

CURRENT TRENDS IN THE KNOWLEDGE ECONOMY

Ciprian Ionel HRET CANU
ciprian_hretcanu@yahoo.com

Abstract

In this paper we discuss various aspects of the current economy known as the knowledge economy. Also we will review two indicators of this new economy, because these indicators presents a general plan on access, use and degree of diffusion of knowledge. Then, based on these indicators and taking into account other aspects, we outline the structure relations between "new economy" and "digital economy". Finally we present the main types of business existing in the digital economy.

Key words: *knowledge economy; digital economy; I-business; electronic business; index of knowledge economy.*

JEL Classification: *D83, M15.*

I. INTRODUCTION

Nowadays more and more insistently discusses the new economy, the digital economy, the cyber-space, virtual markets, e-commerce, e-business, e-marketing, information society, the knowledge economy and more. This new economy has at its core markets change continuously, but also at the individual or family; change and competition between different actors leading to large and rapid dissemination of information / knowledge. Closely associated with the information society, in theory meet various concepts and opinions (eg, "3 I" represents *innovation* - creation of new knowledge, *instruction / learning* - assimilating new knowledge and partnership *interactivity* on knowledge) (Dragomirescu, 2001); we appreciate that sometimes the terminology is likely to create some confusion and that some synthesis / studies require further clarification from the experts.

Since the 60s of last century, as the third wave of progress prediction of Toffler made his presence felt in major Western economies countries and organizations have begun to realize that a new revolution is about to occur globally, namely knowledge revolution. Underlying this direction of evolution of society and economic life were and remain knowledge, as a valuable resource, relatively expensive and difficult to manage.

II. KNOWLEDGE INDEX (KI) AND KNOWLEDGE ECONOMY INDEX (KEI)

The process of globalization induces various influences, consumption patterns, behavior and new types of organizational practices in daily life. We believe that the basis of contemporary globalization process, along with technical and technological factors, there were some liberal policies promoted by countries and governments; such policies were applied in two interrelated ways:

- Liberal policies restricting the presence of the state in certain economic sectors and strengthen competition in most markets;
- Policies to liberalize trade relations between countries and regions, including the establishment of commercial "blocks" type EU, NAFTA, etc.

Differently from one case to another, countries have promoted some reforms in the education systems of public health, to support scientific research and innovative climate (both public funds and funds raised on behalf of the corporate sector). In this new socio-economic climate, some international organizations (WTO, World Bank, UNCTAD, etc.) tries to estimate the competitive position of the world and / or large multinational corporations. It may be inferred that the competitive position of a country or global companies, ie competitive advantage today rely increasingly more on the ability to acquire, exploit and commercialize knowledge.

In Fig.1 we present two indicators provides an overview on access, use and degree of diffusion of knowledge in major developed countries of the world.

Knowledge Indexes

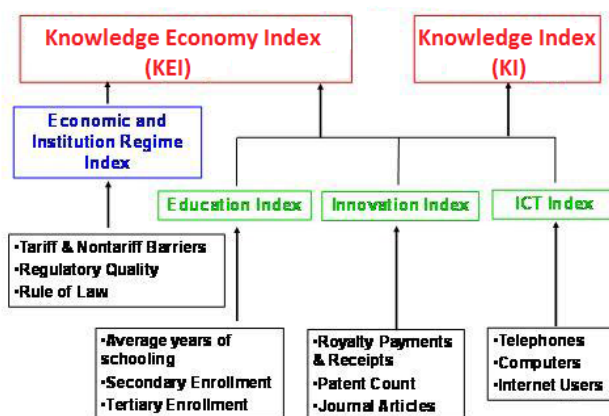


Figure 1 Knowledge indexes

(source: <http://siteresources.worldbank.org/INTUNIKAM/Resources/2012.pdf>)

Content indicated in Fig. 1 is as follows (<http://web.worldbank.org>):

- Knowledge Index assesses a country's ability to generate, adopt and diffuse knowledge, that shows the potential of a given country on the exploitation of this resource (it is calculated as a simple arithmetic average of performance score country / region for major pillars, such as education, innovation and use of information and communication technology - ICT).

- Knowledge Economy Index indicates the extent to which socio-economic environment of a country favors the creation and exploitation of knowledge for economic development; He is a composite indicator which is calculated as the average performance scores of a country / region for the four pillars of the knowledge economy (institutional framework conducive to knowledge, education and human resources, innovation and ICT). Each of these four "pillars" has a methodology for evaluation and elements which are included for the determination (eg. the institutional framework is based on the tariff and non tariff barriers, regulatory quality in economic life and rule of law).

Briefly, remember that the world charts made according to KI and KEI are countries like Sweden, Finland, Denmark, Netherlands, Norway, New Zealand, Canada, etc. ; Romania holds the position 44 (in 2012) of the approximately 145 countries with data; other emerging economies are more modest than positions of Romania (Russia, Brazil, Mexico, Thailand etc.) (<http://web.worldbank.org>).

III. "NEW ECONOMY"

The concept of "New Economy" appeared to reveal two major trends, the global economy: the globalization of business amid the collapse of the socialist economy and the revolution in information technology and communications (Pohjola, 2002). The term "new economy" can equate the knowledge economy; in business practice are discussed and "digital economy" in reference to current transformations of economic activities as a result of using digital technology, which provides access, processing and storing information in a way cheaper and easier. The new economy is characterized by increased incorporation of knowledge into new products and services, increasing the importance of learning and innovation, globalization and sustainable development. Enormous volume of information changing the way of markets function, enabling enterprise restructuring and the emergence of new opportunities for creating value from information available. The old economy is based on management logic processing industries and the new economy is based on the logic of information management and industry information. We believe that in this new economy will win those organizations that have the best information / knowledge and information systems, and it is quite clear.

It should be noted that relations "new economy" with traditional economy, the existence of its real impact on the lives of individuals, various controversies concerning the nature of the "new economy" and its consequences for society of the future is increasing more and more; some aspects remain quite unclear as to the structure of the new economy and its relations with traditional capitalist society (Donlan, 2000). The new economy is a knowledge-based economy, an economy of innovation and economic growth in which ideas are worth more and more, while all products cost less. (Sandu and Goschin, 2005).

Figure 2 suggest relationships between structure what we call "new economy" and "digital economy" based on KI and KEI indices and other indicators of competitive advantage and / or innovation for countries and organizations.

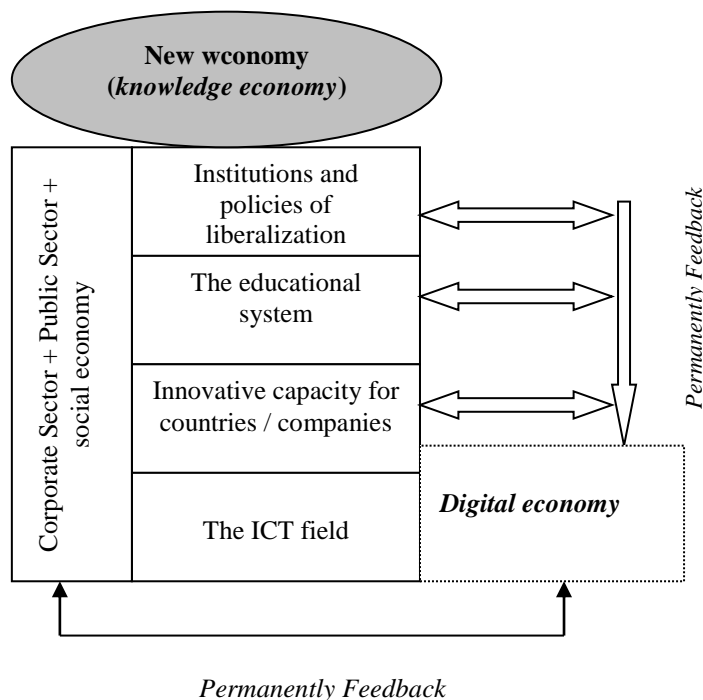


Figure 2 Structural relations between the new economy and the digital economy
(Source: own elaboration)

As suggested by us, ICT is only one of the major pillars of which is knowledge economy; it is true that this field of ICT visible and directly reflects the innovative capacity, education systems and the operation of any specific type of institution of capitalist society (hence the other pillars on which the World Bank calculates KI and KEI). Reporting scope of what we call digital economy is limited, we believe, only the ICT sector or as part of the knowledge economy; even if the computer networks and communication systems benefit manifest in all three major sectors of the economy (the corporate sector, the public sector and the social economy).

Internet economy includes those companies that partially or fully realized income from activities directly related to the Internet, or from the sale of goods and services used in the Internet. The current economic conditions have influenced / have convinced many companies / organizations to use Internet-based systems to increase efficiency, lower operating costs and ability to operate in real time between different platforms and therefore increased investment in key technologies (mobility, cloud computing, information systems and decision support economic analysis and social networks (Oprescu and Eleodor, 2014, p.21).

The digital economy requires creating new markets, new laws of the market, new models of behavior (for both, producers and consumers), new types of money and new supply network. The digital economy is part of the new economy has emerged due to the interaction between the computer, telecommunications, Internet and electronics, and is characterized by substantially different features from those of the traditional economy. Digital economy leads to a new model of business (e-business, e-commerce, e-banking, etc.) using the internet, aspect influencing cost reductions, including transactional relationship based on business / business (B2B) business / customer (B2C), business / employee (B2E), business / government (B2G), government / business (G2B), etc.

Digital business concept emphasizes the integration of all processes on computer components of the so-called "value chain" which ensures that enterprise profitability and thus digital business is considered an extension of e-commerce type approach, which really put its potential value (Neagu, 2001, p.282).

Today, companies / business organizations must achieve a series of changes in their internal structures, namely the organizational and strategies to successfully carrying out their work in the digital economy; companies must take into account certain changes occurring globally, among which (Koetler, Jain et al., 2009, p.21):

- Transition from asymmetric information in their democratization and goods for elite goods for everyone;
- Translation of the "manufactures and sells" to "understand and respond";
- in date, business strategy must be designed globally according to customers' wishes, demographic trends and similar issues etc.

This new economy based on the demand and consumer needs, something that leads to the involvement of increasingly large customers in the design, development and use of goods and services, starting from the stage of research and development. So we can say that the new economy is an interactive, participatory, and the relationship between supply and demand seen in volume and structure in space and time, is more rigorous and accurate. Customer / consumer can be an important source of innovative ideas for producing company, ie its role grows and the old statement "our customer, our master" became an emblem / a banner of the new economy. Because allows quick and easy access to information, this new economy is more transparent than the old one, allows to compare the prices of products and services that are similar and offer the consumer a choice the best price, lets plan the quantities to be produced and avoid precise knowledge accumulation of stocks due to demand, minimize communication costs (Negreponi-Delivanis, 2007, pp.118-119).

The digital economy is part of the knowledge economy and its essence lies precisely in the fact that is based on knowledge and access / processing systems them; new relationships occur between business organizations (alliances, partnerships, collaborations, etc.), but also between companies and communities, customers or markets; among the factors that favor the digital economy are:

- emergence of professional computer and connecting computers in networks;
- development of image processing equipment, sound recording;
- creating means of software and hardware protection plan;
- establishing a legal framework by states / governments tailored to your specific IT applications (which we previously called liberalization policies and institutions);
- emergence of mobile telephony has spurred the development of a new approach to the structure of computer networks and especially revolutionized communication system.

Some authors consider that the new economy is, in fact, more than a digital economy (this conception confirms the structure of relations between the two economies proposed by us), because it involves both globalization and regionalization and speed up innovation and fundamental changes in production systems and in the operation of markets, management, attitude towards risk and uncertainty (Pelinescu, 2007, p.129).

The single market and the digital economy are mutually reinforcing, because it is much easier to purchase goods and services online and at the same time, it is much easier to identify the shortcomings of the single market. According to the McKinsey Global Institute, the Internet creates five jobs every two jobs lost (http://www.mckinsey.com/insights/high_tech_telecoms_internet/internet_matters).

We can see that successful digital platforms have gained significant power market by developing products that meet consumer demands closely and dynamic competition and innovation considerations are specific to this area of dominance a transitional situation can be resolved quickly by the next cycle innovation (OECD, 2012). Known internet platforms such as Google, Apple, Amazon, eBay, Baidu, etc. are leaders of internet based economy and are at the same time, one of the largest companies in the world.

IV. TYPES OF BUSINESS IN THE DIGITAL ECONOMY

Taking into account the three dimensions of business - product, process and distribution channel - businesses can be grouped into: traditional business, the partially electronics business and electronic business. Continuing idea, businesses in the digital economy can be divided into: traditional business, electronic business (partial or total), mobile business and I-business (Mircea, 2009). We present this types of business in fig.3.

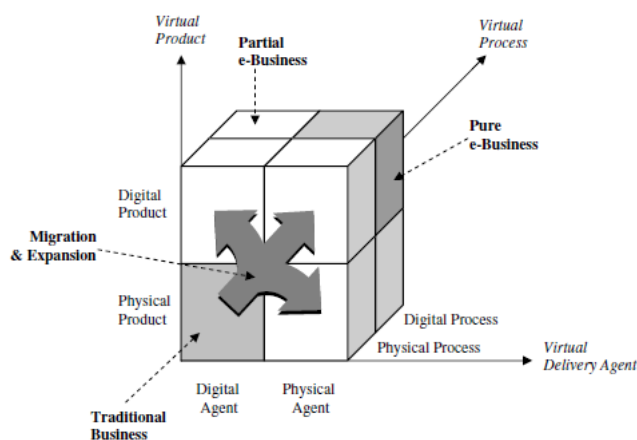


Figure 3 Types of business

(source: Wayne Bremser, Q.B.Chung - *A framework for performance measurement in the e-business environment*, *Electronic Commerce Research and Applications* 4 (2005) pp.395–412)

Traditional businesses have a physical agent on the market that trades a tangible product made from a physical process. Electronic Business contain the supply and sales processes, and economic processes that ensure the inner workings of the organization. An electronic business can not exist without the use of electronic computing. The main characteristics of electronic business are: speed, global access, low cost, customer control (starting with customer requirements) without barriers interdependence (flexible alliances are needed), efficient service, product stock reduction, new opportunities for selling products.

Mobile business are integrating business processes with electronic and wireless communication business (Evans, 2001). Electronic business and mobile businesses complement each other. The transition from electronic to mobile was initiated using mobile payments, which can be defined as payments using mobile phones using wireless technology. M-commerce or e-commerce is the use of mobile devices for mobile communication and implementation of e-commerce transactions or any transactions with monetary value achieved via mobile devices. M-commerce has emerged due to the rapid evolution of mobile devices among users and connection to the Internet has become more accessible, regardless of geographical location that connects to the internet (Ivan, Milodin et.al., 2013, pp.56 -73). Some had ecosystem for creating electronic wallet via mobile phone (Cole, McFaddin et.al, 2009). It described a prototype electronic wallet based on smart mobile devices and architecture created to demonstrate the concept. The simplest example of using this wallet is when a person goes shopping, but forgot the money and the cards at home. What people do not ever leave your phone next to them, surely it is in possession of the person went shopping. And after he purchases the payment via mobile phone like payments via bank cards.

I-business based on mobile businesses, and "I" represents intellect, idea, innovation, internet, intercommunication, intuition, inter-organization.

A model of I-business is a business model for mobile virtual organization in which decisions can be made with the speed of thought (Mircea, 2009, p.48), and a mobile business model is a business model that uses electronic wireless communication. An electronic business model is a structure of how the organization operates and relations with the outside, using the tools offered by information and communication technology for long-term goals.

With the development / maturation of the Internet has made the transition from the concepts of "info" to those of "e-electronic", and those of "m-mobile". Thus, the "infomediare" was passed to "e-business" and, nowadays, to the "m-commerce" (Colibaba, 2000, pp.54-58). The jump is great because we started from the processing and exchange of information through traditional means, it was business development through electronic media to reach mobile network infrastructure using digital phone.

V. CONCLUSIONS

Following our analysis we noticed that in the modern economy creation, communication and exploitation of knowledge management practices involving flexible where the line between informal and formal side visibly fade. Also in the sense relied conclude that changes in the current information society "pattern" organizational culture (in the sense that it focuses around processes such as creativity, communication, continuous learning broader Lifelong learning, participatory management, ethical behavior, there are new responsibilities on knowledge creation and conversion, there are functions / items like new knowledge officer etc.). So it can be said that some business organizations have realized early on that there is a profound interdependence between countries and different institutions globally, that the employees educated / trained are at the "key" to acquire new knowledge and IT systems are a type vector for partnerships / strategic alliances. Managers of such companies realize a greater role and value of knowledge in market competition are concerned about permanent establishment, attracting and exploitation of knowledge and information systems for processing their organization in all his undertakings (about the product or service, used technologies, markets, customers and management applied).

When companies seek to align their business strategy with IT systems requirements, either individually or in strategic alliances, can be determined tendency to centralize information / data and possibly to control certain "integration points"; there is a certain theoretical model according to which different firms can devise appropriate strategies to the knowledge society. Company size, activity or sector in which they operate, market trends, competitors practice and other similar factors should be considered by the decision maker when aiming to include the facilities of IT networks and cooperation with other companies in the future strategy organization he leads. However, it is worth pointing out at the end of our research that some IT facilities to the different markets and cooperation among different "actors" business is a chance / opportunity for large companies but also for small businesses.

VI. REFERENCES

1. Cole, A., McFaddin, S., et.al. (2009) - *Toward a Mobile Digital Wallet*, IBM Research Report.
2. Colibaba, D. (2000) - *Revoluția "mobile" în societatea informațională*, Revista Informatica Economica, nr. 4 (16), pp. 54 – 58.
3. Donlan, T. (2000) – *Un changement qui n'en porte que le non*, Express-Barrons, 10.2, 2000.
4. Dragomirescu, H. (2001, nov.10) - „*Organizații bazate pe cunoaștere*” - Studiu tematic elaborat în cadrul proiectului prioritar “societatea informațională – societatea cunoașterii” al Academiei de Studii Economice – București.
5. Evans, N. (2001) - *Business Agility: Strategies for Gaining Competitive Advantage Through Mobile Business Solutions*, FT Prentice Hall, New Jersey.
6. Ivan, I., Milodin, D., Zamfiroiu, A. (2013)– *Securitatea tranzacțiilor de M-comerț*, Economie teoretică și aplicată, Volumul XX, No. 7(584), pp. 56-73
7. Kotler, P., Jain, D., et.al. (2009)– *Marketingul în era digitală, O nouă viziune despre profit, creștere și înnoire*, Meteor Press, București, p.21.
8. Mircea, M. (2009)– *Managementul afacerilor în economia digitală*, Editura Economică, București, p.48
9. Neagu, G. (2001) – *Comerțul electronic și managementul organizației*, în Ovidiu Nicolescu (coord) - *Sistemul informațional managerial al organizației*, Editura Economică, București, p.282
10. Negreponti-Delivanis, M. (2007) – *Mondializarea conspiratoare*, Editura Bibliotheca, Târgoviște, pp.118-119.
11. OECD Competition Committee (2012) - *The compilation of hearings on the digital economy* held at the Competition Committee sessions of October 2011 and February 2012, DAF/COMP (2012)22.
12. Opreșcu, G., Eleodor, D. (2014) – *Impactul dezvoltării economiei digitale asupra concurenței*, International Conference of the Institute for Business Administration, București, 2014, p.21.
13. Pelinescu, B. (2007)- *Noua economie și societatea informațională și evoluția IT în România*, Revista OEconomica, vol. 03, p.129
14. Pohjola, M. (2002) - *The New Economy: Facts, Impacts and Policies*, 'Information Economics and Policy', vol.14.
15. Sandu, S., Goschin, Z., (2005) - *Noua economie între teorie și practică*, in Iancu, A. (ed.), "Dezvoltarea economică a României", vol.II: Competitivitatea și integrarea în Uniunea Europeană, Editura Academiei Române, București, p.209-222.
16. <http://web.worldbank.org>
17. http://www.mckinsey.com/insights/high_tech_telecoms_internet/internet_matters