

The 8<sup>th</sup> International Scientific Conference  
eLearning and software for Education  
Bucharest, April 26-27, 2012  
10.5682/2066-026X-12-156

**MEASURES AT EUROPEAN LEVEL FOR INNOVATIVE CLUSTER**

Daniela – Claudia JELERIU

*Romanian American University, Faculty of Internal and International Commercial and Financial Banking Relations, 1B  
Expoziției Blvd., Sector 1, Bucharest,  
E-mail: jeleriu\_daniela@yahoo.com*

Mihaela-Georgia SIMA

*Technological Transfer Centre - Chamber of Commerce and Industry of Bucharest  
E-mail: georgiasima@yahoo.com*

**Abstract:** *The role of cluster initiatives in economic and social development is becoming increasingly important. Clusters stimulate innovations and contribute to the increase of competitiveness of local economy and individual businesses. This paper examines the most important measures at EU level concerning the innovative cluster policy and the way in which this helped cluster grow. We focus on the most representative cluster networks in several fields, in order to have an overall picture of the real situation.*

*Due to the fact that România is part of the EU we will try to extend our research on finding the best policies concerning innovative clusters and their applicability in România.*

**Key words:** *innovative cluster, SME, policy, EU*

## **I. INTRODUCTION**

The actual worldwide economic context obliges companies to adopt measures to enrich resistance to potential waves due to new arrangements of the actors involved-clients, suppliers, competitors, the state and government institutions.

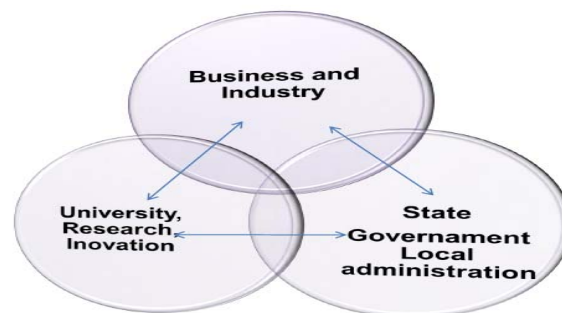
Moreover, the competition between the USA and the UE (Lisbon Agenda) makes the latter adopt a fake position in front of the new economic changes. In the UE the object of the analysis, the science factor through innovation and technological improvement occupies an important role in increasing competition between companies. Because of this, companies profit of the advantages offered by one of the specific means of the company based on knowledge –the cluster- in the context of shifting to economy based on knowledge.

The cluster is a concept developed by the well known strategist Michael Porter who defines it as “A cluster is a geographical concentration of related and supportive industries which compete and cooperate with each other”<sup>15</sup>. The cluster emerged as a solution to capitalize advantages that are delivered when the SMEs are organized and function as a system: to divide the knowledge, to achieve scale economy, learning how to organize, flexibility and to capitalize the market opportunities. The cluster demonstrates that which for some people, at first, may seem paradoxical, that these companies that are in a competition can co-operate if there is a favourable and mutual co-operation based on the win-win principle.

---

<sup>15</sup> Michael E. Porter - Clusters and the New Economics of Competition Harvard Business Review, November December 1998, p. 7;

According to the classical theory for the cluster concept there is the “Triple Helix” pattern of the three leave clover. It represents the business area, the industry –SMEs, university and research area (research, development, innovation) and the public area (authorities–central, regional and local).



**Figure 1.** Model of Triple Helix

Starting from the pattern we will point out in the following the main advantages that arise from this, emphasizing innovative cluster accomplishments like existing politics for the UE with the purpose of increasing competition in relation to the USA. In the context of the integration of Romania in the UE, Romania tries to make a concordance in its politics in the vital areas to develop competition: research, development, innovation, public politics and regional growth.

In addition we will try to illustrate some examples of success at a European level from different branches and why not the possibility of interconnecting these for the purpose of making abroad clusters and in the near future European clusters.

## **II. SUCCESFUL EXAMPLES – WAYS OF GROWTH – SWEEDEN, GERMANY AND FRANCE**

The European Observer of Clusters<sup>16</sup> has recently identified around 2000 significant clusters defined as regional agglomerations of companies and entwined services that hire 38% of the European workforce.

Some specialists say that from all the European countries Sweden has the highest success for cluster politics and that is why the Swedish cluster from Karlskrona (Ronneby) Telecom City is a well known success. The Swedish pattern starts from a well known problem that Sweden has encountered, the city had been a military base that was supposed to close in a short period of time. The town hall found a fast and efficient solution to save this town and so Ericsson’s coming to Karlskrona made the cluster grow, the suppliers to agglomerate in the region and to develop.

The Governmental Agency for Innovation in Sweden VINNOVA is one of the main pawns of competitive agglomeration growth, its mission sums up promoting lasting growth through financing market research and developing innovation systems, bringing Swedish research on the leader position.

Moreover, besides the companies and institutions, the national context is very important also to be able to develop a network of interconnected successful companies.

The Swedish government assigns :

- almost 4% of the PIB to research development
- paradoxical in the Swedish case the high level of inputs in the research-development system there is a low level of outputs
- the high level of globalization of the business domain: high dependence upon foreign companies in relation to research development, work places, etc.
- macro economical stability
- small intern market

The research has the role of transforming money into competence and moreover innovation is the one that transforms knowledge and competence into money.

<sup>16</sup> [http://www.clusterobservatory.eu/upload/Europe\\_Innova\\_Cluster\\_Mapping](http://www.clusterobservatory.eu/upload/Europe_Innova_Cluster_Mapping), accessed 28th May 2009;

Kista Science City-the biggest cluster in Europe in the ITC field and the 5th in the world.  
Karlskrona (Ronneby)-Telecom City (Scientific Enclosure)

A second example of a UE country that has benefited from the cluster pattern is Germany. In the case of Germany, the government has taken upon itself the whole responsibility to create and develop biotechnological clusters in the alternative energy field. In addition the local governments have a high support for educational projects that have as a finality the condensation of companies and international partnerships.

The clusters, especially the ones in East Germany benefited from financing from structural funds through POS axle 1, measure 1.1, the same from which Romania could take advantage. Also, common for Germany, but surprising is the fact that within the frameworks of clusters there are no legal connections between the ones involved but also an external management.

A third example would be the French pattern, sometimes followed by Romania in many fields. Considering France we will not talk about clusters but competition poles the same way the French defined them.

The competition poles<sup>17</sup> are geographical concentrations of public or private companies, research centers and educational institutions that have a partnership under a common development strategy with the purpose of creating a synergy and co-operation in innovation projects, in the best interest of one or more markets.

The French pattern is central the cluster being made from top to bottom, the decision being taken by the government and implemented in different regions.

In England the biotechnological clusters have taken such proportions (the ones in the SE-Oxford and Edinburgh are well known for this) in Norway there is there is the “Maritime Household” cluster and in Finland have developed the forestry clusters.

### **III. CLUSTER PLICY IN THE EU**

Innovative clusters are powerful engines of economical development that lead to innovation in the UE. These are the ones that assure a fertile business environment for companies, especially for IMM's the co-operation with research institutions, suppliers, clients and competitors in the same region.

At present time all the 27 member countries of the UE spread and implement politics and programs for competitive agglomerations, national and regional levels. Their actions made by these are meant to fulfill the objectives of Lisbon Strategy. National and regional politics have been supplemented by European politics when on the internal market was created a solid base for the development of clusters. In addition the UE has created a series of programs and politics in the science and innovation field of regional development of companies, of different industries facilitating bench marketing for the members.

In 2007 the European Cluster Observer was launched and in October 2008 the first information regarding the presence of clusters on its territory was made public. Some opportunities were created to develop top-level clusters as a result of European orientation towards know-how hubs and abroad business cooperation.

In 2009 the High Level Group Cluster is formed having as its main objective supplying instruments meant to enrich cooperation among clusters. Cooperation between cluster members can be achieved through European Cluster Alliance.

Access to developing cluster funds can be achieved through Excellence of Cluster Organization.

Starting with 2007 the EU recognizes the job of “cluster manager” as a new job qualification.

However, the fragmentation of the market, the poor connection of the industry with research and the insufficient cooperation with the UE lead to the idea that these clusters in the UE don't always have the necessary criticism and innovation capacity to cope with such a global competition. To create an efficient frame to support the UE clusters, the European Committee proposes a series of measures

---

<sup>17</sup> <http://www.competitivite.gouv.fr>, accesed 27th May 2009;

for improvement. Improving the internal market function and removing all existing barriers, more like a brain drain in a limited circle, pacing quality staff mobility and also access to external financing. Establishing a Political Group of the European Cluster that will probably offer strategically orientations and assistance for the member countries to support worldwide clusters.

To extend the political dialogue by the European Cluster Alliance between members and UE regions to exchange practice in making a better politics for the clusters.

Carrying on the development of the European Cluster Observer for department development towards clusters and innovative industries, strengthening abroad co-operation and development of partnerships in the UE.

Launching a pilot scheme that offers training programs and a co-operation bridge for cluster managers that can contribute to a “quality etiquette” for cluster organizations as a new way of supporting IMM’s innovation.

The European Committee will continue to fasten its initiatives to support clusters like operational clusters in political cohesion, framework programs for research and technological development and competition and innovation program that will facilitate the rise and quickening of development of many European clusters of world wide scale.

#### **IV. INNOVATIVE CLUSTER – FORMATION, FUNCTION, PERFECTION**

Innovative clusters have as a basis the “Triple Helix” pattern (See Fig. 1 ) and are the ones that facilitate the start-ups and spin-offs realizing a straight co-operation between public institutions and the business environment leading to the improvement of politics that endorse industries. Moreover, they create the premises for profit influence in education and putting them together with company needs of qualified workforce.

Among necessary elements to create a successful cluster that can produce studied socio-economic effects according to Kristofer Erlandsson<sup>18</sup>, these are:

- trust between members-business industry, research university
- voluntaries
- social assets
- management
- asset accomplishment
- research-industry relation
- organized tradition
- a critical mass existence (a series of activities and additional companies interconnected through a common goal based on existing competence, a development strategy, clear and complementary competences put into practice, assuring independence for every member).

Development programs national, regional and European level are the ones through which an optimization of the development of clusters is tried, finding a pattern, functional and adapted to existing variables.

When forming a cluster you have to identify the most important denominator, that which brings potential members together. We have to consider that we are different, we have different views towards the world considering the field (business, authority, university). These differences have to be overcome, replaced by a common goal and a lasting strategy. This is the real challenge for the whole project.

Of course, financing the project can be a real obstacle to overcome as we mentioned in the “Existing measures for the UE” chapter, but for the members financing can be made from structural funds.

---

<sup>18</sup> [http://www.proinno-europe.eu/admin/uploaded\\_documents/2008.2494\\_deliverable\\_EN\\_web.pdf](http://www.proinno-europe.eu/admin/uploaded_documents/2008.2494_deliverable_EN_web.pdf), accessed 27th May 2009;

On the other hand, there are still some elements needed like good governance. The success of the healing process stands in the hands of national or regional administration to develop a Tax Administration legislative climate, favorable for cluster development.

The leader is an essential ingredient, it has to be the cluster pole, the binding that manages to bring together proper partners accomplishing individual competence on the behalf of all its members. There are situations in which the leader a foreign company for example invests in Romania in a field in which local partners are not wanted but prefers to benefit from small wages and then relocate. In this case local administration involvement will be futile.

The tendency is an individual one centered towards owner activity, cooperation being considered by many companies if not harmful at least uninteresting. Generally, this manifestation of companies is specific to individual cultures.

SMEs for example, don't have a co-operation genius, they have a more entrepreneur attitude. They are less likely to share the information they dispose of. Often the IMM's are happy with their position of small business that they control. More often the IMM's don't have an adequate market analysis. After all the observations a series of problems and dysfunctions arose and because of some the emerging clusters have failed.

The first level in which dysfunctions have been seen has been that of business-of SMEs where the spirit of co-operation and competition that partners should show is missing. Trust in the process of cluster formation but also sharing the vision of regional economic development benefits are some obstacles encountered.

## **V. INNOVATION CLUSTER – THE CASE OF ROMANIA**

Romanian economy has a dynamic situation but we cannot speak of clusters. Even though there are cluster attempts there is no politics in this area, the law is not harmonious with cluster politics for the European level.

The layouts for the Romanian European Committee determined the Ministry of Economy to launch InovCluster, a national project that has as a main objective to identify potential poles and point them out on the European Cluster Mapping from the European Cluster Observer.

Other programs for clusters in Romania:

- The sector operational program “Economic Competition Rising - SOP ECR”
- Regional operational program –ROP
- The sector operational program for the development of Human Resources - SOP DHR
- Transboundary co-operation program
- National plan for INNOVATION – DEVELOPMENT – RESEARCH between 2007-2013 (PN II)

As we presented in the previous chapter Romania can follow the successful examples of countries like Germany for finances trying to profit from the structural funds to create a successful cluster networking. Sweden has revived a region attracting a company like Ericsson and the cluster developed in a natural way. Of course we have the French example of top to bottom way of forming itself, of centralization and why not adopting a different terminology, of competitive agglomeration.

The national government authorities can stimulate clustering not through direct intervention but mostly through indirect measures like network functioning, support for small industries in clusters, strong support of CDI activities (research, development and innovation), infrastructure and counseling. Universities, research institutions can manifest a proactive attitude trying to be the ones that initiate cluster programs, innovation, support for the business area especially now.

## **VI. CONCLUSION**

In conclusion, there is a potential for the development of clusters in Romania. The realization of clusters is possible at a national level as well as transnational, financial funds facilitating cluster making.

It's necessary to stimulate local administration and academic environment to make powerful clusters, innovative that brings Romania to compete in multiple fields.

Innovative clusters have a synergy effect in the framework of economy that can be multiplied. The complexity of the processes that are found inside the cluster elicits the co-operation of consortium members more than this all the effects limit on those involved.

The politics and programs developed by the EU are the basis of accomplishments, over 2000 clusters and 38% of the population working in a cluster.

## References

- [1] Dinnetz, Mattias (2007) - Country Report: Sweden, Europe INNOVA Cluster Mapping Project, Oxford Research, Oslo, pp. 56-97.
- [2] Michael E. Porter (February 2000) - Location, Competition and Economic Development: Local Clusters in a Global Economy, *Economic Development Quarterly* 14, no. 1.
- [3] Porter, Michael E. (2003), *The Economic Performance of Regions*, *Regional Studies*, Vol. 37 No. 6/7.
- [4] Porter, Michael E., Christian Ketels (2007) - *Competitiveness in the Global Economy: Sweden's Position*, Presentation given to the Swedish Globalization Council, Stockholm.
- [5] Rosina, R. Paci, S. Usai, *Geographical and Sectoral Clusters of Innovation in Europe*, CRENOS, Working Paper, 2004/15
- [6] Örjan Sölvell - *Clusters – Balancing Evolutionary and Constructive Forces*, Second edition, editura Danagårds Grafiska, Ödeshög, January 2009, pp. 72-112.
- [7] World Bank (2008) - *Doing Business*, ISBN: 0-8213-7231-9.
- [8] \*\*\* [www.competitiveness.org](http://www.competitiveness.org)
- [9] \*\*\* [www.competitivitate.ro](http://www.competitivitate.ro)
- [10] \*\*\* [www.europe-innova.org](http://www.europe-innova.org)
- [11] \*\*\* [www.clusterobservatory.eu](http://www.clusterobservatory.eu)