

FROM CLUSTERS TO COMPETITIVENESS CLUSTERS IN ROMANIAN ECONOMY

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Abstract

The key factor in determining economic growth in entering a market marked by strong competitive forces is to increase economic competitiveness. In addition, development of competitive economic advantages must be a constant process that takes into account European trends, but also by globalization in general. The paper proposes some conceptual clarifications are based on concrete examples and an analysis of the evolution of cluster and competitiveness clusters. Although originally there was no difference between the term cluster (Anglo-Saxon branch) and the competitiveness clusters (les poles de competitivite-French Connection), however, in Romania they tend to be used differently, and a conceptual distinction would be welcome. Thus, the term "cluster" refers mainly on industrial agglomerations concentration of firms in the same field or related economic fields. "Competitiveness clusters" is an association of businesses, organizations and training of research and, acting in partnership to implement a common development strategy. This strategy is built around innovative projects aimed at addressing one or more end markets. Therefore I consider competitiveness clusters to have full triple helix structure (authorities R & D industry) or four clover (+ institution catalyst).

Key words: competitiveness, clusters, competitiveness clusters

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Introduction

Advantages offered by specialization, explained by the theories of absolute advantage (Smith, 1776) and of comparative advantage (Ricardo, 1817), and later by the theory of factor endowments, have been taken and adapted to the level of the firm. The theory of absolute advantage brought for the first time to attention the possibility for a country to produce a certain product cheaper than another country. In this case, countries' specialization in the

production of goods with smaller costs and the trade of the production surplus was beneficial for both countries. Although it represented a major step in demonstrating the benefits of specialization, Adam Smith's theory could not offer the same perspectives for the countries that did not possess an absolute advantage for any category of products. From this situation, David Ricardo (1817) demonstrated that specialization is possible and beneficial even when a country doesn't possess an absolute advantage in the production of any goods. Resources' allocation toward those goods that can be obtained cheaper than others and their export can bring benefits to both countries. This was a major demonstration that fundamented the theories developed later, regardless of the fact that they confirmed, enriched or contradicted the hypothesis of the comparative advantages theory. The first economist who described the clusters from the "chain of suppliers" perspective was Alfred Marshall who analyzing the industrial agglomerations in England found out that these geographical concentrations of enterprises from a specific sector create involuntary positive economic effects (1920). The essence of the cluster concept has its roots in what Marshall, as far back as 1890, called 'externalities of specialised industrial locations'. Somehow paradoxically in the current context of increasingly globalised markets, firm location and interdependence are significant explanations of their competitive performance according to cluster theory. At the beginning of the 20th century, two Swedish researchers Ohlin and Hecksher argued that the difference between countries is given by the production factors, and the products are different because of the production factors incorporated. According to the model (Ohlin – Hecksher factor proportion theory), a country holds a comparative advantage and thus will export the product that incorporates the abundant production factors in other countries. Thus, the more abundant a production factor is, the cheaper it becomes. So, the difference in the production factors is given by the difference in their prices, generating the competitive advantage. Technological developments in the '60-ies and the substantially ample development of multinationals led the specialists to look for new theoretical basis to explain the complex evolutions of the international trade. Subsequently, from the economic geography point of view, Jane Jacobs emphasized the role of the large cities in the economic development, that played the role of what we call today "urban growth poles"(1969). Of much interest is the new theory of competitive advantages launched in the last decade of the last century by Michael Porter in his book "The Competitive Advantage of Nations" (1990). Porter's diamond, as the fundamental elements of the theory were called, represents an economic model that explains why some industries become competitive in certain situations. The diamond has four constitutive

elements, plus two factors of influence: production factors, demand, support industries, firm structure and competition at branch level, governmental regulations and the chance. The theory of competitive advantages considers that these six elements interact one with each other, allowing the creation made by combining these elements to induce competitiveness' enhancement.

1. Clusters and competitiveness or competitiveness clusters – conceptual issues and Romanian realities

Clusters are a driving force in increasing exports and are magnets for attracting foreign investment. Clusters also represent an important forum in which new types of dialogue can and must take place among companies, government agencies, and institutions such as schools, universities, and public utilities (Porter, 2000).

Through clusters not only individual firms can be supported but groups of firms, which represents a more promising approach in terms of efficiency and potential impact of individual public support actions. As a result, the commercialisation of R&D results can be better ensured and SMEs can be better engaged into larger scale projects through cluster organisations. Thus, the challenge today is not to create more clusters but rather to create better and more sustainable ones. Although this sounds logical, it is not quite so easy to achieve in practice. This represents a paradigm change for public authorities involved in cluster policies as well as for cluster practitioners, and it may have a significant impact for future cluster funding and development.

Clusters affect competition in three broadways that both reflect and amplify the parts of the diamond: (a) increasing the current (static) productivity of constituent firms or industries, (b) increasing the capacity of cluster participants for innovation and productivity growth, and (c) stimulating newbusiness formation that supports innovation and expands the cluster. Thus, a cluster is a system of interconnected firms and institutions whose whole is more than the sum of its parts (Porter, 2000).

Three successful systems may be regarded as reference points: the French centralized system, the German complex system combining support flexible schemes at the central and regional level, and the Swedish one which represents the successful application of the “triple helix” theoretical pattern:” industry-research-authorities”.

The Romanian realities require an adjustment of the pattern. A fourth actor is needed “the catalytic organization”- consultants, technological transfer centers, chambers of

commerce destined to bring to the” same table” the other three partners which do not cooperate naturally. The “Four Clover” pattern is already successfully applied in Romania in the field of some clusters / potential competitiveness poles such as “Dacia-Renault” in the automotive field or “Pro Wood” in the wood field.

Therefore, the “cluster” term mainly indicates the industrial agglomerations and emphasizes the concentration of some enterprises in the same field or related fields with economic effects as they have been identified by Marshall: (over the labor force, the specialization of suppliers and as regards the technological transfer and innovation). They can have a “triple helix” complete structure or not.

“The competitiveness cluster/poles” is an association of enterprises, research – development and professional training organizations acting in partnerships in order to implement a mutual development strategy. This strategy is built around some innovatory projects whose final aim is the approach of one or more markets. Therefore we consider the pole to have the triple helix complete structure (authorities- R&D- industry) or four clover (+ catalytic institution).

The fundamental objectives of competitiveness poles that already function in some countries are focused on: - Realization of partnerships between stakeholders with expertise in competitiveness poles; - Promoting a global environment conducive to innovation; - Availability of strategic research and development projects that would benefit from government support.

Michael Porter’s economic theory was the starting point in the implementation of the cluster and regional competitiveness pole concept, namely that “a cluster” is an economic concentration of enterprises, small and medium sized enterprises especially, on a given geographical area, interconnected with its own nuclei (centers) of research, professional training centers, specialized suppliers, in a certain field, that are in competition with one another but also in relations of cooperation and a competitive pole is a regional innovative cluster with national and international vocation or a cluster network (1998).

The economic reality in Romania required the presence of catalytic institutions (entities specialized in the innovation and technological transfer, consulting firms, chambers of commerce etc.) within the pattern called “the Four Clover”. The clusters and the competitiveness poles in Romania have no legal personality; they are established based on a protocol of cooperation signed and sealed by all the members but the management association of the joint structure has legal personality.

2. The French competitiveness clusters/poles of competitiveness - reference model of competitiveness clusters in Romania

The emergence of poles of competitiveness / competitive clusters in Europe was a new stage in regional development of Member States that have implemented and put into practice these concepts as the main vectors: innovation, research and entrepreneurship - Governmental projects generated innovative, sustainable growth, new jobs, competitiveness and international visibility of businesses and local products.

Policy support of French competitiveness poles was established in 2005. However, in 1987, long before the appearance of the term “pole competitiveness”, was an initiative in this regard. Through "Productifs Locaux Systemes", the French government supported the structural changes in regions affected by the decline of industrial sectors. The final beneficiary was not just one company but a network of companies in a given field and in a certain region, called "local system of production-SLP".

The objectives of this program were to increase the competitiveness of SMEs and to increase the attractiveness of the region and therefore creating / maintaining jobs in the sectors faced with problems.

Thus, this program already established two important features of the pole of competitiveness: the geographical proximity and the collaboration between member companies.

In over 20 years of the program (1987-2007), were held about 110 SLP. In 2005, France shifted policy in local production systems, developing the first version of French policy in competitiveness poles.

Appropriate policy, the Ministry for Planning and the Ministry of Industry launched the poles of competitiveness, which was a pretty significant change in orientation from the traditional approach, to pro-growth approach. The objective of this program is to improve the innovative potential of French public by concentrating all efforts on the poles of competitiveness, in order to create wealth and new jobs.

The operating principle of the pole of competitiveness lies in collaboration of the key actors and in the geographical concentration of innovation more effective service by encouraging and supporting projects in order to become a leader in a certain economic field in France and internationally.

Each pole had its own legal personality, often as an association. The association has a team (permanent staff) who has a role in:

- Facilitating actors' collaboration within the competitiveness pole design and implementation of joint projects;
- Coordination and selection of research projects offering the requested public funding of the specific pole of competitiveness policy;
- Developing and implementing the overall strategy of the pole of competitiveness; - Providing international communication;
- Ensuring communication with other policies in France or other countries.

Poles of competitiveness strategies are established for a period of five years. The relations between the poles of competitiveness, the state and the local authorities involved are set in a framework contract.

Thus, in 2005-2008 the French government provided funding of around 1.5 billion Euros to finance research and development projects in the poles of competitiveness. In this period there were financed:

- 544 R & D projects since 2005 (national funding) worth of 3.6 billion Euro, involving 112.000 scholars;
- 1343 R & D projects funded by agencies, in 2006-2007.

In 2008, the French government-issued version 2 of poles of competitiveness policy. Corresponding new version were established axes of the second phase of funding, namely: new methods of funding specifically for innovation platforms; building poles of competitiveness through performance contracts; creating an ecosystem of innovation and development notably through private funding.

For this second phase, the French government provided 5 billion for 2009-2011. It was established at the French National Agency Cluster-CDIF, meant to coordinate the poles of competitiveness. This association brings together 60 poles of competitiveness and its mission is to facilitate mutual learning by sharing experience and providing information and training services. In addition, CDIF supports the creation of new poles of competitiveness in France.

Currently in France there are 71 competitiveness clusters (17 are international and 54 national), involving 5,000 enterprises, of which 80% are SMEs. These poles of competitiveness activate in 16 sectors.

3. Clusters and competitiveness clusters in the Romanian economy - past, present and future

A number of studies have attempted to identify potential clusters in Romania. The first study on the economic agglomerations competitive cluster in Romania was most likely coordinated by the International Center for Entrepreneurial Studies (CISA), in Bucharest, in 1998. Study methodology was based on Porter's competitiveness diamond theory and used a panel of businesses of all sizes (small and large companies) and focused on data from the eight development regions in Romania. The study has identified three types of "early" cluster in the production of software, in the shipping industry and wood industry.

A second important reference to research clusters in Romania is the study published in 1999 by Marco Riccardo Ferrari, assistant researcher at the Department of Economics of Bocconi University in Milan. It focuses particularly on small enterprises and in the data analysis based on regional and county level. The study identifies three so-called "proto-districts", but this time, the wood industry, textiles and ceramics industry.

The third relevant research in the clusters is the study by Valentin Ionescu (1999), who argues the existence of "proto-clusters" or "emerging cluster" and sustains his view by explaining different levels of development and knowledge of industrial agglomerations identified. Research finding confirms the presence of two "proto-clusters" in ceramics and software industries. In addition, the review suggests that the ceramic industry has a lower potential to form clusters, although there are clear signs of evolution towards the formation of networked structures.

A fourth source of data for clusters in Romania is the VICLI3 project, developed within the European program INTERREG II C - CADSES4. The project started in 1999 and lasted until 2001, and tried to identify and support cluster development through regional exchange of know-how. This report identifies four potential clusters appeared in Harghita County (Central Region) in woodwork, pottery, printing and switchgear industry. The emergence of these sectors is clearly related to the area's natural resources.

The fifth research reference for studying clusters of Romania is INCLUD5 project funded under the Interreg III B CADSES, European Initiative for European Regional Development Fund for 2000-2006. The project, conducted between 2003 and 2004, aimed at an analysis of existing clusters of potential partner countries in Central and Eastern Europe and then assisting these countries in developing such clusters, using the experience and know-how in Italy and Austria. Some potential clusters were identified as textiles (North-East, in

particular, Bacau County and West Region, particularly Timis), software (Timis, Cluj and Bucharest), wood, steel and metal components (Region center). Furthermore, Brasov seems to gather crowds cluster of companies in the chemical industry, metal products, the general purpose machines and engines. Local clusters could be located in areas such as leather and footwear industry, electrical equipment industry and machinery and equipment industry, TV, radio and communications.

Another reference for research in Romania is WEID8 Project (The location of industrial districts, funded by the European Commission 5th Framework Programme - FP5). The study cases of Weid8 Project investigates the relationship between clusters at European level. Of the 15 case studies, two were related to Romania, researching potential existence of clusters in two areas: Banat-Crisana and Arad-Timisoara, in the sports equipment industry, respectively, in the shoe industry.

In 2011 from the 55 clusters identified in the peer work shops, only 19 passed the criteria of actual cooperation and availability/usage of innovation services. In the eight regions we have recognised between two and four clusters. Leading region is Bucharest/Ilfov with four recognised clusters. Clusters share the fields as following: tourism 9%; textiles 5,4%, Bio 9%, Construction 3,6%, Automotive 9%, ICT 10,9%, Wider Agrofood 14,5% and others 38,1%.

Currently, the Ministry of Economy, Trade and Business Environment, the Management Authority(MA) for Sectorial Operational Programme 'Increase of Economic Competitiveness (MA SOPIEC) has started implementing the project" Support to the MA in formulating and implementing the operation of competitiveness clusters ", supported by the consortium of consulting firms Archidata (Italy), CIFESAL (Spain), Bergmann Consult (Romania) and CEED (Romania). The project's implementation period is approx. 9 months. The overall objective is to assist the development and the implementation of the operation "Development of business support structures of national and international levels" - „competitiveness clusters" (national visibility and / or international) and the main directions are:

1. To support The Management Authority to develop, launch and implement the Operation "competitiveness clusters", by developing the necessary documentation to launch aid scheme and other projects to achieve optimal competitiveness clusters,
2. To support the MA (through training, consultations, recommendations) for a consistent and constructive approach, in the present and future action.

The specific objectives are generated by: 1. Creating the framework for development aid scheme by analyzing the current situation in terms of competitiveness clusters in Romania; 2. Development and implementation of state aid scheme, the Applicant's Guide for operation "competitiveness clusters" in Romania.

Conclusions

- Although in the recent years a substantial progress was achieved, Romania has serious gaps in competitiveness in relation to the Western and Central Europe. The reasons for this lagging behind are found in all the elements that determine competitive ability.
- The term "cluster" refers mainly to industrial agglomerations concentration of firms in the same field or related fields with economic effects as they were identified by Marshall (on labor, the specialization of suppliers and in the technology transfer and innovation). They may or may not complete the "triple helix" structure. In Romania from 55 clusters identified in the peer work shops, only 19 passed the criteria of actual cooperation and availability/usage of innovation services.
- Increasing the competitiveness of individual companies, provides macroeconomic benefits, some of which are: raising attractiveness of regions ; increasing need-orientation of business supporting. Therefore, clusters contribute to further develop the regional competence and research infrastructure; securing employment and fostering entrepreneurship.
- "Competitiveness clusters" is an association of businesses, organizations and training of research and, acting in partnership to implement a common development strategy. This strategy is built around innovative projects aimed at addressing one or more end markets. Therefore, I consider that competitive clusters have full triple helix structure (authorities R & D industry) or four clover (+ institution catalyst).

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