INNOVATION – THE CORNERSTONE OF ECONOMIC SUCCES AT EUROPEAN LEVEL

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In a world that is in a permanent change, in which the interdependencies between the states are more and more obvious and the rivalry and the inequalities between the nations deepen, one of the main objectives of the actual era wishes to be the growth of the competitivity and innovation degree at a microeconomic level and at a regional and international level. The innovation process means the conversion of new knowledge into economic and social benefits, as a result of some complex interactions between numerous actors in a system that is formed of an environement (local, regional and national) that has productive firms, research institutes, and networks through which all these come into contact.

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1. Globalisation – a game with a positive sum?

The globalisation of the economies accentuated the rivalry between teritories, states and regions. The geo-economical shiftings recorded in the last years, the delocalisation and relocalisation of the activities can be found in a redistribution of the economic actors on the rivalry scene and even more, in a deepening of the differences between the rich and the poor states. The world leaders as the USA and Japan have to face a strong rivalry in the innovation field from states that a few decades ago were used as cheap work force. The technology transfer from the rich countries to such countries represented eventually the launching stone to the new world that seem to appear. If in 1990 the production of high technology of China was less than 10% of the production of the USA, in 2000 it comes to about half it.

Some authors believe that the great world platforms of innovation must adapt really quickly and they must discover new breaches in order to fight the new big demographic powers – China, India or Brazil – that have the potential to develop in all the fields. The particular character of the economical growth without precedent of some countries as China or India make that on the medium term to see changes in the international environement and the developed countries as the USA and numerous European countries to be threatened by the Asian tigers. The importance of the "reserve troops" that is the human resource, respectively the hundreds of millions of Chinese and Indians that are capable to adapt to change and to reach a high degree of education is obvious. The rise of the efficacity in the two states and the orientation towards technological innovation generates advantages that can be compared and emphasized by the Ricardian theory in the fight of the entities for supremacy.

Starting from this reasons the European states consider it to be crucial the problem that refers to the definition and the putting into practice of a effective collective strategies, that limits these shiftings and that will support Europe in improving its position on the world market in this field. Economic rivalry represents today the base of a "permanent war of the shiftings" and no leader position can be considered sure and durable. Today's winners can become tomorrow's losers. Innovation is considered to be the key to prosperity for the enterprises and the geographical teritories.

2.Stimulating creativity and innovation at European level

The new tendencies at world level aim at the involvement in a big measure of the scientific potential in all the productive fields. In this context the Operational Programms 2007-2013 regarding the Structural European Funds have as a priority the innovation's development according to the Lisbon Strategy. These represent a special oportunity that aims to stimulate technological and non-technological innovation in enterprises and the teritorial diagnosis analysis have the role to determine the regional potential of innovation, the way and the importance of the public financing, national and communitary, that one has as his disposal. In one of her speeches Danuta Hubner, the European Comnissary for the Problems of Regional Policy, said that regional strategies must favour the investements in the field of the research and techonological development, of innovation, of the human capital and of the entrepreneurial spirit and to analyse the extent to which these investments answer to the specific needs of economical development of each region.

The communitary strategic orientations that the European Council adopted in Octomber 2006 regarding the innovation and the research offers to the cohesion policy a double role: on the one hand it has to support the regions in the putting into practice of the action plans and of the regional innovation strategies that aim at the growth of the rivalry of the invoolved entities and of the European Union, as a whole. On the other hand it has to contribute at the growth of the capacity of scientific research and innovation in the region up to a level that will allow the participation to the transnational projects of research.

The international studies have shown that the density and the vitality of the local networks of knowledge contribute in a significant manner to the dynamism and the competitivity of the enterprises and that they give an essential role to the local policies and especially to the regional ones of economical development. From the research made the author of the present paper noticed that the regional authorities, especially the ones from Romania, need a very sophisticated and permanent diagnosis of the mechanisms that set into motion the "regional innovation machine" with the purpose to focus the efforts on the incontestable priorities that create richness. The durable development through innovation is based on the intensification of the regional activity for the business environement, through the attraction of talents and the development of the access to knowledge and opportunities. More atention should be given to the regional keeping and improving the human capital, to promoting the cooperation between companies, to the facilitation of the harmonization of knowledge with the international market and to supporting the obtaining of the intellectual property rights. For the stimulation of the rivalry of the economical regional system one will have in mind the diminishing of the significant technological difference by facilitating the acquisition of equipment, technology and services. Regarding the educational system we have in mind the development of doctorate and post-doctorate programms made in association with the business environement.

The regions are often the managers of some global subventions made in the regional rivalry and the occupation of the work force programms. In this context, the European Comission emphasises the fact that during the 2007-2013 programms the made diagnosis should focus on the strong and weak points of the teritories from the point of view of innovation so that the consolidation of an effective innovation strategy is reached, a strategy that is pertinent in connection to the European stakes.

The scientific approach that is intented towards the making of an informatic model of evaluating the innovation degree at a regional level wants to give for the regional managers and to the research and education specialists a robust methodology of teritorial diagnosis and of innovative management.

A recent study made at European level show that Europe started to catch up with difference that separates it from its main rivals, USA and Japan, at performance level into the innovation field. The first place goes to Switzerland, followed by Sweden, Finland, Germany, Denmark and The

United Kingdom. All these six countries are situated better than other European states and than the UE, as a whole. We must notice that the new states that became members recorded the biggest success, especially Cypres, Romania and Bulgaria, although their performaces are below the European average. The tendencies are emphasised by the dashboard of European innovation for 2008. In the 8th edition of the raport published by the European Innovation Scoreboard, that appeared in January 2009, made by Maastricht Economic and Social Research and Training Centre on Innovation and Technology, was measured the performance of the states that are memebrs of the European Union under the innovation aspect. According to this publication, the differences of performance in innovation divide the UE countries into 4 groups:

- *Group 1*. Switzerland, Sweden, Finland, Germany, Denmark and The United Kingdom – the leaders when it comes to innovation, with performances that are high above the UE average; *Group 2.* Austria, Ireland, Luxembourg, Belgium, France that are on the second place, with performances that are above the average of the UE;
- *Group 3.* Cypres, Iceland, Estonia, Slovenia, Czech Republic, Norway, Spain, Portugal, Greece, Italy, that are considered to be modetare innovators, with performances regarding the innovation under the UE average;
- *Group 4.* Malta, Hungary, Slovakia, Poland, Lithuania, Croatia, Romania, Latvia, Bulgaria, Turkey are the countries that are about the make up the differences, with performances regarding the innovation that are very low in connection to the UE average. Bulgaria and Romania are the countries that have the fastest rhythm of improving their performances.

Created on the data that existed before the start of the economic crisis the study uses 29 indicators for evaluating the level of innovation of a country. Innovation is considered to be the main factor for the stimulation of the the economical growth and the main way in which we can prevent some risks – for example the changes of the climate. Among the indicators we can find the popularity of the scientific and techincal studies made by the universities, the number of patents, the risisng of the funds given to the research, the availability of the risk capital for the new companies and the share that the exports of high technology have. The situation from the UE has evolved a lot in the past 5 years. Although it is still behind the USA and Japan, the differences tend to diminish from year to year. It is also situated pretty well compared to the emergent economies as China, India and Brazil. Yes it also has weak points. UE is behind the USA especially in the field of investments, and it is behind Japan regarding innovation in research-development and the information technology. In the same measure the companiesw from the UE spend less on non-technological innovations, as professional training, design and marketing, although they are essential elements for mentaining the competitivity. The study was published in the same time with a raport regarding the UE's performances in research-development and of the efforts to create an European research space. It indicates the fact that the number of the researchers from Europe is increasing and that the UE becomes more and more attractive for foreign researchers and for private American investments in this filed. The study also shows that the funds given to the research-development stayed at 1,84% of the PIB, less than the objective of 3% that was establised in the UE. The objective of 2009 is to promote creativity and innovation capacity. This aspect is in accordance with the Communication of the Comissy "A comprehensive regarding the innovation in the UE" that says that "without education as a central policy, innvation will stand alone. It has to promote ta\lent and creativity from the beginning." The European Year of Creativity and Innovation has as its main target the awareness of the importance of creativity and innovation for the personal, social and economical development; the spreading of the best practises to stimulate education and research. Creativity and innovation contribute to the economical prosperity and to the individual and social wellfare.

3. The contribution of the Economico-financial Analysis to the making of models of determination of the innovation degree

Promoting the stipulations of the Lisbon Strategy, Romanian education, as we know it today, is going through a stage of transformation, that is oriented towards the society that is based on knowledge and innovation. 2007 represented the beginning of the efforts of orientating the national policy towards the development of knowledge on durable criteria, in close connection with the European objectives for this matter. The triade education – research – business environement has become the corollary of the professional formation of the European citizen. In this context the Romanian institutions – public, private or business environements – build their development strategies on the performance and competitivity criteria. More than before innovation is the supreme condition in establishing the comparative advantage on a global level. One can notice that Romania started this approach from an underpriviledged position. Although the efforts are obvious, under an institutional aspect and under financial aspect as well, as the last statistic data show, from the point of view of innovation Romania is situated (European Innovation Scoreboard) among the last three states members of the UE. Compared to the developed countries, Romanian economic agents are still putting the research-innovation chapter on the last place when it comes to giving money. If in the developed countries the noncorporative credits have important values in the total of the given resourches, in Romania the focus is placed on the productive-material aspect. Because the evaluation of the innovation degree at the economical agents level was not a real issue up to now, being a new field, in the last three years efforts have been made to identify and select the measurement indicators. At a regional and national level the demand is higher, because the diagnosis of the innovation degree is made through the centralization of the data from the teritories.

Integrative part in this determination process, on scientific criteria of the contribution brough to the Romanian people at the development of the society based on knowledge, is the scientific activity of the Economico-financial Analysis Department. In the last years, the majority of the department's memebrs are included into the National Plan for Research, Development and Innovation – PN II through two projects, from Programme 4 – Partnerships in prioritary fileds:

- INNOINDEX – informatic model and programme to determine the innovation degree of the IMM – term 2007-2010;
- INNOREG – Informatic programme and model to determine the innovation degree at the devepolment regions – term 2008-2011

The author of the present paper is ASE principal in the second partnership project "Informatic model and programm to determine the innovation degree at the level of the development regions" (The Academy of Economical Studies is one of the eight partners), the coordinator being IRECSON. The role of the Economico-financial Analysis in the evaluation of the innovation degree is decisive because:

- any indicator of measuring the innovation must be interpreted and understood under the aspect of content;
- the evaluation of the results at IMM level or region is made by interpretations on the comparisons in time or space.

In the diagnosis analysis of the innovation degree are identified through a multitude of methods that can be applied, but selection imposes scientific argumentation; in the determination of a refined model of evaluation of the innovation degree, the role of the analist is as important as the role of the statistician, because, in theory, the model will be established on the base of identification of a score function; it results that from the total of the researched indicators only a small number will be taken into account, according to relevance. The final interpretation of the results of the reseach will be made with the help of the financial analist.

The regional, national and international diagnosis analysis means the identification of the strong and weak points of the innovation process, it has to be methodical and to exceed the mere enumeration of the general statistical elements (staff, added value, investments, resrach expenses,

number of patents) or of the list of universities, research centres, incubators, without being accompanied by commentaries that are argumented or scientifically based.
The conclusions that were drawn after the analysis of an area must be completed by the diagnostication of the global stakes that are characteristic of the regio, through an examination of the microeconomic dynamism of the innovation systems actors, by the appreciation of their capacity to generate knowledge and to transform them into new products or services, or in "business models" (innovative), by evaluating the access to capital.
The representatives of tyhe scientific world believe that in the modern economy the traditional advantages represented by the natural reosurces or by the geographical position are not the only solution for diminishing costs. The key factors of prosperity can also be the access to knowledge, talent and creativity. Innovation is a multiform process with multiple causes, as J. Schumpeter described it in his studies regarding the approach of the new combinations of production factors and their role in the economical evolution.
Innovation means, in the opinion of OCDE, the introduction on the market of a new product (thing or service) or that is changed under the aspect of its fundamental characteristics, of technical, logistic, material or immaterial nature, that can respond to the destination it was made for. Starting from this concept one can say that innovation is not a simple and obvious process and that it means the conjoined efforts of some persons, teams, institutions, that often are not in the same location. Innovation is first of all a business of the entreprenors, but the big organisations, the regional environement that stimulates creativity, research and innovation has a central part in creating wealth for the a nation. The regions and the vitality of the ecosystems play a determinant role in creating new value. The possibility to come into direct, informal and repeated contact with an important number of "producers of knowledge", researchers, university professors, financial agencies allow each firm to benefit from a positive "externality".
The most used referene today is that of the **regional innovation systems,** that are in the opinion of the specialists, a method to describe an ensamble of actors and institutions for which mutual relationships are decisive for the good functioning of the ensamble. Such a system allows the optimization of the transfers of competences and the collaboration among different actors of regional development.
The diagnosis analysis in the field of innovation at a regional level has to have three main components:

- the analysis of the global components based on the indicators of economic activity and of the innovation potential;
- the analysis of the actors and of the networks of the regional system of innovation;
- the description of the functioning of the gouvernment process of innovation and of determining the strategic priorities.
- From the studied bibliography, we can draw some conclusions regarding the position of the innovation in a strategic plan:
- Innovation is a challenge and a reality of the contemporary world.
- Most of the developed countries invest in innovation in the last years under all its forms.
- There is not a unique methodology of diagnosis analysis at regional level.
- The indicators of the evaluation of the degree of innovation are numerous and they are approached slightly different from one country to another.
- The innovation degree is more important at the level of the activity clusters.
- The role of the regional and research institutions is significant in developing innovation.
- The analysis of the innovation degree is unsignificant if we do not compare it with other regions.
- The degree of innovation means an indistructable relationship between state-industry – science.
- The qualitative analysis has an essential role in researching the studied phenomenon.

- The migration of the Romanian workforce towards Occident affects on medium and long term the performances of the country.
- Innovation determines the rise of the work productivity and the emergence of new professions, but it can diminish the degree of occupation in the fields with the highest degree of innovation.
- A negative natural output affect a people's creativity.
- The constant training and formation of the employees can be found in the rise of the innovation degree.

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