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E-BUSINESSES AND INFORMATIONAL SOCIETY AND THEIR IMPACT ON SUSTAINABLE DEVELOPMENT

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Abstract

The term of informational society arose from the necessity to accurately denote the society's transformation, generated by the rapid development of information and communications technology. Through the extremely rapid growth of the quality of e-businesses and communication services, the society went through a drastic change process due to the access liberalization to information and communications, thus becoming an information society, practically an e-society.

For governments and public administrations informational society means more efficient, transparent and rapid public services, less expensive and closer to the needs of final consumers, whether we are talking about citizens or enterprises, thus facilitating their e-interaction with public authorities.

Sustainable development must take into account the perspective of the society's structure and to re-launch and reorganize on this basis the management of resources.

1. Introduction

In the current digital economy and electronic business where we are, organizations are under continuous pressure of external factors and are forced to adapt continuously to maintain their positions on the marketplace to achieve competitive advantages.

The last decades represent the background for multiple confrontations between the traditional business environment and e-business environment. Many theorists and practitioners focused on the benefits of new business models and the use of intelligent solutions through the application of new technologies and computer applications.

The development of information and communication technology caused changes in several areas and transformed the business environment, in a positive way, which marks the transition to a new type of society, based on knowledge, communication and information.

The transformations and changes we have been witnessing lately are continuous and it seems that it cannot be estimated when they will stop, when there will be a moment of rest, since their propagation speed is very high and worldwide, as they are taken and implemented by all countries.

Organization's adaptation requires the development of strategies to integrate electronic business. Although in recent years we have witnessed an increase in the adoption and the integration of e-businesses, unfortunately, the Romanian business environment is still facing difficulties.

The development of e-businesses requires the adaptation to the new digital economy in which they are operating by using a new type of management, flexible and with a high degree of automation.

With the increasing digitization of business, a growing number of managerial activities are performed by information systems owned by organizations, this is precisely the reason they are called e-businesses, thus the implementation and use of digital management is no longer an option, but it is a necessity in conducting a business.

To adapt to the online environment, managers are turning to tools from various suppliers in order to have all the resources necessary to conduct electronic business, but this often determines the emergence of integration problems, errors, higher costs, that lead to reducing staff efficiency and reduced effectiveness of the organization itself.

E-businesses have partially or totally integrated information and communication technologies in their activities.

E-business management is accomplished through the use of information systems in which information is the key element. Information is a powerful tool that is necessary to substantiate and support important and vital decisions taken.

Therefore, an increasing number of management activities are executed by using information systems, the results are positive because managers are absolved of certain time consuming activities and can devote their time to more important activities, such as developing strategies, solutions and making important and correct decisions for business efficiency and the organization's development.

2. Transition to informational society

The transition to informational society involves automatically adapting to the new economy, respective the digital economy.

Digital economy is based on the use of information and communications technology (See Figure 1) that facilitates:

- continuous innovation of the processes conducted in e-businesses;
- the creation of a global digital economy and strong competition;
- the conduct of operations and transactions, the distance between organizations is no longer a problem.

Digital economy focuses on the individual, its knowledge and the results of individual work, compared to traditional economy where the emphasis is on collective and the rules and regulations are very strict.

The differences between traditional and digital economy relate to several items from different areas (See Figure 2), as follows:

- Economy
 - in a traditional form, economy is based primarily on control and traditional methods;
 - digital economy relies more on cooperation and innovative methods.
- Economic development
 - in a traditional economy, economic development is assessed considering the number of new businesses and the level of profit;
 - in a digital economy, economic development can be measured by the number of online transactions, the technological equipment of businesses, the risk of capital funds and scientific researches in the field, given the fact that the new business applications and equipment emerges "over night".
- Geographic location
 - in a traditional economy most transactions are made in the geographical space near the organization;
 - in a digital economy the space, actual distance between organizations is not important since they conduct an e-business in a digital space, and given the latest

technology distance is no longer a problem.

- Information
 - in a traditional economy, information is circulating quite difficult, access is expensive and most times information is not available when it is required, thus there are times when important information is received after vital decisions were made and the entire business is negatively affected;
 - in a digital economy, information is easily accessible, the costs are very low, compared to those in traditional economy, and the most important aspect refers to the fact that information can be accessed at any time, as long as there is internet connection.
 - Work
 - the traditional economy is based mainly on manual labor, processes are time consuming and are not completely automated, human capital is the main component, and the production process is time consuming and subject to human errors;
 - in a digital economy, most processes are automated, labor is mostly automated, and the main attribution of workers is to monitor processes, thus products appear sooner on the market, and the production costs are reduced.
 - Transactions
 - in a traditional economy, transactions are carried out with the mandatory presence of both parties involved, both the vendor and the buyer;
 - in a digital economy, most transactions are carried out online, electronic transactions and the presence of the vendor and the purchaser is not required, most of the times they do not meet until further transactions.
- Products
- in a traditional economy, most products are tangible and their purchase most of the times is made directly from the seller, in some cases there might be used traditional delivery methods;
 - in a digital economy, most products are intangible, e-products, e-services and their purchase is done electronically, but their delivery is still performed through traditional methods.
- Value of products
 - in a traditional economy it is much easier to quantify the value of products, the main indicators used refer to the ones required by the measurement of tangible values;

- in a digital economy it is quite difficult to establish the value of products, because among the other indicators used for this it is also necessary to measure intangible values and this is a difficult process.

- Economic indicators
 - in a traditional economy, economic indicators cover issues such as labor productivity, business profitability, profit rate, profit margin, investments, work experience, unemployment rate;
 - in a digital experience, economic indicators target: education level of the workforce, percentage of management positions, percentage of population connected to the internet, the percentage of population that uses electronic transactions and services, level of data security and types of telecommunications and their usage.

3. Businesses and e-businesses

E-business activities are based on a final consumer approach, meaning that they are receptive to the changes appeared on the market, to the needs of the final consumers and to all the new technologies that appear “overnight” and which they have to make sure they implement, otherwise they risk being exceeded by the competition.

Businesses must adapt to the demands of the information society and the new digital economy. They face pressure from the increasingly fierce competitive environment caused by the digital economy.

Some of the main difficulties encountered concern social, economic, environmental and competitive pressures and the most important pressures are felt in the technological environment.

Social difficulties relate to changes in government regulations, political changes, new standards that need to be implemented and increased accountability of businesses.

Regarding the economic and competitive difficulties the most important concerns very strong competition that we are witnessing on the worldwide digital market. This is mainly caused by the fact that competition nowadays takes place on a larger area, not only regionally, as is the case in traditional economy; other causes might be the frequent changes that occur constantly in the market, very reduced national labor costs and the global economy.

Technological difficulties refer to the following reasons:

- informational abundance, information is easily accessible at any time, and often it is difficult to keep up all novelty elements that appear, so there is a risk that organizations have access to information but fail to sort and access or take into

consideration in a crisis situation when the information is required "on the spot";

- lowering the cost-performance ration, this happens mainly due to the extremely competitive environment and emerging technologies that facilitate the creation of products at very low costs (some producers have access to low costs regarding raw materials, workforce, production costs, transportation, hence their final products will be released on the market at derisive prices.
- technological changes that occur very fast, the technological era in which we are currently determines businesses to be constantly aware of new emerging technologies. Unfortunately their development rate is very fast and there are many situations in which Romanian businesses can hardly implement new technologies, and in general after they succeed other new technologies appear on the market.

This situation is encountered by Romanian businesses due to the fact that they are located in a developing country. But these issues are also faced by businesses from developed countries, so this is a worldwide problem.

As proposed solutions to these difficulties faced by businesses trying to become e-businesses and to adapt to the new digital economy the following solutions are possible: the most important is that organizations should try to adapt, as fast as they can and as best as they can, to continuous market changes, especially technological change; another solution could be to transform their domain activity as to adapt to new market conditions; redefining business processes could be another solution, reduce the time allocated to production cycle by trying to automate as much as possible the production process; customization; improving the collaboration relationships with suppliers; outsourcing certain activities, often it can be a less expensive solution; giving up activities that generate losses, restructuring business processes; develop new innovative strategies; center their activity on the needs and expectations of the final consumer; create strong alliances; and continuous improvement and innovation of their business.

4. Informational society and sustainable development

The information society is a society of knowledge and communication based on information and communication technology. Digital economy and information society technologies are constantly developing, so businesses must keep pace with rapid

development, and this can only be achieved through access to information.

Information is the most important asset of a business, but after obtaining information is very important their correct storage and transmission so as to generate new knowledge.

Today values that seemed important in the past are replaced by other values determined by present needs, so a generally valid truth is that information and knowledge give power to businesses, it can be said that we are witnessing a reversal of values. The fact that information and knowledge give power is a statement that is not asserted only by businesses, but also by the vast majority of people, from young to third age people who really believe that if you have knowledge and access to information this gives you power.

Through the unprecedented growth of the quality of communications and data processing and storage of the information, society underwent a fundamental process of change, due to free access and at low-cost to information and communication, becoming a digital society based on information and communication technology, respectively an information society.

Currently, solutions are sought so that all domains of activity to be extended using computer networks and to adapt to new market requirements and to its digitization.

Development is sustainable when it is based on economic objectives, as well as social and environmental objectives.

Sustainable development is a fundamental objective of the European Union. The purpose of this approach is continuous improvement of life quality and well-being of present and future generations, through an integrated approach between economic development, environmental protection and social justice.

At European Union level, sustainable development became an assumed objective since 1997, when it was included in the Treaty of Maastricht. In 2001 the Sustainable Development Strategy in Gothenburg was adopted, which was added to the external dimension in 2002 in Barcelona, and in 2006 the revised Report regarding institutionalizing sustainable development, by Organisation for Economic Co-operation and Development. (OECD, 2006)

The concept of sustainable development can be characterized in several ways from different perspectives:

- economically, sustainable development implies efficiency, growth, stability;
- socially, sustainable development targets living standards, equity, social dialogue and delegating responsibilities, protection of culture/ heritage;
- sociologically/ psychologically, the most important aspects of sustainable development refer to people's mentality and their way of thinking;

- ecologically, sustainable development aims at the conservation and protection of natural resources and biodiversity, avoiding pollution.

Fulfilling the objectives of sustainable development cannot be achieved without a change in the mentality of the people and without communities able to use resources rationally and efficiently and discover the economic potential, ensuring prosperity, environmental protection and social cohesion (Leontief and Ford, 1970).

Development implies ascension of the entire society and all its systems, economic, social, cultural, and political and so on. However, in order to achieve the desired progress in one of the systems of the society we have to consider the results of all the systems. All systems are interdependent, so if we have a missing link or one of the systems is underdeveloped this draws consequences on all the other systems.

The concept of sustainable development was defined by different regulatory bodies and specialists in the field, some of the most common definitions are:

- The United Nations affirmed in the *Report of the World Commission on Environment and Development* that sustainable development meets the requirements of the present without compromising the ability of future generations to meet their own needs, (United Nations, 1987) this concept was also affirmed in the Brundtland Report (1987), and was reaffirmed in the United Nations Conference on Environment and Development, held in 1993 in Rio de Janeiro.

- Thomas Jefferson stated in 1789 that the earth belongs to each generation during its existence, which is fully and entirely appropriate, no generation cannot make liabilities greater than the ones that can be paid during their existence.

- In 1989, William D. Ruckelshaus ("Toward a Sustainable World", Scientific American, September 1989) affirmed that sustainability is an emergency doctrine through which economic development and progress have to be performed and maintained over time, within the limits set by ecology, in the broadest sense - the interdependence of human beings and their jobs, the biosphere and the laws of physics and chemistry that govern it. He states that "environmental protection and economic development are indeed antagonistic processes". (Ruckelshaus, 1989).

- United Nations, affirmed in 1993 in the Report "Choosing a sustainable future" developed by National Commission on the Environment that sustainable development is predictable on the recognition that economic and environmental goals are inextricably linked, this being a pertinent affirmation.

- Muscoe Martin stated in 1995 that the word sustainable (support) has its roots in Latin, meaning

"to stem/ retain" or "lean down". He considers that a community must be supported from below by its current and future residents. Some places, through the specific combination of the physical, cultural and perhaps spiritual characteristics, inspire people to care for their community. He considers that these places have greater chance of sustainability. (Muscoe, 1995).

- Beth E. Lachman affirmed in 1997 that a lot of people consider that it is better for sustainability issues to be dealt with by means of collaborative and holistic approaches because such issues are confusing, multidisciplinary, multi-organizational and in different sectors, by their nature. She stated the effort to support communities consists in adopting long-term integrated development systems that create a viable community by considering economic, environmental and social problems. She believes that other important elements of such efforts are cultivating a definite meaning and building partnerships and agreements between stakeholders. (Lachman, 1997).

Sustainable development is a strategy through which communities seek solutions that lead to economic growth and brings benefits for the quality of life.

We can state that sustainable development became a guide for many Romanian communities that realized that traditional planning and development methods often create social and environmental problems and their goal is to resolve them. Where traditional enterprises cause pollution and excessive consumption of resources, sustainable development provides them viable and lasting solutions and encourages the transition to e-businesses. For the economy to be sustainable it is important to take into consideration economic resources, the environment and social factors, these are interdependent directions that should be addressed simultaneously.

5. Conclusions

In recent decades we have seen fundamental changes in the world economy at all its levels. These changes were so rapid and produced with such intensity that public authorities, businesses and people, faced difficulties adapting to ongoing changes and witnessed collapses of certain systems of values that proved to be incompatible with the new realities of the global digital economy.

Thus, today we are witnessing a world in which trade and capital flows between countries have increased so dramatically, that the phrase globalization of the world economy is a reality in which businesses are conducted on the basis of information and communication technology.

Traditional economy focuses primarily on issues of efficiency, allocation of rare productive resources, their optimal enhancement in time, so

that in the future to generate a higher level in the supply of goods and services.

On the other hand, digital economy is a capitalist system in which markets are dominated by a certain degree of equilibrium, this is caused by the fact that new e-businesses are primarily based on the use of information and communication technologies and therefore the distance between businesses is no longer a problem, hence markets are open to businesses from all around the world and transactions are performed easier between business partners and so final consumers have numerous options. The system is based on economic rationality.

The concept of sustainable development requires an economic development that is compatible with the natural environment and ensures the satisfaction of people's needs, whether we are talking about food, living conditions, information technologies and so on. (European Commission, 2013)

The overall objective of sustainable development is to find an optimal interaction of four systems: economic, human, environmental and technological, operating in a dynamic process.

Therefore the best solution is the adaptation to this new digital economy, in which sustainable development and economic growth are key objectives.

A solution to overcome current problems is the constant change of technology by supporting intensive research and development process, this support is materialized by the implementation of this new technology.

However, this is only a solution that can not totally change the problems faced by economies and businesses today. We are talking about an ongoing process in which everyone (economies, businesses, markets, and individuals) has to do its best to keep up with the alarmingly fast developments.

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Appendices

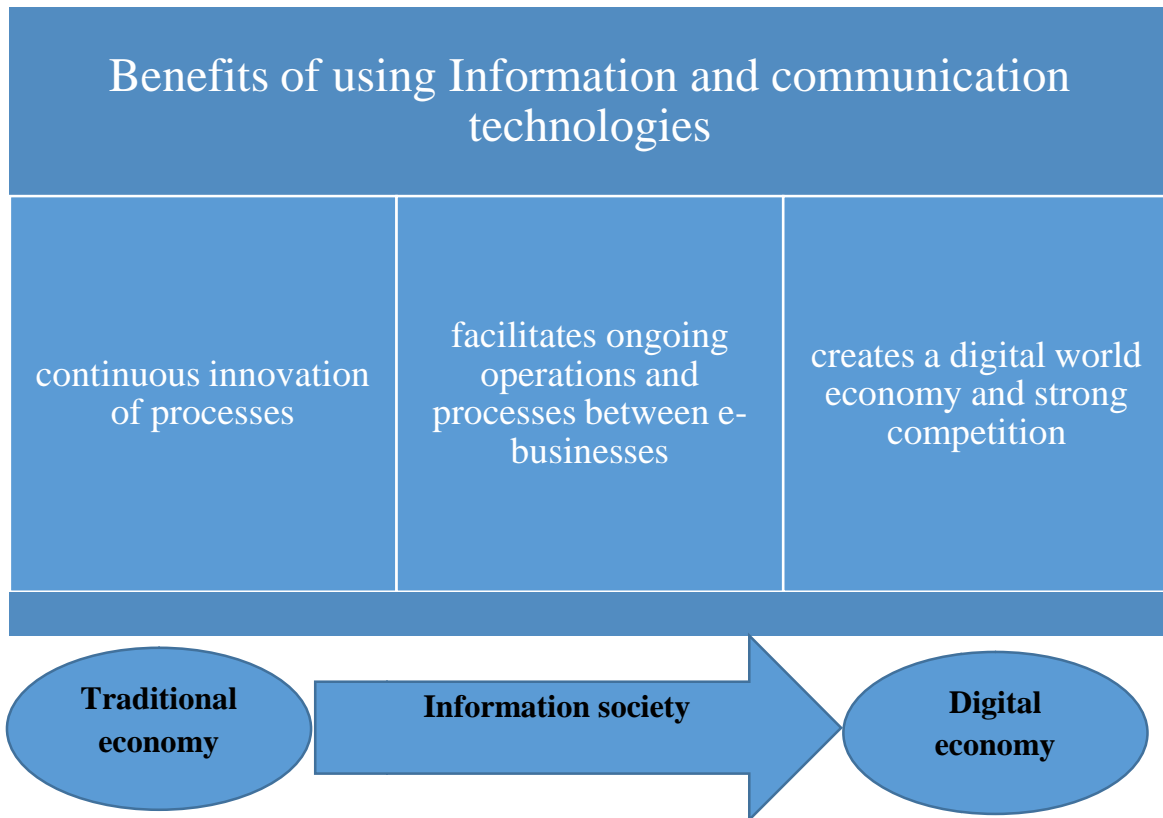


Figure 1 Benefits of using Information and communication technologies in the current digital economy

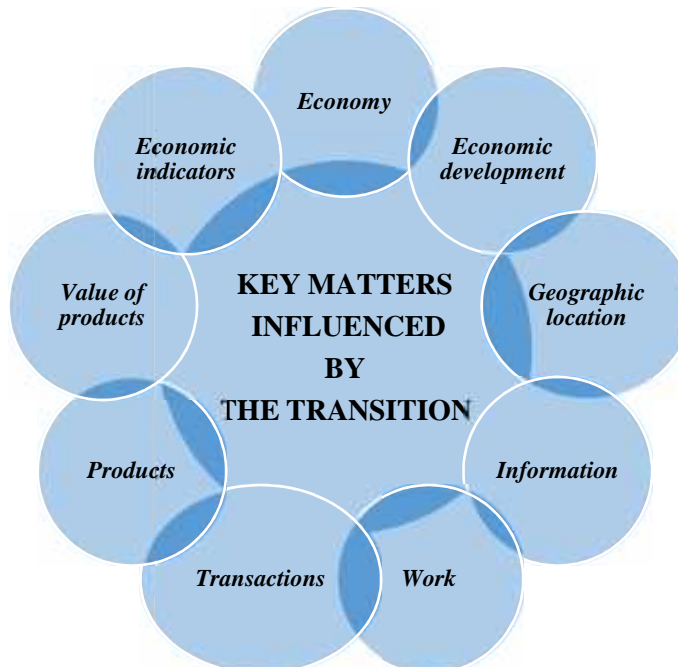


Figure 2 Key matters influenced by the transition to information society

