

# CLUSTER POLICIES IN THE EUROPEAN UNION – ENGINES FOR SUSTAINABLE ECONOMIC DEVELOPMENT AND COMPETITIVENESS

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**Abstract:** *The present article wishes to present the topic of clusters and cluster policies, to highlight their status and role in the European Union and to underline their significant purpose in obtaining a sustainable economic development, and in making a more competitive and well oiled Europe. The research for this article is part of a greater goal – that of getting the answer to the question: What are clusters what and how can “they” better the performance of the regions that are part of the member states of the European Union? To do that, an inquiry into the issue was necessary, by analyzing information from multiple data sources and by drawing some conclusions, based on those informations. The conducted research was empirical, and in order to better highlight the relationship between clusters, cluster policies and economic development, a synthesis of different case studies and statistical data were used. The conclusion that was found was that strong cluster portfolios are related to (and thrive in) developed countries, but interestingly enough, relationship can also be reversed (meaning that clusters cause the region they exist in to increase its performance). Also, clusters are highly prevalent from a geographical point of view, the existence of which can be seen globally, of course in different stages of development. And last, but not least, from the standpoint of national cluster policies, although all countries have programs for clusters either at national or regional level, which varies from country to country is the number and type of ministries that are responsible for implementing cluster policies. Also another factor that varies is the importance given to cluster policies. However an issue that is becoming increasingly clear is that the cluster policy is becoming more important and relevant. Therefore, the hypothesis was confirmed, there is a direct correlation between clusters, cluster policies and sustainable economic development and competitiveness.*

**Keywords:** *clusters, cluster policies, economic development, European Community instruments*

**JEL classification:** *F63, O1, I15*

## **1. Introduction**

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

Many Europeans are concerned that their levels of prosperity, productivity and innovation can not keep up with those from 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, could be an important factor that will pull Europe back when it comes to global competition.

European regions have seen an improvement in overall economic performance, due to the presence of strong portfolio of clusters and this is accentuated in some regions by supporting cluster development policies by the European Commission in the European Member States, but also at national and regional level within individual countries.

### **1.1. Background**

As the current EU countries were integrated, they tried to develop plans and strategies that have the common interest issues related to globalization of trade, sustainable regional and social development, interests in areas such as research, innovation, economic growth and of jobs, heavily tested by the economic and financial crisis.

All of the EU legal frameworks aimed at facilitating a social and economic environment favorable to the requirements of its citizens in order to transition well over imminent challenges of the present context - as well as the main objective being sustainable economic development, and competitiveness.

Through the global crisis, economic and industrial zones have been relocated and consequently jobs were disrupted. Although Europe concentrates on her vital area, it is also facing many of the effects of globalization (outside areas of military conflict, epidemics, outbreaks of riots, famine, the dynamic economy of the Asian market), taking into consideration the essentiality of improving its competitiveness. A real challenge is really the adaptation of Member States - especially of the latest ones, on the go to these challenges. To these, also contributes sustainable economic development plans for individual countries; supporting and developing clusters being able to assist in this regard.

Through the integration of as many countries of the European continent, in the European Union began to appear new challenges in many areas. The complexity of these new challenges is amplified by a large and diverse range of economic, social and political issues that EU economies have been based on. By establishing joint strategies at all levels, the EU must take into account a bonding and a versatile strategic partnership both with Russia, China, USA and other countries around the world, this having an important role on the global stage.

### **1.2. Theoretical framework**

Clusters are part of a broader conceptual framework of understanding, respectively as influencing factors (stimulus) of regional and national competitiveness. This framework was developed by Michael E. Porter (1990) in his book "The Competitive Advantage of Nations". According to M. Porter environments for growing and innovative clusters are usually led by a strong "diamond", which includes:

- intense local rivalry - including famous battles that stimulates continuous improvement that creates a more advanced and diverse base of suppliers;
- Dynamic Competition - arising from the entry of new firms;
- intense cooperation - collaboration organized by various institutions, such as professional organizations, chambers of commerce, cluster initiatives; (Solvell et. al., 2003)
- Access to more specialized and advanced production factors (human capital, financial capital, infrastructure) and for more clusters, links with

- universities and public and private research institutions;
- Links to related industries, sharing talents and new common technological advances;
- Proximity to sophisticated customers and with needs.

Among the important terms related to the support and help of clusters are to be found:

- Politics - strategic intentions of a government, listed in a certain document, must set the political objectives and provide reasons why these activities are important in that direction.
- Schedule - switching from intention to action, involving allocation of funds, creating organizational responsibilities and defining the specific conditions under which funding is available.
- Implementing Agency (government agency or ministry) - is responsible for the program implementation

There are 3 types of cluster policies. Cluster development policy - directed towards the creation, mobilization and empowerment (strengthening) of a given cluster (e.g. national funding competition for the best strategies for "life science" clusters). These are actual cluster policies. Policies for clusters influencing - use a cluster to increase the efficiency of a particular instrument (traditional) (OECD, 2007). These are represented by industrial policies, SME policies, innovation and research policies or regional policies.

## **2. Cluster development strategies, projects and policies in the European Union**

EU-10 - the countries which joined on 1 May 2004 - differs in a large proportion from the EU-15 and EU-27 in terms of multiple factors related to business conditions. Instead, all were affected by barriers at the efficient geographic allocation of economic activities.

„ To improve the innovative capacity of Europe, in particular, will not be sufficient for more resources for science and for research and development; there is a need to focus on the microeconomic capacity of European regions: the quality and specialization of factor conditions, demand sophistication, quality corporate strategies and entrepreneurship, and the presence and depth of clusters. These qualities of the business environment enable the transformation of specific knowledge into products and services and competitive companies.” (European Communities, 2006)

Most EU Member States have specific measures of clusters or cluster programs developed at national and / or regional level, which are essential elements of national and regional strategies to support innovation.

„ Examples of successful clusters such as Silicon Valley, raised political interest regarding clusters and accelerated the desire to replicate in other regions (to stimulate economic growth, foster innovation and make the region more internationally competitive)” (European Commission, 2008).

The European Commission embraces the development of clusters and cluster policy as the main factor to improve clusters competitiveness in Europe. The objectives of the European Commission:

- A better design for cluster policies at national / European level
- Strengthening cluster initiatives more effectively and exchange of

knowledge

- Better access of knowledge through cooperation at trans-national cluster level.

European Cluster Alliance (ECA) is an open platform that protects trans-national cooperation between policy makers for improving cluster policies for the benefit of companies and other stakeholders connect. This is managed by TACTICS INNO-Net Project.

„Europe INNOVA Initiative” – under the „Competitiveness and Innovation Programme” – CIP – Europe INNOVA initiative of the Competitiveness and Innovation Programme is focused mainly on the joint development, of better and new tools, that can be used by cluster organizations to support innovative SMEs, and therefore to improve the Service Support of clusters in Europe. This initiative has helped to increase business ties between clusters in Europe by organizing cluster visiting schemes and "coupling" events and preparing partnership agreements for creating sectoral platforms for business opened to cluster. (I „Europe INNOVA Innovation and Clusters: The experience of Networks”, available at: [www.europe-innova.org/index.jsp?type=page&cid=10337&lg=en](http://www.europe-innova.org/index.jsp?type=page&cid=10337&lg=en))

Policy makers at all levels should be concentrated on providing the best framework conditions by nourishing innovation, excellence and cooperation across the EU. To support this approach, common efforts are needed to achieve more synergies and complementarities between different policies, programs and initiatives.

”To promote the free transfer of knowledge produced in public research institutions and technological organizations, the basic construction of clusters should be supported by policies and programs for public networks and cluster. The purpose of these programs cluster is to promote the construction of clusters and networking in society to overcome market imperfections and improve structures to allow free movement of knowledge” (Thomas Alslec Christensen, Ger Meier Zu Kocker, Thomas Lammer-Gamp, Morten Solgaard Thomsen, Kresten Olesen, 2011).

### **3. Clusters - driver of sustainable economic development and the competitiveness promoter - analysis**

Interest in the research in the field of clusters has become increasingly larger in recent years, given the fact that they make their presence felt in large numbers in developed economies and in smaller numbers, but increasing, in developing countries.

For the analysis several data sources were used. One of them presents data on the employment rate in clusters and regions (the basis of the analysis), which shows the presence and strength of clusters per country. The other four data sources are divided into three categories: case studies, data on exports by type of cluster (additional perspective on the economic success of regional clusters identified) and data on national business environments.

The analysis was realized at cluster level (where relevant statistical information is provided by mapping of clusters - which leads to a better understanding of the present economic profile and performance of clusters). As the main advantage of cluster-level analysis is the comparability between regions and the main disadvantage is the inherent limitations of the data (the definition of cluster treats the dimension specific to the region of a cluster, reliance on data on employment rather than wages or productivity creates a fostering of industries with an intensive

labor occupancy). The power of regional clusters has also been evaluated, following a three star rating:

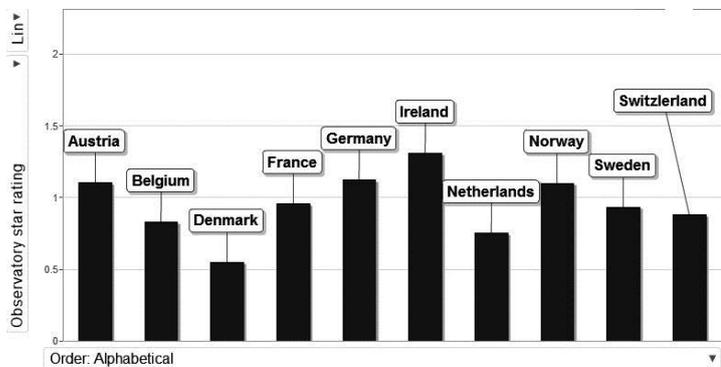
- Size (size - over 15000 employees)
- Specialization (specialization - over 1.75)
- Dominance (dominant - over 7%) (according to the European Cluster Observatory, available at: [www.clusterobservatory.eu](http://www.clusterobservatory.eu)).

“The first Human Development Report introduced a new way of measuring development by combining indicators of life expectancy, educational attainment and income into a composite human development index, the HDI. The breakthrough for the HDI was the creation of a single statistic which was to serve as a frame of reference for both social and economic development. The HDI sets a minimum and a maximum for each dimension, called goalposts, and then shows where each country stands in relation to these goalposts, expressed as a value between 0 and 1” (Human Development Reports, available at: [hdr.undp.org/en/](http://hdr.undp.org/en/)).

**Table 1: Top 10 European Union Member States to HDI ranking 2013 (Human Development Index)**

No.	Global Ranking	Country	HDI value - 2012
1	1	Norway	0.955
2	4	Netherlands	0.921
3	5	Germany	0.920
4	7	Ireland	0.916
5	7	Sweden	0.916
6	9	Switzerland	0.913
7	15	Denmark	0.901
8	17	Belgium	0.897
9	18	Austria	0.895
10	20	France	0.893

Source: adapted from UN Development Programme, Human Development Report, 2013



**Figure 1: Observatory Star Rating cluster from the top 10 European Union Member States, ranked according to HDI ranking 2013 (Human Development Index)**

Source: adapted from European Cluster Observatory, available at <http://www.clusterobservatory.eu/index.html>

Above in the table and figure, in the table mentioned the top 10 European Union countries are mentioned, according to the Human Development Index value from 2012, and then the graph which follows shows the European Cluster Observatory star rating, of these 10 countries. The purpose is to highlight the correlation between the level of development of a country and the cluster portfolio strength in that country.

#### **4. Conclusions**

Case studies show that although there are differences between countries in terms of policies and institutions that affect the development of regional clusters and cluster portfolios, the challenges faced by cluster organizations in their efforts to improve competitiveness are similar in many countries:

- regional clusters must overcome the barriers of collective action, especially the lack of trust between the public and private sector
- regional clusters should identify strengths / weaknesses of their location, decide on a positioning strategy for the regional cluster within the network of locations, in the category of clusters which is feasible and attractive, and create and execute an agenda of action that to help them achieve that position

Assessing the information made several observations and proposals emerge that will be presented below.

Emphasizing geographical specialization - European institutions must develop data, tools and methodologies to enable initiatives in member countries to be more effective.

Provides a process to support for initiatives of regional development clusters - the EU should focus its policies on increasing (improving) microeconomic capacity of Member States and their regional economies.

Improving the efficiency / effectiveness of EU competition policy

Increasing of regional specialization and the efficient allocation of economic activity across the area must be a main element of the European competitiveness effort.

Where there are regional clusters, cluster initiatives, organized efforts of companies, government agencies and regional research and education institutions, the economic benefits may increase.

In most EU countries, national cluster policies are implemented by agencies organized under the authority of various ministries. Across the 31 countries were identified 75 national agencies or at the state level. Most countries have 1-3 agencies.

Efforts to develop and support clusters are based on national programs and projects. The government has a strong role in initiating these efforts. To support clusters appropriately with their needs, cluster programs should take into account the technological field in which the cluster operates.

From the observations results low levels of regional specialization and correlation of regional specialization and economic performance, given that the policies pursued by the European institutions should focus the process of increasing geographical specialization of industries in Europe.

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