TERTIARY ECONOMIC ACTIVITIES UNDER THE IMPACT OF SCIENTIFIC AND TECHNICAL PROGRESS IN ROMANIA

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Abstract:
The scientific and technical progress put its mark in a different manner on all activities that occur within contemporary economy and it was present in the entire evolution of human society, but its implications and effects were never so strong and extensive. There is no area of activity in which progress not to interfere, both as important mutations that they are happening in the all area of production factors, as well as the place and role of the human factor in the deployment of production processes. In the current period the progress has exceeded certain human limits, operating in other areas which until more now it seems unattainable by the achievements of new technology. In this paradigm are successfully integrated tertiary activities in which the scientific and technical progress entered with great difficulty. Nowadays we are witnessing spectacular evolutions whether we talk about movement of goods, education, research, health, transportation, arts and culture, etc. The purpose of this paper is to determine the degree in which scientific and technical progress. In this paper we proposed to determine the level in which the scientific and technical progress, had a decisive impact on the development of the tertiary sector in general and in Romania in particular, we shall specify which are the economic tertiary activities that adapt fast to new changes occurred in the system of informational society. In this context we have to mention the systems of intelligent transport, electronic governance, medical system based on ICT online educational systems, as a possible response of the tertiary sector to the adaptation of technological progress benefits. In the first part of this paper we focused on the conceptual delimitation of scientific concepts at which we refer often such as: technological progress and innovative services which inevitably determine the evolution of tertiary sector under the impact of new modern technologies. On this background we have to consider the fact that all participating countries to global economic market have different capabilities for generating of technical progress and the assimilation and dissemination of its results. Thus we shall try to notice on the one hand in what measure it is Romania a country that generates or consume of technological progress and how large it is the absorption capacity of technological progress our country in services. Therefore, in our scientific approach we shall offer some practical examples intended to demonstrate that Romanian tertiary sector is integrated in the new development trends which are manifested in the global economy, caused by the nature and configuration of contemporary technological progress resulted from the development of electronics and informatics.

Keywords: investments, scientific and technical progress, new technology, information society, sustainable economy.

JEL Classification: O31, O32, O33, Q32, Q42

Introduction
Whatever the domain of activity mentioned, in the contemporary context we cannot ignore the society where we live, suggestively called knowledge society, implicitly the scientific and technical progress which generates new discoveries in the current society, which it helps to evolve into an alert rhythm.
In this society the information in the most general sense means power-- whatever its form of manifestation: political, economical, financial.
In an objective manner we can say the possession and superior capitalization of information is the essence of knowledge economy. This issue leads to the famous assertion of Francis Bacon, "knowledge is power".
The Society has reached an unprecedented development that recognize the knowledge as the last and si the highest fundamental source of social power succeeding other factors that have marked the development of human society -
The tertiary sector under the impact of technological progress

The role of tertiary sector in any economy is well defined. Thus, any country who aspire to a rapid economic growth and join to global economy based on knowledge encourage the development of tertiary economic sector as a determinant factor of national competitiveness. In Romania between 2010-2012, the statistics offered by INS related to the enterprises which have implemented technological progress in the production process shows that:

- one of five enterprises has introduced, implemented or significantly improved / enhanced a product, process, organizational or marketing method;
- more than half of innovative enterprises have developed the innovations in their production activity;
- 7.4% of companies have signed cooperation agreements for the achievement of innovative activities;
- the advantages of advance timing was the main method for maintaining or increasing of competitiveness in innovative enterprises;
- the most innovative SMEs were registered in the South East (36.1%) and the North East (31.7%).

In 2012, the share of expenditure on internal activities of research and development almost doubled. The top 10 of innovative activities in 2010-2012 contains in its structure on 2nd place R & D activities, 5th place Information service activities, 6th place repair and installation of machinery and equipment, 7th financial intermediation, except insurance activities and pension funding. 8th Insurance, reinsurance and pension funding (except those of public system of social insurance), 9th services of decontamination. On this background we note that of 10 domains that include elements of scientific and technical progress in their activities, 6 positions are occupied by service providers, which implies and the concentration of the financial potential and the research and development activities and in the field of services enterprises.

The knowledge society is defined differently from one specialist to another. The new economy is an economy more dominated of global influences and the speed in real time often of communications and informations, regardless of distance. Thus it is considered that its basic characteristics are the globalization and the digitization, characterized by the attribution of intangibility for both direct investment and trade international transactions. According to this definition the new economy involves the development of inovative companies, high technologies and new models of services.[2]

Thomas Stewart defined the economy based on knowledge, thus: economy based on knowledge takes into account money in the context of purchase, production and sale of knowledge ". This type of economy is based on intellectual capital, which does not relate to irrational boom of enterprises actions focused on the phenomenon of Internet expansion, nor the exaggerations regarding web sites and high technology. Jack Welsh president of General Electric, referring to the knowledge society says: a good idea is not limited to a biotechnology idea. Such an idea is to deal with a process that requires a 6 days period and you can reduce it to a single day. We obtain an increase of labor productivity with 6-7% for the most part with such ideas. In this sense each person can have a major contribution.

New services caused by scientific and technological progress

The majority of researchers in this domain consider that unprecedented progress of information and communication technologies, generates new services and also they sustain already the existing services.[4] The appearance of informational society and new economy has several influences on the development of services, which can be found of following aspects:

The acceleration of e-commerce.

E-commerce is a domain in a continuous development within UE countries and a global scale especially as a trade instrument. So we can say that it has a strong impact on the pattern of organization of the industry and services. The development of the infrastructure and the access facilitation to the ways of communications for affordable prices, and also the politics of implementation of these forms of trade has led to a fast development and also an important increase in demand. The Secure payment systems, a better logistics distribution, the application of electronic signature, the increase trust of economic agents and consumers in this new type of trade are conditions applicable for accelerating the e-commerce.
E-government, electronic access to public services
The use of new technologies of information and communication can bring the public administration closer to citizens and business environment, especially via Internet. In these circumstances the public administration can make a major contribution to the acceleration of transition towards an economy based on knowledge, by the stimulation of access and use of online government services. Moreover, through the contribution to the organizational transformation of the public sector, the e-government can improve the public services by making them faster and more affordable. Business environment can also benefit from the decrease administrative obligations, this aspect contributing to the efficiency of economic growth. Also, a transparent and interactive administration can stimulate the participation of citizen to the democratic exercise.

Medical Services based on ICT
The proper use of online technologies in order to create a great availability of quality information about health among citizens can increase the share of preventive medicine reducing on long term the social and administrative costs of the diagnosis and treatment. Furthermore, a change towards preventive medicine requires that both the public and professionals in this sector to have access at quality health information easily available through Internet. Therefore the main criteria of quality for the development of national web sites they should be adapted for new implementations of sites with medical information. The cooperation and the change of informations concerning the medical strategy and policy, health indicators, the conditions of health services, at professional level is very well appreciated and it can contribute to the development of a coherent system. The evolution of Romanian sector of medical services will be influences of following factors: the congruence between the characteristics of medical companies and the economy based on knowledge; the increase of population education level and the new economic and social culture; the enhance of individualization and customization of products and services; Technical and technological changes; the informatization of society and economy; The Externalization of organizations activities; Regionalization and local development; The internationalization of economic activities

The educational services based on ICT
The educational services become stable with the support of information and communications technology through E-learning in general, which includes all forms of learning and educational technology.[6] Also, through e-learning in the broadest sense we can understand the all educational situations in which it is substantially used the means Information and Communication Technology (ICT). The term was retrieved from Anglo-Saxon literature, being extended from the etymological primary meaning, learning through electronic means, to the area of intersection of educational activities with modern ICT tools. The computer and electronic/ multimedia materials are used as support in teaching, learning, evaluation or means of communication. In the restricted sense e-learning represent a type of distance education, a planned experience of teaching-learning which is organized by an institution which provides in a sequential and logical order for to be assimilated by students into a personal manner. Intercession is realized through the new technologies of information and communication especially via Internet.[7] The Internet is both the environment of materials distribution and channel of communication between stakeholders.

Intelligent systems of transports
The intelligent system of transport begin to be recognized that a new option for the operating and management of transport network. This is at the crossroads of two powerful current of change: radical transformation of the economic system or the alternative of building of new infrastructure for taking over the traffic demand. The implementation of intelligent system of transport and services for all the transports types will significantly contribute to the improvement of efficiency and traffic safety as well as environmental protection.

Innovation in tourism
Innovations in the hospitality industry are largely appreciated intangible on their nature. Therefore they are difficult to monitor and evaluate as frequency, execution time (efficiency) and contribution in achieving customer satisfaction and profit obtaining (effectiveness).[3] Logistic innovation includes a reassembly of external trade relations which may affect the image of enterprise in the values chain.[5] In tourism such innovations lead inevitably to the appearance of changes in the structure of distribution chain, or the e-marketing creation. In the economic contemporary context, the increased dynamics from the information domain generates the implementation in the tourism sector of IT systems that we can be considered for this matter, as radical innovations and also process innovations. Major hotel chains come with ideas and concepts meant to bring them an important competitive advantage. For example, the Ritz-Carlton chain, property of Four Seasons, has identified the consumer need of technological assistance and to satisfy such a request it was created the post of “concierge” in order to offer solutions for customers that are hitting the informatics problems.[8]
The online involvement of disabled people

The development of digital technologies offers for the disabled community great possibilities for overcoming the socio-economic, geographical, cultural, time barriers. The accessible technologies which are addressing for their specific needs, allow them the participation to social life and work on equal basis. The accessible technologies which address their specific needs, permit their participation at the social life and work on an equal basis. For the following years remains a challenge reduction incompatibilities between technologies and this category of users. The legislative framework in the field has many gaps because often is missing the standardization of products for this market segment. A special attention must be given to improving education and training possibilities in order to ensure the complete participation of people with disabilities in society. Thus, we appreciate that it must be achieved online networks of care services to enhance the independence and safety of Handicapped Persons. For this purpose, the digital technologies can facilitate the administrative formalities involved in the management of public and private systems of social services.

Conclusions

In the contemporary context of economy based on knowledge the top companies operate and cooperating with suppliers, business partners at global level in order to provide the adequate service packs for new trends and requirements. The service providers which completely understand the needs and interests of customers are able to incorporate customer knowledge in business processes of organization for services improvement. This fact is useful not only for the integration of relation and resource inputs, but it has favorable effects concretized in the improvement of customer satisfaction. As it results from these aspects presented above, the services sector responds to the new achievements of scientific and technical progress by it fast incorporated and often, surprisingly by creating of new amazing services through their possibilities of avoiding the negative characteristics specific for the tertiary sector, which were difficult to replace some time ago. Thus, the inseparability between provider and consumer can be substituted in many services such as education, health, consulting, legal etc. ICT equipment. The human need for communication, to be permanently in contact with other people make them use intensively various instruments that can help them in this sense and how these tools are more efficient and provide a medium for communication, a better interaction so the users will move quickly toward them. Finally, in the same order of ideas we can appreciate that simultaneously with the acceleration of dynamic process technology will substantially increase the possibilities of users to interfere, change, and contribute to the new format of medium communication.

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