

# **THE ROLE OF CLUSTERS AND CLUSTER DEVELOPMENT TOOLS IN THE EUROPEAN UNION IN REGIONAL ECONOMIC DEVELOPMENT, IN THE CONTEXT OF POST-CRISIS ECONOMY AND GLOBALIZATION**

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## **Abstract:**

The aim of the present paper is to highlight the importance of clusters and the main cluster policies of the European Union, their content, and their influence in terms of obtaining regional economic development, in the context of post-crisis and globalization. Regarding the research goals and expected results, this article represents a small part of a doctoral thesis: *Business networks and clusters in Romania*, that will later on be published, and which wishes to underline the benefits of clusters and the means through which they can be used to obtain regional economic development in Romania, and in the European Union.

**Key words:** *cluster, economic crisis, policy, regional economic development*

## **1. Introduction**

Cluster and cluster policies analysis is an area which still lacks a perfect understanding, in terms of the key concepts and their use. “The financial and economic crises have had multifaceted consequences. This calls for rethinking our policies and approaches to economic development” (OECD, 2012).

„History indicates the fact that, clusters have existed, in many shapes, since man invented commerce (historians highlights the existence of wool industry clusters in medieval England and of cotton industry clusters in the industrial revolution period). As economies have become more complex and competitive, evolving business practices have also recognized the benefits of locating firms, sectors or industries close to each other or to the sources of suppliers. Grouping into clusters as a tool of policy is a

modern concept and is assigned mostly to Michael E. Porter of Harvard Business School. In his work The Competitive Advantage of Nations (1990), Porter argued that in today's advanced economies, clusters are the source of jobs, income and export growth."(McPherson, Lisa, 2001).

Clusters play an important role in achieving competitiveness and job creation in the EU. However, to take full advantage of clusters, the EU must take responsibility to assist Member States and regions to promote excellence at all levels and encouraging cooperation across the EU to aim for world-class clusters.

Clusters are becoming increasingly perceived as tools to engage the economic growth, innovation and competitiveness. While in Europe, developing clusters is the responsibility of the Member States, there are many trans-national activities which are intended to explore synergies between national and regional efforts that can be organized and implemented in the European Community. This will lead to greater internationalization and development of first-class clusters (European Cluster Alliance, 2010).

## **2. The role of clusters in overcoming the difficulties and challenges of the post-crisis economy**

According to OECD (2011): "Action needs to be taken by governments at national and regional levels to help promote innovation, research, and development in both the private and public sectors, including putting in place the necessary 'framework conditions' such as openness to international trade and investment, a healthy financial system, and a supportive tax climate, and developing capacity to absorb and effectively use technology. This requires co-ordination across a wide range of government ministries and with the private sector. At the same time, international co-operation is necessary given the global nature of these challenges. No single country can address them on its own. The uncoordinated efforts of countries acting separately are likely to be more costly and less effective than countries acting together."

In recent years the clusters based concepts have been used ever more often as a tool to strengthen regional economies.

Although clusters are an important part of the regional economies of different countries across the globe at various stages of development, they are also important indicators for understanding and addressing the economic challenges with which Europe is facing with.

Many Europeans are concerned that their levels of prosperity, productivity and innovation can not keep up with the U.S., but also with competitors from other parts of the world, including Asia.

The fact that the European regions have clusters and cluster portfolios weaker than other regions outside Europe, it could be an important factor that will pull Europe back when it comes to global competition.

A significant number of studies and surveys show that the geographical proximity of related economic activities achieve high levels of productivity and innovation; thus, clusters are an important factor for improving the dynamic regional economies.

Even though Europe is ranked on a superior level in terms of the quality of institutions and in many factor conditions, it is classified on a lower level compared with other regions of the world, in terms of ability to mobilize these factors to entrepreneurship, formation of new firms and corporate renewal. While the expenses on R & D and scientific capabilities rank Europe at a high level, the ability of transformation of research into valuable innovations, from an economic point of view, is reduced. Central-Eastern European regions have had in the past planned economies in which economic activities were based more on political than economic considerations, therefore the transition to high productivity economies involves a high degree of geographical specialization.

The force of regional clusters portfolios but also of individual regional clusters are important determinants of economic performance (as in other countries there is a strong positive relationship between those measures of strengthening the cluster portfolios and the prosperity of regions).

In Europe there is lower specialization of specific regional clusters in certain regions and a smaller geographical concentration in specific regions of a class of clusters compared to the U.S. economy (resulting a problem - because the high levels of specialization and concentration attract a increased productivity and innovation) results the relative difference of performance between Europe and USA.

Therefore, it is indisputable the role (or the economic impact) of clusters on:

- ✓ Success of firms in general and SMEs in particular
- ✓ Increase of national and regional development
- ✓ Innovation
- ✓ Competitiveness
- ✓ Growth
- ✓ Productivity
- ✓ Employment (European Commission, PRO INNO Europe paper No. 9, 2008).

Innovation is not created by isolated firms but by a dynamic environments in which organizations are enabled the interaction between themselves and skilled workforce in a positive way, that facilitates the learning of existing knowledge and the birth of ideas and products.

Clusters can include features of a modern innovation process: they can be considered as "small-scale innovation systems" (OECD, 2001). Also we can find clusters in different forms, some of them being focused around universities or research centers, while others revolve around large multinational key enterprises and others are basically just networks of SMEs.

### **3. Cluster development tools in the European Union as drivers for regional economic development**

„The growth scenarios for the global economy over the next 50 years are shaped by developments in education, technological progress and labor force participation based on a framework in which GDP per capita in each country is expected to converge to the long-run path that is consistent with its own endowments, policies and institutions. Once this path is reached, all countries are expected to keep growing at the same pace determined by the worldwide rate of technical progress. Nonetheless, cross-country GDP per capita gaps would remain, mainly reflecting differences in technology levels, capital intensity and human capital. These in turn would partly depend on differences in structural conditions and policies. Over a time-horizon covering several decades structural conditions and policies are likely to adapt to changing economic circumstances, in particular those induced by continuing globalization (OECD, 2012).

According to Bénassy-Quéré, Agnès et. al. (2010), “policymakers need to take into account the cross border implications of their decisions and their interactions with other governments. A growing number of rules that constrain national policy choices are set at the global level. International institutions are entrusted with the responsibility for ensuring the consistency of national policies with international agreements, and also for conducting certain policies on behalf of the international community. Important policy competencies have also been transferred to regional institutions – the most notable being the European Union – or devolved to sub-national entities. This severely challenges the simple assumption that economic policy is exclusively or primarily conducted at the level of the nation-state”.

Consistent with the EU's Lisbon strategy, it is the task of the European Commission and the EU Council presidency to monitor national initiatives, assess their effectiveness and promote debate on the medium-term impact of crisis management policies (Bruegel Policy Brief, Issue 2009/02).

„Clusters exist for hundreds of years, and efforts to use clusters as tools for economic policy began to increase in number since the early 1990s. But not so long cluster analysis is over the stage of individual case studies.” (Ketels, C., Solvell, O., 2006).

It is important that a clear differentiation is made between clusters (real economic entities) clusters policies (a statement to support the development of existing clusters or the birth of new clusters) and clusters initiatives (a real action that strengthens cluster development).

The great majority of clusters have developed without the help of policies specifically designed for the emergence of clusters, but taking into account the positive contribution to the regional performance of clusters in areas in which they exist, policies are needed to cultivate the development of clusters.

According to OECD: “The 2000s represented the first time in many decades when poorer developing countries grew faster than the high-income economies. In the

2000s, as many as 83 developing countries managed to double OECD per capita growth rates, compared to only 12 countries in the 1990s. The 2010s have begun under bleaker global growth prospects than the 2000s however, as growth has stalled in advanced economies in the midst of recovery from the crisis. With a less propitious international environment for growth, the new decade is bound to test the strength of new engines of growth and the sustainability of shifting wealth" (OECD, 2012).

The Europe 2020 strategy explicitly mentions clusters as important elements to improve the business environment, especially for small and medium enterprises (SMEs). Extremely important is that: in the past there were efforts to establish as many clusters in the European countries, and now, the challenge is to make them competitive.

The EUREKA 2011 Studies highlights the strong economic impact of international collaboration between enterprises in minimum 2 countries (export growth rate higher), indicating the importance given in clusters internationalization strategies policies and programs. In some cases, internationalization is embedded in the strategies of cluster programs. In other cases, internationalization is emerging as an inherent part of the activities within a cluster (considering the fact that growing globalization and international competitiveness requires constant attention cluster members).

Although the international cooperation clusters is not yet sufficiently developed in the European Union, a pretty good cooperation occurs between clusters in Europe. This cooperation is supported by EU programs such as interregional program of the EU Cohesion Policy, The Regions of Knowledge initiative of the Research Framework Programme, INNOVA initiative, funded under the CIP (Competitiveness and Innovation Programme), "European Innovation Platform for clusters "that supports and helps to build real partnerships between clusters.

Community instruments which help achieve the goals of the European Commission are:

- ✓ European Cluster Observatory – data and information
- ✓ Regional Innovation Strategies (RIS) 1994
- ✓ Innovative Achious Programme 2000-2006
- ✓ Regions for Economic change initiative (The last three tools provide policy learning platforms)
- ✓ PAXIS initiative – an active and pilot project for networking that identifies good practices and develops tools for determining cluster initiatives
- ✓ PRO INNO Europe initiative
- ✓ "Regions of knowledge" initiative
- ✓ Europe INNOVA initiative
- ✓ ERAWATCH
- ✓ European Technology Platforms (ETP)

Tools supporting the cluster development at national, regional and European level are: cohesion, the Community framework for State aid, cluster policy impact

assessment tools, which are added: tools to support networking between clusters and collaboration between relevant organizations for clusters in Europe.

Built on lessons learned from efforts of regional and national cluster policies in the EU, the European Cluster Memorandum - launched in January 2008 - was an important step towards encouraging the future development of clusters (European Cluster Memorandum).

Cluster policies are designed and implemented at local, regional and national level, depending on the purpose and their goals. It is The EU's role to facilitate and add to these efforts, mainly by improving framework conditions, by promoting research, excellence in education and of entrepreneurs, encouraging better links between industry (especially SMEs) and research and encouraging the learning of mutual policy and cooperation between clusters in the EU.

While overall in Europe, the development of cluster policies is still in its infancy, as time passes it is gaining ground. While different tools and mechanisms to support clusters are applied in different places, they are used ever more for the protection of structural changes, to revitalize certain industrial sectors (e.g. maritime clusters).

The European Cluster Observatory provides policy makers neutral and comparable information about cluster policies, the relative strengths of the clusters in the EU. This cluster mapping service for Member States promotes the development of evidence-based policy and refining and improving the mutual learning.

Despite efforts to strengthen the single market, clusters in Europe can not rely only on natural forces of agglomeration to achieve the talent and other assets in the same way as, for example, clusters in the U.S. can. Clusters in the EU can compensate for some of these drawbacks by creating strong links with other clusters that have complementary strengths. Changes in the global environment are also to be important links between clusters. As firms internationalize their activities, it is important that cluster initiatives and organizations that support them, to internationalize as well.

Cluster initiatives are in a growing state, lead by specialized institutions, and known as "Cluster Organizations", which can take various forms, from non-profit associations, public agencies companies. Cluster policies are tools for knowledge transfer, innovation and growth.

"Cluster policy changes the behavior of entrepreneurs and institutions, which implies that cluster policy is a structured policy. In this regard, cluster policy contributes to growth and prosperity in a medium and long term perspective" (Christensen, T. A. et al., 2011).

A low level of specialization is found along regional economies. Business environments tend to be powerful when they depend on conditions driven by the input of factors, and weaker in the context of strategy and competition. Given the fact that most members of the EU have used cluster policies for the first time after 2000, this area is still in an incipient stage in many Member States. It is not known exactly when cluster policies were used; ministries responsible for implementing cluster policies vary from country to country.

Cluster programs have an impact on key performance indicators such as exports, employment, labor productivity and innovation. If there are any clusters, we have a degree of innovation and high R&D. Therefore, countries have begun to realize the essentiality of cluster programs, the main reasons why a country creates and runs a program cluster being the following:

1. To change the behavior of firms, to increase collaboration between them and external partners, to increase investment and innovation activities, CD and specific infrastructure and increase competence and access to jobs in companies.

2. In order to improve the international competitiveness of enterprises (national or regional industry) to increase the number of innovations, new innovative start-ups, access to new markets.

3. To improve key performance indicators (focus on direct economic impact)

As an important element in national innovation strategies, cluster programs are listed on the political agenda and are relatively well known. In some countries, there is a lack of this type of strategy, but cluster programs are supported by political decisions in parliament. A limited number of countries mentioned cluster programs in the national report, which is transmitted every year to the EU and the EC. The main objectives of the cluster program are nearly the same in most countries, although there are some differences.

There are 4 types of programs for clusters and networks: regional economic development programs; programs for the development of the national industry; cluster programs based on Research and Development; network programs that support the development of new clusters.

#### **4. Conclusions**

Supporting the clusters does not refer to the establishment of clusters but the development of excellent clusters that are internationally competitive and which have an impact on the regional development of the economy, and it represents a step forward towards overcoming the challenges of the post-crisis context.

The information shows a low level of regional specialization and a small correlation between the regional specialization and the economic performance, meaning that the policies pursued by the European institutions should focus on increasing the geographical specialization process of industries in Europe.

Also, among the most important conclusions of the conducted analysis, I mention: The role of clusters in the post-crisis economy in the European Union; The relationship between the strength of the cluster portfolio and the economic performance of the regions; Data indicates that the strength of the cluster portfolio is one factor likely to increase regional economic performance; Clusters have a significant relationship with prosperity and should be considered an essential part of any regional economic strategy.

Therefore, in order for the European member states to be able to be more competitive with other regions from outside, and to better face the shortcomings of the

post-crisis economy and to take advantage of the opportunities coming forward at full potential, I believe that clusters, cluster policies, and other cluster development tools should be taken into account and given a greater importance, at European, regional, and national level. That being said, as well as the European authorities and the national authorities should be more involved in the process of policy making, and especially economic development policies and strategies. Another thing to be attentive to is policy coherence, the Organization for Economic Cooperation Development saying that: "Improving development perspectives lies at the very heart of the OECD's founding mission to contribute to economic growth and development worldwide." (OECD, 2011)

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