ASSOCIATION THROUGH CLUSTERS IN THE CONTEXT OF REGIONALIZATION

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Abstract:
An important objective of the European Union is to sustain progress both economically and socially, balanced and durable, through administrative divisions/regions located in the administrative hierarchy in a position immediately below the central level. In the last decades regions and regionalization were imposed, not only in European countries, as trends in territorial organization. In the process of regionalization, the development of clusters had a key role in a country’s economic competitiveness. New administrative regions determine the appearance of new economic structures and cluster organizations can respond to problems in different economic areas. In Romania the stage of development of clusters is still early, but in terms of global competition for markets, economic power is needed, and that is why the idea of cluster associations should be sustained so as to promote a properly entrepreneurial climate. Clusters are accepted as a solution to the crisis, a tool for competitiveness and regional development. Considering the economic potential and Romania’s current economic situation, we plan to discuss the issue of clusters in our country through content analysis, scientific observation, induction, deduction, considering the pros and cons of their development in the context of highly-publicized regionalization.

Key words: cluster, competitiveness, economic development, economic concentration, regionalization.

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Introduction
Europe 2020 sets out principles of the Lisbon Strategy for growth and creating new jobs and includes three major objectives: smart, sustainable and inclusive growth. In the short term, this strategy aims to prioritize the fight against the crisis and long-term creation of jobs, increase living standards and positioning the EU at the forefront of international rankings. Meanwhile, the European Commission has set the objective to create a Europe that is based on social progress, sustainable and rapid growth. One of the ways to accomplish this goal is the improvement of regional cooperation between business, universities, research institutes and the state, through a form of partnership highly debated and publicized, but under exploited, the cluster. The paper aims to discuss the concept of clusters in the sense of specialists, with the advantages and risks involved, to present models of developed countries that have facilitated the emergence and development of clusters and, finally to grasp the shy but promising initiative, of clusters in Romania, in the current context of regionalization.

1. Concept of cluster
Increased competitiveness and regional development are some acceptable solution to the crisis determined by the use of an instrument that has no novelty character, the cluster.

Clusters are now the subject of a whole series of documents issued by national and international organizations (OECD, 2005, 2010, European Commission, 2008) and, based on experience, many authorities promote the idea that due to clusters increase competitiveness, workforce is specializing, businesses and regional economies grow.

The first economist who described the clusters in terms of "supply chains" was Alfred Marshall (1842 - 1924), who analyzing industrial agglomerations in England found that clusters of firms in a particular sector creates involuntary positive economic effects - the so-called externalities:

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- effects on employment: a large number of enterprises supplies from the same workforce pool results in increase of salaries on the one hand and specialization and increase the level of qualification on the other hand;
- effects in terms of specialized suppliers: to avoid competition, a cluster of industrial enterprises tend to specialize in a particular segment of the chain creating added value, leading to increase product quality and reduce costs;
- technology transfer: Marshall found that the information and knowledge flows between existing businesses in the geographical concentration.

Since the '50s, the term became current and was debated by specialists in regional science, architecture, urban planning, urban and regional economics, political science. Most authors have defined the cluster, revealed the factors influencing the emergence of clusters and presented the positive and negative effects of a cluster in a region.

In the 80's, Michael Porter, in his book "The Competitive Advantage of Nations", stated about the cluster that is the most common form of collaboration. Porter describes a "diamond of competitive advantage" to be the basis of any cluster. The main elements of the diamond, identified by Porter, consist of factor conditions (skilled workforce), demand conditions (influences innovation in enterprise), related and supporting industries (the network of providers help reduce the distance between suppliers and producers), firm strategy, structure and rivalry (to remain competitive the company is forced to upgrade and invest continuously).

According to the same author, clusters are geographic concentrations of interconnected companies and institutions, in a certain domain. Clusters include a group of related industries and other important entities from a competitiveness point of view. These include, for example, suppliers of specialized inputs such as components, machinery and services, or specialized infrastructure providers. Also, some clusters include governmental institutions and other types of institutions - such as universities, standardization agencies, think tanks, vocational training providers and employer's associations - which provide specialized training, education, information, research and technical support.

In the early 90's politicians have admitted interest in recognizing and supporting clusters, stating that they are not simply agglomerations of business enterprises, but also a platform for innovation. According to specialists, clusters are geographic concentrations including businesses, universities and research institutes, and local or regional authorities, and because of that they attract specialized suppliers, can select from a workforce pool, easier access to information. By facilitating the dynamics of workforce, specialization and exchange of information all businesses can benefit from potential local innovation, it encourages entrepreneurship, and growth of productivity, salaries and jobs. Clusters are characterized by a flexible organization, each member meets certain activities, has a role established under the cluster strategy and market requirements. Membership of an organization to a cluster is supported by the benefits of this form of association:

1. Increase competitiveness and the employment rate of workers by interconnecting people, skills, competencies and knowledge.
2. Increase efficiency due to the presence of the network of customers and suppliers.
3. Stimulating innovation as customer interaction creates new ideas and strong pressure on innovation.
4. Increase the bargaining power of companies both on the domestic and foreign markets.
5. Encourage businesses to collaborate on quality criteria approved according to international standards.
6. Arise opportunities for knowledge transfer.

Initiative of association in a cluster influences business strategy, improve its competitiveness as it increases the added value provided. The authorities have rethought policy and analyzed all the new perspective of the regional economy. The local economy benefits
from clusters because they may increase the competitiveness of ii, income, provide quality jobs, develop investment in research and innovation and promote potential winners. And the state can use financing projects more efficiently by supporting start-ups, innovative companies, can implement effective public policies (health, education, infrastructure and so on).

The state is seen in the regional development as a major player in the promotion of clusters and networks. The success of clusters is equivalent to an economic objective because there are adopted different projects and programs that fund collaborations between different economic actors, local authorities and other institutions.

The importance of clusters in the EU economy is supported by the establishment of the European Cluster Observatory which identified some 2000 cluster (defined as regional agglomerations) working in 38% of the labor force of the union.

2. Regional development and competitiveness through clusters

Clusters own an important place in the general policy of the European Union, something seen in many documents and position papers adopted by the European Commission since 2005 and the establishment of a European Cluster Policy Group that in 2008-2010 studied the cluster policy countries outside the EU.

In the EU there are three categories of cluster polices. The first category the policies for facilitating work to create a microeconomic friendly environment to growth and innovation which in turn stimulates the emergence and dynamics of clusters, for example by encouraging networking and business knowledge from the action or geographical proximity. The second category, the leveraging polices, concerning the industry, SME (small and medium-sized enterprises), research and innovation that often use the cluster to increase efficiency of a specific instrument. The third category consists of development policies designed to create, mobilize and strengthen a particular cluster or initiative to associate in clusters.

In the economic literature there are several models of clusters.

The French model

French policy to support clusters (poles of competitiveness) was introduced in 2005. The objective of this program is to improve the country's innovation potential by focusing efforts on public centers of excellence to create wealth and jobs. The poles of competitiveness, according to the French model, are combinations of companies (large and small), research centers and educational institutions that implement a common strategy for economic development in line with the overall strategy for regional development. Other partners of the pole of competitiveness are represented by local and national authorities. An important role is played by large companies and research institutions from a region.

During 2005 - 2008 the French government has provided funding of around 1.5 billion euros, with the allocation of funds being funded research and development projects in 71 clusters.

Currently, in France are 71 poles of competitiveness which includes 5000 enterprises, of which 80% are SMEs.

The German model

In Germany, the first efforts to support clusters were made in the mid 90's. Federal states such as Bavaria, Lower Saxony and North Rhine - Westphalia started implementing clusters within their borders. In 1996, Federal Report on Research included for the first time officially clusters as a way to support innovation.

In Germany, cluster policy has its origins in supporting technological networks and regional development and even today put focus on these fields through the support of networks of excellence. Thus, at the federal level are supported, since 1999, the 130 German competence network that bring together partners from different sectors and different, around a main theme.
In order to increase flexibility, competitiveness and quality of research, Germany has chosen in 2005 to strengthen the academic research and to establish academic excellence poles being implemented through the Excellence Initiative. This funding program extended over a period of 6 years (2006-2011) the committed the amount of 1.9 billion euros (75% of federal funds, 25% of provincial funds) and included the following axes: Support technology transfer by selecting the cluster of excellence; Research - Industry (optional averaged 6.5 million/cluster); Supporting scientific excellence by selecting the top doctoral schools (1 million euro/year/school); Support future strategies for promoting top university research, proving once again that the partnership between academia and industry in the clusters is an important activity supported by public funds.

**The British model**

Promotion of the "cluster" on British territory was initiated by the Department of Trade and Industry in December 1998, implementation of this policy in a specific program is assigned to the 10 regional development agencies, established in the same year. In 2000 was launched the second phase of this program, and in February 2001 was made a national cluster mapping, were identified 154 clusters throughout the territory of UK.

Although were found 154 clusters, the British approach to clustering starts from universities, most notably Silicon Fen, Cambridge, organized around the best European universities. Cluster organization is provided by Cambridge Network and is characterized by great professionalism in its action through intensive cooperation with the university, and by a strong involvement of local entrepreneurs and investment funds. Professionalism in actions, entrepreneurial dynamics, strong involvement of investment funds and local entrepreneurs, intensive cooperation with universities are some arguments supporting this cluster.

**The Slovenian model**

In Slovenia, a consistent policy of support for clusters is found since 2001. The main objectives were:
- Encouraging cooperation between companies and between companies and research – development sector;
- Strengthen the capacity, skills and know-how of actors that contribute to the development of clusters, cluster formation itself;
- Developing an innovative environment in clusters;
- Development of networks of micro-enterprises (local clusters);
- Development of network technology.

Following the implementation of this policy were created over 25 clusters.

**The Hungarian model**

Hungary, a country from the group of the new members of the European Union, imposed an original at the same time strong and flexible model of cluster. Policy on clusters was coordinated by the Ministry of Economy, through the Implementing Agency POLUS which aims to monitor and accredit clusters in Hungary. Financial support of clusters is in 4 phases, accreditation returning after stage II.

In 2012, in Hungary about 70 clusters receive support in phase 1, 21 clusters in the second stage and 21 clusters obtained accreditation.

3. Romania's experience in association through clusters

The idea of clustering is not completely new title in Europe, nor in Romania, but we can give title of present. We believe that in our country the fatherhood of the cluster idea can be assigned to the great forerunner of economic thought, Virgil Madgearu. Concern for the development of the internal market was manifested especially after the Union of 1918 which was the culmination of Romanian heritage integration into a unitary functional body. The process of industrialization typical for the 3 and 4 decades of the twentieth
century took into account first of all the location of industries, resources of raw materials, processing industry being concentrated near the exploitations of ores, coal, salt, quarrying, oil reserves, natural gas, forests.

**Fig. no. 1. Parameters of call proposals for cluster in four development phases**

In his paper "Romanian economy after the World War", professor of economics, Virgil Madgearu identified in Romania for that period a number of 8 industrial development areas:

1. **Prahova Valley Region** has developed because of the existence of oil, stone quarries, forests. These conditions resulted in the establishment of oil refineries, cement plants, lime, plaster and paper mills.

2. **Resita Region** developed due to mineral resources in iron ore and manganese, coal and wood. It was characterized by the development of metallurgy and steel industries.

3. **Turda Region** rich in reserves of gas, salt, gold and silver ore, copper and lead have led to the development of industries in the region: cement, lime, bricks, tiles, porcelain, glass, and some industries consumer goods: food, textile and leather.

4. **Baia Mare Region** has allowed the industry due to the presence of gold ore, silver, copper, lead, zinc. Based on these resources have emerged chemical industry.

5. In **Hunedoara Region** was shaped steel industry due to iron ore, forests, manganese and waterfalls.

6. Although is located far away of the supply of raw materials and fuel, **in Region Ferdinand and Nădărug** developed steel industry and for the manufacture of iron and steel was used iron ore from Teliuc and crude iron from Călan.

7. **Cisnădiei Region** developed on the basis of old domestic industry qualified in textiles. The region later extended including Tâlmaciului’s and Sibiu’s area.

8. **Region Piatra Neamț, Bacău and Buhuși** was a good place for the textile industry due to specialized workforce.

These industrial concentrations identified almost a century ago subsequently demonstrated viability. Nowadays, we find them in the industrial landscape, some in the active state, the other in the fall or latent, but whatever they may be, we remember that idea of development focused on resources, on regional forces, was sustainable.
Such an approach deserves to be considered in a higher proportion of by the firms in our country and harnessed this time relying on other conditions and resources, but in a context of unity of Romanian companies.

We can inspire very well from the experience of countries such as USA, France, Italy, Finland, Austria or can borrow from enthusiasm and actions of Hungary or Moldova. Association it becomes a necessity to cope with intensifying competition in the various markets: local, national or international, is a good motivation to carry out large projects (construction giant, highways, tourist complexes) that requires huge expenses, large and ready workforce and works of quality.

The Romanian state role is very important in the development of clusters. The theory states that cluster initiatives should occur only in areas where there are already various forms of partnerships and networks, but still underdeveloped because of the economy. We believe that the state should get involved and help more businesses.

The first steps have been taken by the Ministry of Economy, which has funded a number of studies for Romanian definition of cluster. Based on the model of 'triple helix' which included three natural partners (industry, especially SMEs, universities and state) concluded that Romanian model cluster should have the shape of a four leaf clover, where the fourth partner are promoters. These are organizations specializing in technology transfer and innovation, consulting firms etc.

Fig. no. 2. The Romanian cluster model

Research and development
Universities

Authority
County Councils

Catalyst Institutions
Consulting firms

Industry
Associations of producers in different areas

Our experience so far shows that, on the one hand, the state facilitates the establishment of the clusters, introduced positive measures in industry and SMEs, on the other hand, there are few cluster initiatives that work, although potential exists. Ministry of Economy funded in 2009, the publication of the "Guidelines for implementation in Romania of innovative cluster concept", which presents a list of industrial parks, technology transfer and innovation entities, universities, Romanian and foreign investors who can benefit of cluster's advantages by association.

Analyzing the strengths and weaknesses of Romania's regions, it appears that there are economic sectors and industries with potential (e.g. agriculture, textiles, construction, tourism, forestry, industry), SMEs seeking to internationalize, entrepreneurship is growing and entrepreneurs show more courage. Meanwhile, due to political instability and lack of a clear strategy for Romania, medium-term strategies are absent or weak, for businessmen it is difficult to plan and predict, the education system is not market oriented, workforce migrated in the last 10 years, especially in the age segment of 18-35 years (the active group) and those who remained active in the country are not very mobile, infrastructure is underdeveloped (about 300 km of highway), communication between potential partners in a cluster is rare or nonexistent, research activity in universities is poorly developed, there are not coherent and prioritized topics, cooperation between members of industrial clusters is lacking.
Chances in the formation of clusters are coming from the EU, which requires Member States to transfer policies and measures on clusters in national programs to improve conditions for business. The Black Sea and the Danube Strategy provide opportunities for cross-border projects and economic development, the implementation of regional development programs, increase interest in opening branches of multinational companies and research units in universities.

Romanian state is involved in cluster policy differently. As in other European countries, the regional development policies, clusters, and the role of SMEs in the economy are contained in several ministries and institutions. The main actors are the Ministry of Regional Development and Public Administration, Ministry of Economy, Trade and the Business Environment, Ministry of Environment and Climate Change, Ministry of Transportation and Infrastructure, Ministry of Internal Affairs (responsible industrial parks). Nationally, developing regions will play a more important role because project evaluation will be done by regional and local mayors, and municipal councils are encouraged to be more involved.

Since 2008, the Ministry of Economy, Trade and Business Environment, General Direction of Industrial Policy conducted a comprehensive effort designed to identify existing and emerging clusters in Romania. This resulted in four main actions:

1. Elaboration of the chapter regarding clusters on industrial policy document, with support from the German Society for Technical Cooperation (GTZ).
2. The "Inov Cluster" project (2008-2010), from the framework of the Sectoral Plan for Research and Development which aimed to disseminate the concept of innovation cluster in Romania and examples of good international practice and stimulating economic operators in creating and developing innovation clusters by making specific tools (guide, gateways, consulting services).
3. The "cluster mapping" exercise conducted by the Ministry of Economy, Trade and Business Environment with support from German Society for Technical Cooperation (GTZ).

All these actions were aimed at:
- Analysis of international situation in clustering;
- Developing the Guidelines for implementation in Romania of the concept of innovative cluster;
- Conducting 19 regional workshops (Bucharest (2) Iași (2) Piatra Neamț, Brăila, Constanța, Călărași, Pitești - Mioveni, Craiova, Râmnicu Vâlcea, Timișoara, Arad, Oradea, Cluj, Sibiu, Sfântu Gheorghe (2), Bistrița, on the whole over 500 participants. Workshops have a double role: dissemination of the concept of innovation cluster and identification of existing/emerging clusters in Romania based on methodology "peer review";
- Consultancy services (including on-line) on the creation and development of innovative clusters in Romania;
- A study visit to Hungary where were visited clusters representative of Szeged and Debrecen. Also, a visit was made to POLUS, Promotion and Accreditation Agency of Clusters in Hungary, to identify examples of good practice and adapting them in Romania.

**Romanian Cluster Association**

Romania's experience in clusters association is shy. However, in 2011 Romania had formed Romanian Cluster Association whose purpose is economical development, promotion and revival by supporting creation, development and cooperation between clusters at regional, national and international level.

Among the founding members, we can mention:
1. The North-East ASTRICO Textile Cluster, Piatra Neamț, represented by the ASTRICO Association
2. The South-East Maritime Cluster, Constanța, represented by the Ronomar Foundation
3. The Elinclus Electronic Cluster Bucharest, represented by the Association for Promoting Electronic Technology
4. The South-West Tourism Cluster, represented by the Association for Promoting Tourism Mehedinți
5. The Agro Food West Cluster, represented by the Arad Chamber of Commerce, Industry and Agriculture
6. The Green Energy Covasna Cluster, represented by the Green Energy Association
7. The Pro Wood Covasna Cluster, represented by the KOFA Association.
8. The Electrotechnical ETREC Center Cluster, represented by the Regional Electrotechnical Cluster Association ASCRET Brașov.

From the Association's standpoint, the cluster must contain:
- The Economic pillar (industry and / or services): a significant number of enterprises from the domain in which the cluster is operating;
- The Education - Research – Development pillar: universities, research institutes (or any other institutions engaged in research and development);
- The Public authorities pillar, at national level (ministries), regional (Agencies for Regional Development, country councils), local (local councils, municipalities, City Halls).

In the year 2012, the Association's activity is reflected in the following economic data:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>UM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>15.006</td>
<td>thousands RON</td>
</tr>
<tr>
<td>Number of enterprises</td>
<td>255</td>
<td>Units</td>
</tr>
<tr>
<td>Export</td>
<td>3345</td>
<td>thousands RON</td>
</tr>
<tr>
<td>Employees</td>
<td>77295</td>
<td>persons</td>
</tr>
</tbody>
</table>

Source: www.clustero.eu

Since Romanian Cluster Association is a trans-sectoral organization, economic data are relevant at national level.

Conclusions
Cluster initiatives are seen as a tool for improving both national and regional competitiveness, through clusters a nation can secure economic development, promote cooperation between companies, universities, research institutes, customers, competitors and suppliers in a particular geographic area. Establishing priorities and accepting collaboration with research and development entities, with the state, in a cluster businesses can enhance their image and invest in modernization and ensure efficiency.

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