Innovative Clusters in Times of Economic Crisis. Case Study Romania

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Abstract: The small and medium-sized enterprises (SMEs) are deeply affected by the current economic crisis, especially due to decrease in demand and much harder access to financing sources. Most of the small and medium-sized companies (over 90% of them) face major difficulties due to decrease in orders and diminution of their financial resources. Other impacts of the financial crisis identified at work within the SMEs environment are the decline in exports, the lower investments and, not least, the psychological effect of the market hindrances. In order to alleviate and/or fight back the impacts of the crisis, programs and measures are envisaged, including certain solutions, both at governmental, as well at local and company level, destined to support the development and efficiency of the viable SMEs. The financing solutions for the SMEs may be oriented also to a modern type of industrial activities organization namely clusters and clusters networks. The concept of cluster has gained a lot of popularity in the past few years, policy-makers, practitioners and scientists having equally referred to it. A lot of policies have been initiated and implemented in Europe in the past few years with the purpose of stepping up the activity of the current clusters and of providing favorable conditions for the creation of new ones, especially innovative clusters. The paper intends to present the records registered in this field by Romania on regional level, and the challenges faced by the Romanian firms under the circumstances of the financial crisis and the lack of institutional framework and of clusters governance tools.

Keywords: knowledge-based economy; cluster; SME; competitiveness; regional development

JEL Classification: O25, R38, R58

In order to alleviate and/or fight back the impacts of the crisis, programs and measures are envisaged, including certain solutions, both at governmental, as well at local and company level, destined to support the development and efficiency of the viable SMEs.

The financing solutions for the SMEs may be grouped by three types of sources:

1) ***Bank loans***, which provide the SMEs with the possibility to expand their activities faster, by simplifying the required documents and diminishing the time for responses.

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2) ***Guarantee funds***. The guaranteeing services are available to the companies which pursue obtaining a bank loan to implement a project, for which the applicant submits a well-founded business plan but cannot provide the material guarantees.

3) ***Financing programs***. Most of the financing of such kind is provided for by other countries and international funding institutions. The system of public, external non-reimbursable financing is one of the components of the wider mechanisms of inter-country collaboration.

Given the importance of specific programs which are implemented in the EU Member States with the goal to overcome the economic crisis, we will be referring in the following to the possibilities to improve the financial absorption capability for the most active participation of Romania to the supply of European Funded Programs and Projects. After EU accession, Romania is bound to adapt to the rules of the European Union cohesion policy, while at the same time having to develop its own national concept regarding the economic and social cohesion policy. Due to the economic problems, in the first years after accession cohesion in Romania is likely to be achieved especially on the basis of the Cohesion and Structural Funds.

In the view of the European Union, the cohesion policy will continue to be a significant funds transfer mechanism for the Member States with a significant number of less developed regions, which will have a priority status within the Structural Funds.

At the same time, EC maintains its attachment towards three basic principles regarding the financing of the European programs:

- efficient fund management, on the basis of the Member States' capabilities;
- result-conditioned transfers;
- the Member State's administrative, financial and economic absorption capability.

The absorption capability is the extent to which a Member State is able to spend effectively and efficiently the financial resources allotted from the European funds. In this case, on the one hand is to be distinguished the *absorption capability of the institutional system* created by the respective state to manage such funds and, on the other hand, the *absorption capability of the beneficiaries of such funds*. One may consider that there are two distinct categories of absorption capability: one regarding the *supply* (*of funds*) and another regarding the *demand*.

The absorption capability of the applicant for projects financed through European funds is determined by three main factors:

- *The macroeconomic absorption capability* – defined and measured in ratio to the Gross Domestic Product. For the interval 2007-2013, it is provided that the annual amount of which benefits a Member State from the Structural and Cohesion Funds must not exceed 4% of the GDP. Linked to the macroeconomic capability is the *necessity to increase the budget spending due to the EU accession*. In this respect, Romania must ensure since 2007 budget spending by at least 2% of the GDP higher than previously, strictly determined by the obligations assumed in the context of European integration.

Also linked to the macroeconomic absorption capability is the capability to absorb the macroeconomic effects generated by the *additional expenditures incurred*.

- *The administrative absorption capability* - refers to the capability of the central and local authorities to prepare plans, projects and programmes in due time, to select the best ones, to organize an effective partnership framework, to comply with the administrative and reporting obligations, as well as to finance and supervise the implementation process.

- *The financial absorption capability* – represents the capability of the central and local authorities to co-finance programs and projects funded through European funds, to plan and guarantee these domestic contributions in multi-annual budgets and to collect them from the different partners involved in a project or program.

The co-financing capability

A basic principle of the cohesion policy is *co-financing*, according to which the Member States must contribute financially, thus completing the non-reimbursable EU assistance. The funds allotted through co-financing are the responsibility of the EU assistance beneficiaries, which bear a part of the costs of elaboration and implementation of the proposed projects.

The co-financing level may be determined by certain factors, whose identification and analysis might lead to the increase in the financial absorption capability: *the co-financing effort at project and operational program levels* and *the co-financing capability of Romania*.

The co-financing effort at project level is determined for each beneficiary and computed in three distinct steps;

1) *elimination of non-eligible expenditures*, namely those that cannot be covered through the structural instruments. For the “Convergence” Objective, it is the responsibility of each Member State to establish its own system of eligible expenditures, only certain non-eligibility provisions existing for each fund (ERDF, ESF, CF).

2) *subtraction of private expenditures* from the total eligible expenditures. The expenditures for a project covered by private beneficiaries depend on the contracting agreement between the public and the private parties. In the case that a project does not affect to any extent the public budget there is the possibility of co-

financing the EU funds only from private sources, by maintaining the compulsory ratio of public co-financing for the level of the respective OP.

3) *application of the co-financing ratio.*

For each Operational Program, a maximum co-financing ratio from the part of the EU is set. Certain priorities, projects or measures may be 100% financed through EU assistance, under the circumstances of maintaining a balance among the different priorities for the whole OP and of complying with the maximum co-financing ratio agreed by the European Commission.

The co-financing effort at program level is determined on a national basis, starting from the predominating beneficiaries in the respective Operational Program, and taking into account the following three basic elements:

1) Allotment of the European Funds for each Operational Program (OP) – it is established by each Member State in collaboration with the European Commission considering the *total EU transfers*, *financial prioritization of the OP* and *other EU rules*.

The *transfers* allotted to Romania within the cohesion policy negotiated for the financial perspective 2007-2013 amount to 19.3 billion Euros.

From the total transfers, Romania must allot:

- 1/3 – to the Cohesion Fund, from which the SOP Transport and SOP Environment will be financed;
- 2/3 – to the European Regional Development Fund and the Social European Fund. These funds will be divided by the European Commission between the *"Convergence" Objective* and the *"European Territorial Cooperation" Objective*, following that the allotments for these objectives are not to be transferred between them.

From the funds available for "*Convergence*", Romania may decide since the very beginning to create a *national performance reserve* (in order to increase the performances of the Structural and Regional Operational Programs – 3% of the total for this objective) and a *national auxiliary reserve* (1% of the annual contribution of the structural funds) to be used in the case of unpredictable regional/sector crises concerning the economic and social restructuring or the consequences of the commercial openness. From the funds allotted for "European Territorial Cooperation" an amount that represents the transfer towards the financing instruments of the trans-border cooperation at the EU external borders is first subtracted. The rest of funds are divided according to three axes: trans-border cooperation (35.6%), trans-national cooperation (47.7%) and inter-regional cooperation (4.6%).

The funds for this objective are further divided to more Structural Operational Programs. For example, an allotment of funds for operational programs might be sketched as follows:

Table 1

Financial Allotment 2007-2013	"Convergence" Objective							"European Territorial Cooperation" Objective*
	SOP Competitiveness	SOP Human Resources	SOP Transport	SOP Development of Administrative Capability	SOP Regional	SOP Technical Assistance		
%	13	18	25	23	1	25	1	3

* There are several operational programs.

The EU transfers are accompanied by the public national co-financing of Romania, whose size is established as according to the additionality principle.

2) *Estimation of the national public expenditures and of the co-financing ratios of the Operational Programs*

The co-financing effort is determined by applying the co-financing ratios to the whole public spending for operational programs, determined by summation of the public EU spending and the national co-financing spending.

The ratios of contributions for each operational program are established by the Romanian authorities in charge (and afterwards submitted for the approval to the European Commission) on the basis of several criteria:

- seriousness of specific problems, especially of economic, social and territorial nature;
- importance of each priority axis, both for the European Commission priorities as they are established in the EU community strategic rules and for the national and regional priorities;
- environment protection and improvement, especially by applying the precautionary principle, the preventing action principle and the "polluter pays" principle;
- ratio of private financing mobilization, especially within the public-private partnerships;
- inclusion of inter-regional cooperation within the "Convergence" Objective.

The maximum contribution ratios provided by the regulation are:

- for the "Convergence" Objective: 85% of the public expenditures co-financed by the Cohesion Fund, 75% of the public expenditures co-financed by EFRD and ESF, which may increase up to maximum 80% in exceptional cases and with adequate justification;

- for the “European Territorial Cooperation” Objective: 75% of the public expenditures.

The minimum co-financing ratio for each axis is 20% of the public contribution. Within these limits, the co-financing ratios are modulated as according to certain criteria:

- the ratios are higher in the disadvantaged areas, and in the poor areas where difficulties regarding the way of public co-financing are foreseen;

- the ratios might be diminished when applying the “polluter pays” principle and the incomes estimated to be generated by the project.

The co-financing of the expenditures resulted from the implementation of the cohesion policy is ensured by the Romanian Government. The responsibility of authorities, both at technical and political level, is to identify the co-financing difficulties that the beneficiaries might encounter and to enforce the necessary measures to solve such cases.

After accession, the cohesion policy in Romania is achieved mainly on the basis of the Structural and Cohesion Funds. Consequently, a highly important and real stake appears as obvious, namely that Romania is able to absorb as much as possible from the EU community funds that are or will be allotted to it.

The identification of the expenditures co-financing difficulties in order to implement the cohesion policy (which is the responsibility of the central authorities) means to reach two major objectives:

- finding solutions to ensure the necessary level for *public co-financing*;
- creating the necessary conditions to *attract private capital investments*.

a) Public co-financing

Public co-financing may be done from the state budget, by the county and local authorities and other public associations or institutions. If their budget incomes are in insufficient amount, such institutions may engage loans on the domestic market (from the commercial banks) and/or on the foreign markets (from European Bank of Investments).

The state budget must ensure on an anuual basis the *co-financing necessary amount*, at least for the “Infrastructure – Transport” Structural Operational Program of whose beneficiaries are mainly central public entities. Although the co-financing effort from the state budget is a large one, the highest pressure will rest upon the local public authorities (county councils, local councils, mayor offices), because they are the main beneficiaries of two Operational Programs: SOP Environment and SOP Regional. The experience of pre-accession funds allotment revealed that the local public authorities have encountered major difficulties in ensuring the necessary co-financing. Such difficulties are determined, on the one hand, by the level of the *fiscal autonomy that conditions the volume of the local authorities' incomes*, and on the another hand, *the borrowing capability is legally restricted*, under the circumstances of limited state guarantees.

In such a context, the local public authorities reveal specific features that might turn them into the main weak factor in the co-financing process that will be carried on over the post-accession period. In order to avoid such a "juncture", it is necessary *to define clearly the responsibilities concerning the management of structural funds at the level of the local public authorities and to promote an efficient management from the part of the central administration*.

The European regulations require that the local administrations have access to adequate financial resources in order to fulfill their pending obligations, against the background of increasing the financial autonomy.

Although the fiscal autonomy of the local administrations has increased significantly in the last years, the transfer of responsibilities among different administrative levels was influenced by several factors:

- lack of administrative capability of *income collecting* at the level of communes;
- unreliability of the system of *transfers among the public administration levels*;
- preservation of the central administration's prerogatives to change the incomes allotted to different levels of public administration, so that the *volume of the income sources becomes unpredictable*;
- *allotment of the available funds is performed by negotiation*, on the basis of political or personal agreements, and *not according to clearly specified criteria*.

The unbalanced distribution of resources by criteria that do not take into account real necessities and are not founded in *coherent projects of local development is a source of the significant disparities within the local communities of Romania*. At such a level, a vicious circle may be emphasized: *low capability to collect incomes → insufficient local budget → adapting at institutional level the behavior dominant at population level → locality with low community participation, lacking development projects*. The share at county level of the communes and towns captive inside such a vicious circle is a *determining factor for the disparities among counties in what regards fund accession on a project basis*.

To all these adds up a *significant deficit of administrative capabilities to implement and manage development projects, especially when such projects include community development*. In such circumstances *the support and expertise from county level* are welcome, in order *to achieve feasible projects for the economic and social development of the local communities*.

In their turn, most of the county authorities encounter certain *difficulties in the process of accessing and managing the structural funds that have to be eliminated by adequate measures*:

- *human resources deficit*, expressed by insufficient staff, low training in this domain, precarious logistics, lack of wage motivation;
- *material resources deficit* (lack of funds for co-financing the development projects);
- *unsatisfactorily level of the working and information procedures* regarding the programs and financing opportunities for the development projects.

A special effort and an adequate resource allotment must be directed towards *strengthening the role and capabilities of the regional institutions*. The key of an economic and social regional development is the *regional partnership*. The cohesion instruments may be efficiently implemented only if there are *strong regional partners through whom the necessary connections between the local authorities and the regional structures* are achieved. For instance, the Regional Development Agencies that are intermediary organizations would have an increased role in *implementing the regional programs* if the *transfer of funds from the local authorities and complete transfer of responsibilities in such an area* is properly regulated.

As regards the partnerships, the European Commission recommends *establishment of partnership structures especially dedicated to regional policy and the use of structural instruments at regional level, by including the local and regional authorities, of the econ9omic and social partners and of other significant organizations*.

b) Attracting private capital investments

Considering the significant co-financing effort and the pressure upon public expenditures, it is required that *the structural and cohesion funds are used as an incentive to attract the private investment and financing sources*. The main beneficiaries of such a pursuit will be the SMEs, by *participation of the private capital* within the “Competitiveness” Structural Operation Program.

Co-financing from the part of the SMEs is one of the most difficult issues of the absorption capability in this sector. First of all, the structural funds do not any longer allow allotment of non-reimbursable funds as advance payments but only as *reimbursements*. *Such a regulations forces the SMEs to contribute with their own (or attracted) funds in order to cover all the expenditures concerning the proposed development project*.

Secondly, the SMEs must *cover also from their own resources the non-eligible expenditures for the elaborated project (including VAT), which might negatively influence their co-financing capability*.

Thirdly, *the private financing institutions are generally reluctant to lend to the SMEs* considering that a high risk is still existing, and *the conditions imposed by banks for the SMEs financing are still tough*. That is why the public intervention in order to improve SMEs access to financing might be considered as a correction to an eventual market failure. In this respect, the "Competitiveness" SOP also provides for development of certain guarantee and venture capital funds as dedicated instruments to the SMEs.

The private investments may be found in other Structural Operational Programs as well, especially under the shape of the *public-private partnership* (PPP). Such schemes are agreements between the actors in the public sector and in the private sector, respectively, in order to achieve a project or to deliver certain services that are traditionally delivered by the public sector. Both the public and the private parties share investments, risks, benefits and responsibilities stemming from the implementation of the PPP projects. The most common PPP categories are:

- *Planning – Building – Operating* of a certain facility, which is financed by the public sector and remains in its ownership along the duration of the project, but the private sector bears the planning, building and operating risks;

- *Planning – Building – Operating – Financing*. The four stages of a facility are performed by the private sector for a certain period, then returned to the public sector; the private investors own the facility during such a period, bear the planning, building and operating risks and recover costs from public subsidies;

- *Concessioning*. It is similar to the previous partnership agreement, but the public sector recover its costs from the user fees.

The private capital investments in structural operational programs depend on the degree of implication of the authorities from a central level. For the post-accession period special opportunities are created with the aim *to use the technical assistance of the cohesion policy to plan partnerships between the public and the private sector*.

The financing solutions for the SMEs may be oriented also to a **modern type of industrial activities organization** namely **clusters** and clusters networks, especially through applying to different EU collaborative projects which are implemented because of specific programs.

The concept of cluster has gained a lot of popularity in the past few years, policy-makers, practitioners and scientists having equally referred to it. A lot of policies have been initiated and implemented in Europe in the past few years with the purpose of stepping up the activity of the current clusters and of providing favorable conditions for the creation of new ones, especially innovative clusters.

In the last years there were elaborated in the framework of Romanian industrial policy esspecially with the goal of economic recovery and in compliance with the european trend, the following *major documents:*

- Industrial Policy document and the related Action Plan (2010-2013) with a specific chapter on cluster policies;
- National Program for increasing the competitiveness of industrial products (activities dedicated to clusters);
- Regional Development Strategies focused on clusters and networking;
- Project INOVCLUSTER launched by the Ministry of Economy Trade and Business(2008-2010);
- Collaboration with GTZ from Germany for the « Romanian Cluster Mapping » (2010);
- Clustinova project and trans-borders cooperation projects;
- Exchange of best practices with Hungary, Croatia, Poland, Turkey, Sweden, France, Germany, Slovenia, Italy-Ministry of Economic Development and IPI-Institute for Industrial promotion, Serbia, Macedonia etc.

But the most efficient of all them seems to the author, the Guide for the implementation in Romania of the innovative cluster concept, under the guidance of the MINISTTRY OF ECONOMY, TRADE AND BUSINESS General Directorate for Industrial Policy and Competitiveness (Leucuta Christina). This guide offers a methodological and a pragmatic basis for those who wish to apply at an industrial scale the new concepts in the development of innovative clusters. Some of the main chapters of it are:

- Concepts, main actors, conditions and benefits;
- Situation at the European and international levels;
- Innovative clusters in EU (France, Germany, Sweden);
- Situation in Romania (Regional SWOT analyses, regional potential for clusters, initiatives, Interministerial Working Group, INCLUD Project-Industrial Cluster Development, INOV Cluster project, Romanian Cluster Mapping);
- Posibilities of financing (private and public funds, European funds, billateral cooperation etc);
- Main stages in setting up a cluster and registering in the European Cluster Observatory;
- Conclusions and recommendations.

As a special case of promoting innovative clusters, was the recent project, Adriatic Danubian Clustering (ADC), conducted in the period 2009-2012. The project

“Adriatic Danubian Clustering” (ADC**) -** (www.adcproject.eu) was financed from European funds and via the Transnational Cooperation Program for South-East Europe (SEE) 2007-2013. The project was coordinated by the Italian Region of Veneto, well-known for its experience in the field of entrepreneurial activities. The other partner countries in the project were: Bulgaria, Italy (with four regions: Veneto, Friuli Venice Giulia, Emilia Romagnaandi Molise), Slovenia, Hungary, Croatia, Serbia, Montenegro and Bosnia-Herzegovina.

The ADC project is an excellent example of mobilizing public support for entrepreneurial cooperation in the strategic productive sectors of South East Europe. After deep investigations during the ADC project, based on the on the results of the national context and swot analyses, with the support of stakeholders and opinion leaders, as well as based on the discussions with representatives of the existing or in progress national clusters within Regional Focus Groups, Sectoral Working Groups and national Forums which have taken place during the project implementation, were identified four strategic sectors of common interest for all the project partners and agreed by the countries’ representatives in the project for transnational clusters’ development: the sector of Agrofood (processing, preservation and packaging of food products and related technologies), the sector of Modern Housing (building and modernization of living dwellings), the sector of Logistics and the Sector of Mechatronics.

There are still some other potential economic sectors for cooperation to be identified further. The identification of the four strategic sectors is a first step to overcome the current situation which is characterized by the lack of an exchange of information among the countries in South-East Europe on their potential for entrepreneurial cooperation, which can facilitate trade exchanges, specialization, access to innovation, joint initiatives on the global markets, in order to build a regional economic identity of the Adriatic-Danube area as an integrated productive system of high competitiveness and strengthening its capacity of attracting foreign investors. Regarding the innovative clusters one of the most recent cluster mapping exercise in Romania shows the situation of the Romanian clusters according to the following map.

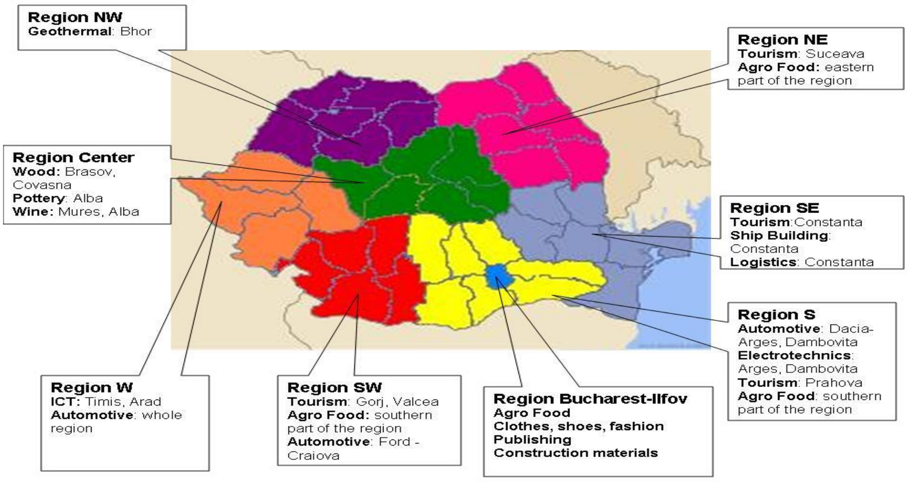

Figure 1. Romanian innovative clusters

Source: Guth, M (2010), ZENIT GmbH, Daniel Cosnita, Inno Consult – Clusters and Potential Clusters in Romania

References

(2004). European Commission. *Third Report on Economic and social Cohesion*.

Constantin, Daniela Luminiţa (coord.) et ali. (2007). *Coeziunea economico-socială şi politica regională. Contribuţia fondurilor europene la finanţarea programelor/Economic and social cohesion and regional policy. Contribution of EU funds to financing programs*. Bucharest: ASE.

Guth, M. (2010). *ZENIT GmbH*. Daniel Cosnita, Inno Consult – Clusters and Potential Clusters in Romania.

Horvat, Andrei (2004). *Absorption Problems in the EU Structural Funds*. Ljubliana.

http://www.adcproject.eu/

Kehew, R.; Giosan, V et. al, (2001). *Manual de evaluare preliminară a credibilităţii financiare a autorităţilor publice locale din România, utilizând indicatori financiari primari, USAID/România. Programul privind Administraţia Publică Locală/Manual of preliminary assessment of the financial credibility of local public authorities in Romania, using primary financial indicators, USAID / Romania. Program on Local Public Administration.*

Pascariu, Gabriel (coord) et ali. (2003). *Impactul politicii de coeziune socială asupra dezvoltării economico-sociale la nivel regional în România, Studii de impact privind pre-aderarea/ The impact of social cohesion policy on the economic and social development at the regional level in Romania, Impact studies on pre-accession*. Bucharest: Institutul European din România.

Păuna, Carmen Beatrice, Project manager (2012). Adriatic Danubian Clustering (ADC) Project DVD 2012, ADC BEST OF. *Contribution of Institute for Economic Forecasting* (IPE) Team.

Wallace, Helen; Wallace William & Pallack, Mark A. (2005). *Elaborarea politicilor în Uniunea Europeană (Capit. 9 – "Coeziunea şi fondurile structurale" – David Allen/Policymaking in the European Union (Chapter 9 – "Cohesion and Structural Funds" - David Allen*). Bucharest: Institutul European din România.