

# INFORMATION SOCIETY AND KNOWLEDGE ECONOMY

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## Abstract

*Today, technologies have changed our social and economic life. Society is becoming “knowledge society” and information and communication technology has played an important role. The economy is evolving out of classic model of the economy in the new economy known as “knowledge economy”. Information and communication technology is bringing changes to various sectors of economy. Business is undergoing a fundamental structural transformation and traditional business become more dependent on Internet related technologies. This paper describes the role and the importance of the use of information technology with special emphases how economy and business can benefit from information technology. This technology play a key role and influence society and have a great impact in all spheres of economy. This components are described and discussed while the use of this technology for business purposes are proposed as necessary.*

**Keywords:** *information society, knowledge economy, information technology, information and knowledge.*

## Introduction

In 20<sup>th</sup> century, which was the century of industrial civilization, the global economy was characterized by transformation of physical products, massive production and domination of material factors (basic material, work object and labor force). Today, as a result of rapid development of information technology and its application, very fast came to a transformation of industrial society into an information society, thus the increase of importance and role of information and knowledge. In a information society, the information and knowledge have gained the role of “power” and “money” and become “the most precious merchandise” ever seen. The classic economy is transformed into knowledge economy, which is based on the use of computing networks and virtual spaces. In the knowledge economy the electronic business is offered as an alternative to classic business, which was based on paper work and direct and physical communication between individuals and enterprises. Working in information based business environment and aiming the internationalization of the business, enterprises are being provoked to develop a business policy based on the use of information and of new information technologies transforming their business from the classic to a digitalized business. These technologies will continue to play a key role in changing the society and economy in the 21<sup>st</sup> century.

## Information society

During the last years, more and more is being used the expression “knowledge society” or “information society”. Development of knowledge society is a result of the development and application of new technologies, especially of the Internet technology. Various authors make the connection of this expression with the increase of the use of information and computers, especially of PC-s and Internet. While the sociologists claim that the information society is a society where

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people are connected to each other through network, and they are massively using the information and communication technology, the economists claim that information society is in fact a society where the information sector and computerized technology is massive and the number of employees who are doing knowledge based work is also increasing.

In a information society we see the increasing role and significance of information and knowledge, which are becoming producing factor like it was the case with materials and energy in the classic (industrial) economy, and for the first time the brain becomes the main “production power”. According to business professor Peter Drucker, the contemporary changes shouldn’t be understood only as technical and technological changes, but should be also seen as a complex of technical, economical and social changes [3]. In the information society and in knowledge economy, the non-material factors (information and knowledge) are seen as main resources, which are determining the direction of the development of society.

It is important to note that changes of our time can be compared with the changes that occurred when agrarian society was changed into industrial society [2]. But, while for previous technologies like: steam engine, electricity, telephone, electronic pipe, television, car industry etc, were needed decades to reach the critical point of their use, the Internet achieved this within a few years<sup>1</sup>.

In the information society, usage of information and communication technology affected the rules of society, human and business relations. Information becomes important source and gained the role of “power” and “money” [V. Milicevic:2002:12] and is seen as “precious merchandize” in the market [3], where the information technology become a factor of success and efficiency in business [M. Berisha-Namani: 2004:58]. Therefore, all the problems of knowledge and lack of knowledge have to do with information.

While in the industrial era the dominating factor was material and it was imperative to have physical capital: factories, railroads, electric power plants, etc, and to have physical resources transformed into a final product [4], now in the knowledge society and information era the dominant factors are non-material: information, knowledge and system of management [M. Mustafa:1995:12].

These changes in society in global level are not only as a result of the increase of the role and significance of information, but also a result of the use of information technology for information processing. In fact information technology<sup>2</sup> is a vital feature of the move to a knowledge and information society and has played a central role in enabling the growth of the knowledge where knowledge<sup>3</sup> is becoming the key resource and global product [5]. Technology and knowledge are now the key factors of production [6].

Information technology and Internet are transforming the way how we work, how we develop business and how we live [7]. New technologies<sup>4</sup> influences economy and organizations in a variety of ways and has a significant effect on the structure of the organizations [T. Lucey:2005:298]. Today, information technology is integrated into the work of all sectors of the organizations [John.F.Nash:1988:368].

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<sup>1</sup> ) Radio existed 38 years before it reached the number of 50 million users. TV technology needed 13 years to reach this number of users. PC reached 50 million users in 16 years, while Internet from the year when become a general good (1992), reached this number in only 6 years.

<sup>2</sup> ) In the broder sence information technology refers to hardware and software that are used to store, retrieve and manipulate information. Information technology is a generic term covering computers, broadcasting, information systems and telecommunications and computer networks.

<sup>3</sup> ) Knowledge can usually be represented in terms of facts about the world, procedures or rules for manipulating facts and information about when or how to apply the rules or procedures.

<sup>4</sup> New technologies includes information and communication technology, information systems, telecommunications and computer networks.

It is clear that in the information society took place the transformation of structure and functioning of economy, as well as the transformation of the business in new models and forms, and today, we speak about the economy which is based on the use of information and communication technology and is known as the new economy or knowledge economy.

## **Knowledge economy and new trends in business**

In the era of knowledge society, the rapid use of information technology is transforming the economy from classic economy to a new economy and is affecting the way how the business is developed in general by making new trends of business transactions. Entire industries have changed, and are created new forms and models of business, new products and new services unknown before. Knowledge economy<sup>5</sup> is economy of Internet and is characterized with flexibility, cooperation and fast interactivity between individuals [B. Djordjevic: 134]. With the increase of the quantity of information and knowledge and with intensification of the use of information and communication technology in business are created new possibilities for the development of business.

Experts of economy say that the rule of behaviour in the knowledge economy is not shaped according to physical laws and the way how the human wellbeing is formed has been transformed from the physical labor to the information and knowledge based labor [4]. Knowledge economy consists of digitalization of products (books, films, newspapers, games, discs, etc.), electronic services as well as electronic business, which implies the transactions via network. Knowledge economy is dynamic and global and there predominate a general competition, which urge enterprises to face various challenges: such as to fit in new market conditions, reengineering of business processes and creation of new industries. [P.Fingar&R.Aragona:2001:266]. Under these circumstances, enterprises are provoked to develop a business policy which is based on information and the usage of new information technologies, and to transform their businesses from the classic model to the digital model, which is completely realized via Internet and computing network<sup>6</sup>.

According to Terry Lucey, electronic business became reality thanks to the development of Internet<sup>7</sup> as an international network of computers and as a massive medium and as a result of development of certain Internet access tools [T. Lucey, 2005:244], i.e. World Wide Web (WWW), e-mail, voice mail etc. Computer networks and especially Internet with its service known as WWW enables the enterprises to improve their communication with costumers, business partners and with other business entities.

By developing the business globally and by transforming it from the classic business to the digital business, by producing new digital products and services, and by offering electronic goods and services which didn't exists before, the enterprises realize their earnings or at least a major portion of incomes from business transactions with digital products and services. The competition

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<sup>5</sup> Except the expression, knowledge economy, it is used also the expression new economy, Internet economy, information economy, virtual economy, web-economy etc. in all cases the goal is to show the role of non-material resources in the information society and to make the difference with traditional economy.

<sup>6</sup> Apart from the predecessor of Internet, ARPANet known since 1968, the real impact of Internet in business started in 1993, and although in the beginning was not clear what is actually offering this new medium, its application eliminated time and spatial limits in communication and enabled the transformation and flow of documents electronically independently where was the location of the users.

<sup>7</sup> The Internet is for businesses of certain interest. Not only because it is an outstanding market place, but also because provide a chance for the company to show their capability and superiority and to gain competitive advantage.

between classic enterprises and digital enterprises is being developed in the field of fulfillment of the needs and wishes of costumers, because in the information society and new economy, the costumer is "major power", which creates values for the enterprise [B. Djordjevic: 139]. However, research and practice shows that through collaboration and sharing knowledge companies can serve customer needs a minimum of wasted effort or assets [G.J. Cross: 2000:36-39].

In the knowledge society and the knowledge economy where all transactions are done electronically and online, the electronic business is offered as an alternative of the traditional business, which was based in using paper and direct physical contacts with other individuals and enterprises. Time and space differences in communication are eliminated, and now it is provided fast transportation and communication, free flow of information, knowledge and capital even in most isolated parts of the world. As a result of cooperation and innovations<sup>8</sup> in the field of information technology, it is created a synergy which provides the growth of quality of products and services, and shortens the time of appearance of products in the market and their sale [V. Milicevic: 2002:90-95].

Cooperation between business partners connected in network is resulting with a great impact in gaining competitive advantages, growth of productivity and increase of electronic support in decision making process [James O.Hicks:1997:17]. Information and communication technology help organizations to create linkages with suppliers, service providers and customers and they make it easier for organizations to orient themselves to environmental changes and to respond faster to these changes.

Worldwide, current trends in the knowledge economy and in the field of electronic business which are generating new types of business partnership as well as new ways and opportunities for success in business, are showing exponential growth and it is estimated that within few years the incomes generated as a result of online business transactions will be several billions of dollars [V. Milicevic: 2002:29]. Therefore, those who know to use these technology and effectively apply it in their economy and business will be at a competitive advantage [James O.Hicks:535].

## Conclusions

In the information society and in the knowledge economy, the business can be successful and can provide sustainable incomes, only if the companies in time become part of regional and global processes and integrations and do apply contemporary way of doing business, based on information technology and known as electronic business.

By transforming the business to the computing networks and by supporting new forms and models of business, enterprises will gain the growth of productivity and decrease of expenses, good partnership, cooperation and fast interactivity with business partners, enterprises and individuals. Information technology is playing an important role in the processes of transformation of society, economy and business at global level and became a factor of success and efficiency in business. On the other hand, information's processed through information technology became as important resources as material and energy used to be. The fast development of new technologies and their fast application seems that will continue to have impact in the future.

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<sup>8</sup> Most of information technology becomes absolute approximately only few years after it was introduced requiring organizations to change to new technologies.

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