*, pp.36-38; Toriell, P., *op. cit.*, pp. 1-2, I.T., www.oecd.org, accessed in December, 2006.

- The proliferation of symbolic equipment and products, alongside with the ratio reduction of physical goods;
- The constant decrease of serial production ratio and the focus on reduced, personalized ballot production, towards this goal the first steps have been taken by using “*just in time*” systems, a computer integration based process;
- The progressive elimination of frontiers between activities within organizations and those within branch, regional, national, and international organization level;
- The fundamental team activity planning, task interchangeability, multiple qualifications;
- Excellent skills acquired by creating, exploring and perfecting technologies become a major feature for successful organization results and achieving a competitive advantage;
- Increasing the services ratio in the economy as a whole to the disadvantage of the production sector;
- Developing and increasing exports, due to decreasing or eliminating differences between national markets, and progressively removing institutional, time and spatial barriers between countries;
- Increasing the small enterprises sector, simultaneously with the relative reduction of large enterprises, since the former can rapidly adapt to contextual developments;
- The superior put to use of a knowledge portfolio by differentiating between economic associations: enterprises network, clusters and industrial parks.

In the following figure the main feature of a knowledge based are illustrated.

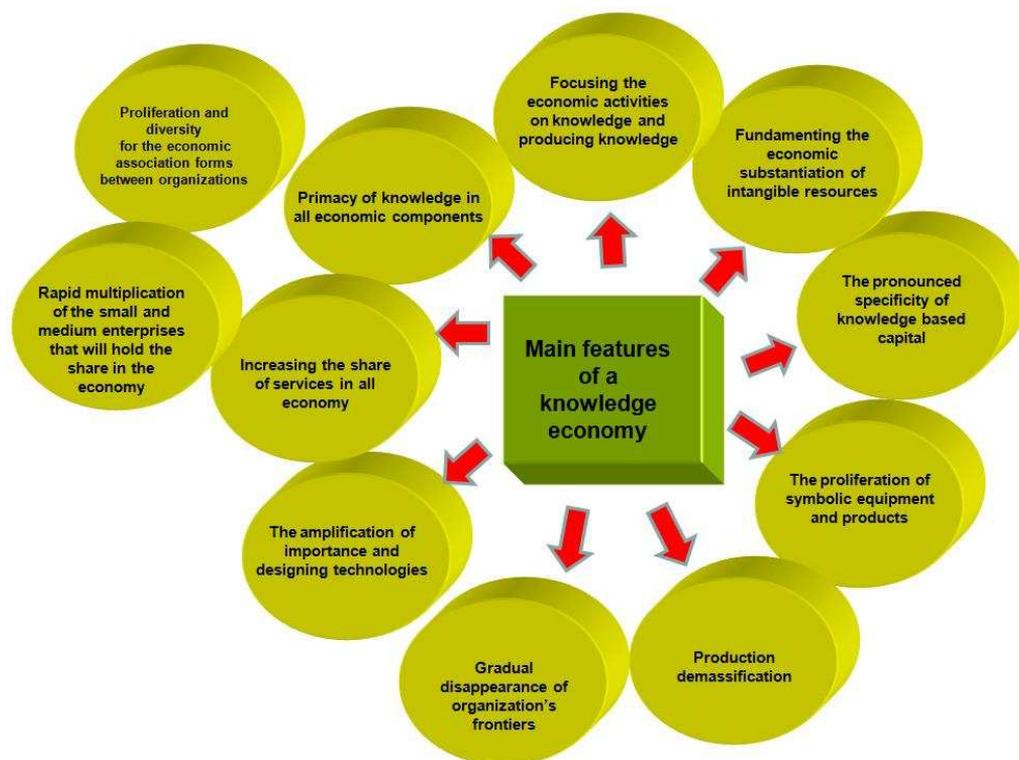


Fig.1. Main features of a knowledge economy¹

It is worth mentioning that these features reflect the significant differences that appear between the knowledge economy and the other types of traditional economies. Some of these, though they can be more difficult to perceive, due to the strictness and the absorption capacity involved, allow for the stress of the distinctive feature of the knowledge economy and the current economy observed in developed countries.

The current European and global context imposes upon Romania a strict necessity towards increasing economic competitiveness, on realizing that in the 3rd millennium the competitive upper hand can only be acquired through *innovation*, *highly qualified* work force and a large scale *use* of knowledge, in other words through a knowledge economy.

¹ Nicolescu, O., Plumb, I., Pricop, M., Vasilescu, I., Verboncu, I., (coord.), *op. cit.*; *Managementul general al organizației*, București, Ed. Economică, 2003, p. 37.

The Romanian reality is though undoubtedly the following: the economy in Romania is still, largely, under the effect of the industrial and agrarian, product manufacturer and service economy era, that nowadays are hardly competitive on the global markets and, even more, on the national one.

References

Bohn, R. (2001). *Measuring and Managing Technological Knowledge* quoted by Drăgănescu, M., in the study for SI-SC Project of The Romanian Academy, *Societatea Informațională a Cunoașterii. Vectorii Societății Cunoașterii*.

Drucker, P. (1999). *Societatea postcapitalistă*, București: Image.

Nanoka, I. (1995). *The Knowledge Creating Company*, New York: Oxford University Press.

Nicolescu, O., Plumb, I., Pricop, M., Vasilescu, I., Verboncu, I., (coord.). (2004). *Abordări moderne in managementul și economia organizației*, București: Economică, vol.1.

Torriel, P., *Nouvelle Economie et Financement*, I.T., Ottawa (1994).

World Convention WASME of Small and Medium Enterprises – Bucharest, 15-18th May, 2005.

Online sources:

www.oecd.org., accessed December, 2006.