

Spatial Distributions of Regional Economic Activity

Innovation Cluster and Economic Development in Bucharest Ilfov Region

Ana Cristina Adumitroaei¹, Claudia Ionescu², Simona Curpan³

Abstract: Simultaneous globalization tendencies have created policy challenges for national and local governments. One response to these challenges has been a dramatic proliferation of development policies based on clusters of firms and industries. In EU Strategy 2020 – COM 546/6.10.2010 Initiative “An Union of Innovation”, COM 614/27.10.2010 Initiative “Industrial Policy in the Globalization Era” innovative clusters were considered the “engine” of economic development. They represent a framework for business development, collaboration between companies, universities, research institutions, suppliers, customers and competitors located in the same geographical area. Clusters of small and medium sized firms in developing economies are coming under increased pressure from competition as products mature, technology becomes widely available, and companies seek lower cost locations for production. In this paper, we consider that the cluster is an engine for economic development in our region and we need to have a regional strategy for clusters in Bucharest Ilfov Regional Development Plan for 2014-2020.

Keywords: cluster; innovation; economic development

JEL Classification: O1

European Clusters Policy

“Clusters are geographic concentrations of interconnected companies and institutions, in a given field. Clusters comprise a group of related industries and other entities important in terms of competition. These include, for example, suppliers of specialized inputs such as components, machinery and services, or providers of specialized infrastructure. Often, clusters extending to different

¹ The Bucharest Ilfov Regional Development Agency, Romania, Address: 163-165 Mihai Eminescu, Str., 2nd district, Bucharest, Romania, Tel.: 0040213138099, e-mail: anacristina.adumitroaei@adrbi.ro.

² Senior Lecturer, The Bucharest Ilfov Regional Development Agency, Address: 163-165 Mihai Eminescu, Str., 2nd district, Bucharest, Romania, Tel.: 0040213138099, Corresponding author: adrbinvest@yahoo.com.

³ The Bucharest Ilfov Regional Development Agency, Address: 163-165 Mihai Eminescu, Str., 2nd district, Bucharest, Romania, Tel.: 0040213138099, e-mail: simona.curpan@adrbi.ro.

downstream channels and customers and laterally to manufacturers of complementary products and the industries related by skills, technologies or common inputs. Finally, some clusters include governmental and other institutions- such as universities, standards agencies, vocational training providers and employers- to provide specialized training, education, information, research and technical support". (Porter, 1998).

All theoretical and historical considerations, concluded into today's paradigm of the "triple helix" as a model for successful cluster initiatives. According to this model a cluster must consist of following categories of actors:

- Universities, research institutes – as suppliers of innovative products, technologies, processes and services;
- Industry, especially SMEs – which represent the innovation demand and in an ideal case they should determine and absorb the offer mentioned above;
- Authorities responsible for the process facilitation (ministries, regional authorities, etc.).

The concept of clusters generally comprises of three important dimensions¹:

- clusters are seen as geographical concentrations of specialized firms, advanced skills and competences in the labour forces, and supporting institutions which increase knowledge flows and spill-overs as a result of their proximity. Regions compete with each other worldwide in providing the best framework conditions in order to facilitate business growth and to attract investment and a talented workforce.
- clusters serve a functional purpose to provide a range of specialized and customized services to a specific group of firms, such as the provision of advanced and specialized infrastructure, specific business support services or training and coaching of staff. Cluster organizations help to channel, facilitate or provide access to facilities and services, which may include specialized research and test centers, consultancy, training, and so on. In this sense, clusters are a form of "self-organization" that offers competitive advantages. Clusters facilitate both intense competition and close cooperation. Geographical proximity is believed to facilitate the flows of tacit knowledge and the unplanned interactions that are critical parts of the innovation process.
- clusters are characterized by a certain dynamic social and organizational element, the so-called "institutional fix" or social glue that holds the different interlinked innovation actors – such as universities, businesses

¹ DG Enterprise and Industry Report "Innovation Clusters in Europe: A statistical analysis and overview of current policy support".

and public authorities – together and facilitates intense interaction and cooperation amongst them.

Through their value networks and proven channels between businesses, research and academics, clusters provide efficient catalysts for innovation policy interventions. They are able to transform policy interventions into value creation and multiply public spending by private investments.

In the past decades European Cluster Policies played an important role for innovation and the transfer of technologies and thus and through the World Class Cluster Approach started by Europe INNOVA Initiative of the European Commission showed its commitment and aims to lift cluster activities on a higher level. Nevertheless, possibilities exist to further enhance the quality of cluster activities.

Since 2005 and the Lisbon Partnership for Growth and Jobs, Innovation has been the focus of various documents issued by the European Commission: “More Research and Innovation” (2005), “A broad-based innovation strategy” (2006), “Reviewing Community Innovation policy in a changing world” (2009). All of them have contributed to build an innovation policy framework that already brought some very positive results: A more research and innovation-friendly state aid regime, improvement of skills (Universities, research, etc.), a progressed cluster support framework as outlined in “Towards world-class clusters in the EU” (2008), a Small Business Act adopted etc. There were also positive results regarding new supply-side and demand-side measures: On the supply side, more EU innovation and research funding has been made available (86 billion Euro through Cohesion Policy between 2007-2013 for Innovation only), participation of SMEs in FP7 has been facilitated, the European Institute for Innovation and Technology and Joint Technology Initiatives have been launched and a support service for innovative SMEs – the Europe Enterprise Network – has been created. On the demand side, the Lead Market Initiative has been launched, standardization has evolved to support innovation, and public procurements have also increasingly be used to provide incentives for innovation.

Cluster policies can be defined as specific governmental efforts to support clusters. Such cluster policies may take different forms and follow different objectives, such as industrial and SME policy or research and innovation policy. Cluster policies are in most cases supported and implemented by specific cluster programmes of governments or initiatives. In consequence, cluster initiatives can be understood as organized efforts to increase growth and competitiveness of clusters within a region, involving cluster firms, government and/or the research Community.

The EU encourages the development and finance of clusters; we mention here initiatives like Regions for Economic Change, Regions of Knowledge, the Community Strategic Guidelines on Cohesion, European Grouping on Territorial

Cooperation. In the same time, the EU asks the Member States to include in their national programs for reforms measures for cluster.

Key Messages for Cluster Policy in Europe¹

Cluster policy is an important policy tool for countries/regions in their innovation and business development strategies. Each country/region should ensure that cluster policy and cluster programmes should remain high on the government's political agenda.

Cluster programmes are in all regions and countries an integral part of an effective innovation policy and cluster organizations have developed to be an important infrastructure in the regional and national innovation systems. Public authorities should ensure an effective public research and innovation system and improve further the governance of cluster programmes and cluster organizations.

Monitoring and evaluation of cluster policies are important, but difficult. Impact studies and guidelines for evaluation of cluster policies should be improved and shared. Exchange of national practices on the impact measurement and evaluation of cluster organizations should take place.

There is room for improvement in most regions and nations of the coordination of cluster programmes with other innovation policy instruments, e.g. innovation funding schemes and knowledge transfer mechanisms. This could enhance the impact of clusters and ensure a more effective innovation system. There should be more exchange of best practice in this field.

The importance of clusters in the EU economy is emphasized by the European Cluster Observatory which identifies around 2000 clusters (defined as regional agglomerations); it also shows that 38% of the work force is active within clusters.

Cluster Policy in Romania

In Romania the implementation of innovation policies is hindered by a wide range of obstacles (legal, institutional, financial, managerial, etc.) In addition, the 2009-2010 cuts budget in the public RDI had vast negative consequences that annihilated the improvements of the few previous years with higher RDI funding. In response to the budget cuts, the 2009 'Plan to increase the efficiency and effectiveness of RDI expenditure' introduced a funding re-prioritization to four main directions and several reform measures to maximize the social and economic impact of RDI investment and allow the release of the EU's RDI financial assistance to Romania.

¹ The NGP Cluster Excellence Benchmarking project and the Copenhagen Cluster Conference May 26-27, 2011.

This was followed in 2010 by the launch of the 2011-2013 National Reform Programme (NRP), coordinated by the Ministry of Economy, Trade and Business Environment, which comprises among other RDI measures, the ambitious target of 2% of the GDP for public and private RDI investment by 2020 (1% of the GDP for public RDI investment and 1% for private RDI investment to narrow the gap to the EU - RDI investment level).

Moreover, the National Reform Programme includes a set of new policies for improving the business environment and stimulating innovation in industry, such as:

1. Improving the administration decision-making, management and horizontal coherence of public policies.
2. Stimulating firms' capacity to create, add and retain value in the national production chain, based on processes, products and services.
3. Consolidation of regional/national/cross-border innovative clusters and their collaboration with academia, national RDI institutes and public administration.
4. The completion by 2013 of the Operation 'Competitiveness Poles' of SOP IEC Priority Axis 1, which supports infrastructure construction and modernization, acquisition of equipment and entrepreneurship services.
5. Establishment of several risk capital funds within the JEREMIE scheme during 2011-2013, with two funds expected to start in 2011.
6. Modernization of industry and consolidation of enterprises' technological capacity by stimulating investments in new technologies and introduction of quality management systems. Local/regional entrepreneurship is also encouraged in view of reducing regional gaps in the business environment.

In Romania we need to make the distinction between *natural clusters* and *public clusters*. The public clusters (industrial parks, scientific and technological parks) have been established by law.

In Romania don't exist a dedicated policy for clusters, but in the Sectorial Operational Programme "Increase of economic competitiveness" has been made an review about the Romanian clusters and have a dedicated operation "Support for enterprises integration in supplier chains and clusters".

According with Sectorial Operational Programme "Increase of economic competitiveness" here are several types of business infrastructure providing premises and logistics for SMEs (e.g. business incubators, industrial parks, science and technology parks). The business support infrastructures in Romania are still poorly promoted within business environment and their advantages are not enough well understood by potential entrepreneurs. Thus, incubators are underdeveloped

and under populated by SMEs. The existing business incubators were set up under different sources of financing (Phare funds, World Bank, Romanian budget) as tools to enhance entrepreneurial initiatives.

A number of industrial parks have been developed in order to encourage economic development and to reduce unemployment particularly in areas affected by the industrial restructuring process. In Romania were 34 authorized industrial parks¹ at various stages of development and these have a disproportionate regional distribution with 11 parks in both South and Central Regions and only 1 park in the West Region. Some of them have difficulties in operating, due to lack of finance and a too small number of SMEs using the facilities. Moreover, few of them shelter companies and clusters capable of competing in international or even national markets.

Also the document “Guide for implementing the concept of innovative cluster”, financed by the Ministry of Economy (2009), presents a list of industrial parks, entities of innovation and technological transfer, universities, foreign and Romanian investors that by associating can benefit from the advantages and benefits of a cluster. Even so, we observe at national level that such initiatives and partnerships are rare or if they exist they have only the goal of spending funds without a mid or long-term strategy.

Clusters in Bucharest Ilfov Region

Bucharest-Ilfov region has a high innovation potential that is largely underexploited because of the lack of a formal framework for innovation policies and programmes at the regional level, and poor articulation of the national innovation policies and programmes with the regional priorities.

In the region has been identified 8 clusters (according to “Clusters and potential clusters in Romania” elaborated by GTZ – 2010):

Furniture: Pipera, Militari

- ICT: - SEMA PARK, Northern – Bucharest, Siveco, Softwin, UTI, Oracle;
- Clothes, shoes and fashion: APACA;
- Audiovisual services: BUFTEA, ROMEXPO, all Televisions;
- Construction materials: Militari, Catelu;
- Food industry: Fundeni: Danone, Popesti: Tnuva, Bragadiru: Rostar, Icecream, Buftea: Avicola, Canning fact;
- Logistic: Militari, Buftea, Otopeni;

¹ Ministry of Economy (2009). Guide for implementing the concept of innovative cluster.

- Publishing companies: Bucharest.

A new cluster infrastructure and a very complex facility will be built in 2014 in Bucharest-Magurele - ELI - The Extreme Light Infrastructure. (Press release – European Commission) ELI will create a new European laboratory to consistently investigate a very broad range of science domains, from new fields of fundamental physics, new nuclear physics and astrophysics topics, to applications in material science, life sciences and nuclear materials management.

ELI is a European Project, involving nearly 40 research and academic institutions from 13 EU Members Countries, forming a pan-European Laser facility, that aims at hosting the most intense lasers world-wide. The facility, based on four sites, will be the first large scale infrastructure based on the Eastern part of the European Community and has obtained a financial commitment exceeding 700 M€.

Conclusion

We may say that clusters could be an instrument to improve national and regional competitiveness. A cluster can force economic development; promote the cooperation between enterprises, universities, research institutions, clients and competitors, suppliers within the same geographical area. In Bucharest Ilfov region the new cluster from Magurele could be one of the engines for economic development of the region. We need to have a regional strategy for clusters in Bucharest Ilfov Regional Development Plan for 2014-2020.

Bibliography

(2010). *Report – Clusters and potential clusters in Romania – GTZ*. February

Dan, Mihaela Cornelia (2012). Innovative clusters: a solution for the economic development of Romania. *Theoretical and Applied Economics*.

Europe INNOVA (2008). *The concept of clusters and cluster policies and their role for competitiveness and innovation: main statistical results and lessons learned*.

European Romanian Institute (2010). *The competitive potential of economic growth: guiding lines for a new industrial policy in Romania*.

GTZ – Report (2010). Clusters and potential clusters in Romania.

Ministry of Economy and Finance (2007). *Sectorial Operational Programme – Increase of economic competitiveness*.

Ministry of Economy Trade and Business Environment (2011). *Analysis of existing and potential competitiveness poles in Romania*.

OECD (2000). *Local partnership, clusters and SME globalization - Conference for Ministers responsible for SMEs and Industry Ministers Bologna*. Italy, 14-15 June.

- Porter, Michael (1998). Cluster and the New Economics of Competitions. *Harvard Business Review*.
- Romanian Government (2011). *National Reform Programme*.
- Stanciulescu, Gabriela Cecilia (2008). Cluster policy and entrepreneurship promotion in transition countries: the case of Romania. *Conference Entrepreneurship Education*.
- Technopolis (2012). *Evaluation of Innovation Activities – Guidance on methods and practice*.
- Technopolis (2012). *Regional Innovation Report – RO 32 Bucharest-Ilfov*.
- Verbeek, Hessel (1999). *Innovative Clusters - Identification of value-adding production chains and their networks of innovation, an international studies*.
- World Bank. International Trade Department (2009). *Clusters for competitiveness – A Practice Guide – Policy implications for Developing Cluster Initiatives*.