# A Diagnosis Model of the Economical and Social differencies, as a Support for the Regional Development Policies

[*]Daniela SARPE
[**]Vasile MAZILESCU
[*]Mihaela NECULIȚĂ
*Department of Economics
*Department of Economic Informatics
Dunarea de Jos University, Galati

**Abstract.** The research idea of this paper is the diagnosis of the disparity among Romania's developing regions and the issuing of economic policy measures for the polycentric development. The product of the research, thought as a diagnosis model, will be able to support the decision process, on the local and regional level, of the actors in different fields of the economic and social life. The research's field of interest suggested by the paper complies with the concerns deriving from the new cohesion policy developed on the european level – "Regions for Economic Change", the research proposed having the aim to provide solutions for the regional restructuring that depend on the traditional industries through developing some mechanisms of economic policy to support the cluster formation on regional or local level. The knowledge mobilization represents the solution that was accepted and developed within the paper for intelligent social network setting up, structures that use intensively the knowledge management, distributed technologies and competencies of the human resources within organizations and from outside. Concrete knowledge structuring and mobilization defined as expertise will allow to work out effectively and efficiently the objectives based on some dynamic learning processes, strategic planning and decision making, developing in this respect a system of knowledge management. the entire knowledge mobilizing approach will be made designing a social network of experts for the creation of knowledge in the shape of a generic knowledge model for every region (RGKM). The assessment of these models will be made on one hand by their comparison on the base of instantiation for every region and on the other hand by using all these instances in a case-based system that will aim at supporting the macro-regional diagnosis and will constitute a support in decision-making (formulation of some measures of economic and social policies).

**Keywords:** social networks, regional policies, knowledge management, polycentric development, diagnosis

## 1. Introduction

The aimed purpose in this paper is that of synergically reunite the relevant competencies for the spatial macro-regional analysis, in order to provide certain operational tools to decrypt the diversity of the territorial systems. The x-ray diagnosis of the developing regions taken into consideration will be accomplished in a new logic of the system-network binomial, concepts which in general have been insufficiently valued in explaining the dynamics and territorial differencies. The research's field of interest suggested by the paper complies with the concerns

deriving from the new cohesion policy developed on the European level – "Regions for Economic Change", structured on 30 important themes focused on economic modernization and on the Lisbon Agenda. Regarding the strategy of regional development, these themes are concerned with the necessity of new policy implementation, that are oriented on the convergence speed increase of the industrial structures. Thus it should ensure the regions cohesion. In this respect, the present approach focuses especially on the direction of improving the research and innovation capacity on regional level as well as on shortening of the implementation period of the innovative ideas. Since Romania is on the verge of being integrated in the European structures and since the economic integration represents itself a reallocation process of resources among different sectors, it can bring about asymmetric shocks through specialization changing on regional level. These changes may have a great influence on the economic performance of the involved regions. Moreover, a lack of studies regarding the integration impact upon the regional development can be identified, most of theses approaches referring only to the specialization degree on the regional level not to its factors of influence.

## 2. State of the art in the proposed field of research

The theoretical frame on which the present paper is based starts with the traditional approaches in the international trade theory and the economic growth models based on constant return to scale and perfect competition. To the above mentioned aspects, the most recent models of development of the new economic geography are added and the economic growth of endogene nature based on increasing returns to scale under the circumstances of imperfect competition. The contemporary economic theory, which is frequently represented especially by the new theory of international trade, through the new approaches in economic geography or through those regarding the role of direct foreign investments, is trying to provide arguments to define different regional development policies. Thus the positive externalities associated to the scale economies and to the advantages resulting from the spatial location that allow the potential market access, to the qualified labor or to the advanced technologies are only a few reasons that generate polarizing on regional level.

The endogene economic growth models demonstrate how the externalities associated to the public goods investments can generate additional benefits associated to the productive capacity of an economy (Hammond &Rodriguez-Clare, 1993). Whereas the endogene economic growth has advanced in the grasping of the growth process, considering it as being supported by the new technologies (Romer, 1990), the geographical approach is trying to explain why the innovative practices are developing in the geographical proximity areas (Martin & Sunley, 2006).

The regional structures typology analysis that work as networks (Johannes Glückler, 2007) emphasize the intra and inter-regional innovative opportunities. The neoclassic model of economic growth limits, pointed out by the difficulty of inequalities explaining between the increase rates on regional level lead to a revolutionary approach in economic geography. (Boschma & Lambooy, 1999, Boschma & Frenken, 2006). Actually, an integration of the economic growth theory in the one of innovation has been accomplished, aiming at emphasizing the endogene aspects of the regional economic development (Frenken & Boschma, 2007)

A research branch in the field (Zak &Knack, 2001; Hall & Jones, 1999) refers to the social capital that as a concept covering the institutional sector, governmental policies as well as the inter-personal relationships that occur on the regional (or country) level. The social capital is the one that influences or even generates the development of all the other types of capital (physic, human, technologic). Another way of analyzing the regional economic development is

connected to the so-called *social networks.* (Granovetter, 2005) As well as the evolutionist economic science, the social network theory allows the regional clusters creation to study the conditions, results and dynamics of the network structure. However, Knowledge Mobilizing and Management (KMM) are used increasingly striking on the organization level as instruments that involve the increase of opportunities of the network members collaboration regarding the planning, implementation and refining of certain initiative based fundamentally on the intellectual capital. KMM strengthens the decision making capacity, competence based issue settling, provides platforms for dialog, research and consulting (Mazilescu V., 2003, 2006).

Knowledge in an organisation is the collection of expertise, experience, and information that individuals and workgroups use during the execution of their tasks. Organisational knowledge is stored in individual minds, or implicitly encoded and documented in organisational processes, services and systems. Besides labour, capital, and land, knowledge has been recognised as an important productivity factor for organizations (Abecker et al. 1999). Solving problems in organisations is a complex, knowledge-based activity. It entails taking decisions in a dynamic environment using different sources of information. In such a dynamic work environment people increasingly recognise the management of organisational knowledge as a key factor for business process effectiveness. Knowledge intensive companies employ highly skilled people, knowledge workers, which are faced with constant problem-solving tasks using knowledge that needs to be grasped from existing information sources. In the context of a knowledge intensive organisation (KIO), knowledge intensive tasks, such as dealing with abstraction, dealing with uncertainty, and recognising patterns of organisational behaviour involve an effective combination of corporate competencies and responsibilities. Organisational groups in KIO need to manage their skills efficiently, create mechanisms to elicit innovation, and gather ideas, suggestions and other sources of information to tackle their workgroup processes. The objectives that underlie this quest are the development of more effective workgroup practices, the improvement of business effectiveness, and ultimately to enhance organisational learning. In this research, the concept of organisational learning is viewed as an organisational process where three forms of learning can occur in parallel: individual learning by reusing lessons learned experiences, learning through communication (or group learning), and learning through the use of an information repository. Organisational learning means the process by which the organisation enriches its knowledge including a common view of its organisational culture and a coherent understanding of their knowledge assets.

## 3. General and specific objectives of the proposed system

The knowledge mobilization represents the solution that was accepted and developed within the proposed system for intelligent social network setting up, structures that use intensively the knowledge management, distributed technologies and competencies of the human resources within organizations and from outside. Knowledge mobilization (KM) is defined as a practice on which organizations, in a conscious and intelligible way, identify, purchase, select, organize, distribute and analyze their own knowledge in terms of resources, documents and people's competencies. Knowledge mobilization is regarded as being an instrument of intern management used to strengthen the operational efficiency. In most cases it is looked upon without the existence of a formation modality of a strategy based on knowledge, in the respect of their mobilization, thus obtaining systems of knowledge mobilization based on their mobilization process. KM combines very well with the business processes, collective intelligence, and competency management, in each case having as a consequence a system (KMS) or a KM platform (KMP). The systems and the cases-based reasoning (CBR) have been employed for the management of expertise or of experience regarding the settlement of an issue for providing the associated technical support.

We consider the effective development of a KMS/P based on the expertise management convenient using the support of the CBR-type systems for the following reasons:

1. Knowledge integration on the regional level represents the impulse for economic prosperity.
2. Market unpredictability requires the giving up of traditional approaches in KM field, on development and use of ICT that allow rational manipulation of distributed and dynamic knowledge, to the amplification of different KM theories that are applied on the regional level for knowledge that can be used again.
3. KMM can support the change grasping and of effective performance in the good way of change even if the change occurred and was not understood.
4. KMM, through its strong interdisciplinary and integrative character can support correctly the increasingly complexity management of all economic systems and processes.
5. Without any method of capturing and integration of the similar experience (for example the regions, considered as being individual cases, with all characteristical elements) in a CBR-type system, any new development process may lead to chaos.
6. Implicit knowledge mobilization may contribute in a better way to the competitiveness increase and to the identification of some economic concrete measures oriented towards the disparity administration on the regional level.

A well-defined knowledge structure (an intelligent model) that relies on the heterogeneous information accumulation and distribution that can be used by any member of a social and economic network at any time, represents the support of a dynamical allocation of resources mechanism that can have as a result the regional disparities reduction.

The general objectives of the approach will be:

1. Accomplishing of a comparative macro-regional diagnosis among Romania's developing regions, identifying the common aspects as well as of the specific differences regarding the resource allocation.
2. Designing and applying of a Knowledge Chain Model – KCM in the view of creation of knowledge management and mobilization strategies – KMMS.
3. Developing a case-based system that encompasses experience-type models of knowledge.
4. Formulation of social and economic policies measures both on adjusting policies level and on structural one with the purpose of inter and intra-regional disparity reduction on the base of RGGKM-type cases (Regional Generic Knowledge Model).

The specific objectives could be:

1. Territorial defining of the active endogene sub-spaces, presenting a knowledge mobilizing potential in the view of synergy creation within some social networks based on collective competencies.
2. Creation of involved social networks of experts and of the modalities of collaboration specific to the knowledge mobilizing process.
3. Analysis of the dependent between the specific of the industrial sectors and their degree of concentration on the regional level.
4. Classification of the development regions depending on their industrial structure and their geographical position.
5. Developing of a KMS/P-type environment for knowledge and expertise mobilizing, capable of undergoing distributed knowledge processes, based on a social network.
6. Synthesis of a generic knowledge model for every region (Regional Generic Knowledge Model - RGKM), thus involving the KMM process.
7. Applying and refining RGKM for all involved regions of development.
8. Developing of the cases-based system that encompasses knowledge models RGKM under the shape of experience, system which is called Case-Based Experiential System (CES).

9. CES implementation and use to determine the social and economic policies derived on the regional level.

## 4. The novelty, originality and complexity of the suggested solutions

The novelty of the suggested approach consists in associating systemic approaches with network-type ones and with the endogene-exogene attributes associated to them and applied to a geographic territory in which the administrative-type classical concepts like static, politic etc, represent only the hypotheses links of support and not final units of the project. The suggested solution is provided by an instrument of evaluation of the knowledge mobilization capacity on some social and practice networks. Thus it can be quantified in real time the endogene-exogene ratio in the regional development dynamics, suggesting the categories that have systemic vocation and those the run particularly as a network. Concrete knowledge structuring and mobilization defined as expertise (contextual, relevant, performable on the social network level under the shape of a community of practice) will allow us to work out effectively and efficiently the objectives based on some dynamic learning processes, strategic planning and decision making, developing in this respect a System of Knowledge Management. The entire knowledge mobilizing approach will be made designing a social network of experts for the creation of knowledge in the shape of a Generic Knowledge Model for every Region (RGKM). The assessment of these models will be made on one hand by their comparison on the base of instantiation for every region and on the other hand by using all these instances in a case-based system that will aim at supporting the macro-regional diagnosis and will constitute a support in decision-making (formulation of some measures of economic and social policies).

The importance of the theme consists in the novelty and its inter-disciplinary strong character, the approach being centered on new management practices and technologies that are encompassed in the semantic trend (Semantic Web, OWL and RDF, Web Services, Data Integration). Knowledge-based organizations are designed on purpose with the aim of making a better use of their own resources of knowledge and of the knowledge processing abilities to increase productivity, reputation and innovation.

The impact of the suggested approach could be described at the economic and social level. The economic effects will be visible after the implementation of the suggested policies, of the provided tools (analysis models) under the circumstances in which the economic and social agents will integrate the obtained results. Thus the reduction of the regional disparities in economic terms can be accomplished but with the maintaining of the local cultural identity. The social effects will be emphasized as a result of the increase of the social networks role identified by the inter-groups contacts dynamics, by mutual acknowledgement of the different actors involved in the development process and by changing the macro-regional perception of the systems presenting an endogene potential. Thus, the network members are allowed on the basis of some planning, development, implementation initiatives (based on research and practice results) to have the chance of mobilizing and increasing the capacity of social and economic analysis. KMM is considered an intern management instrument to strengthen the operational efficiency and frequently is looked upon without the presence of a knowledge-based strategy formation modality. From this point of view we shall create and apply for the presented issue a knowledge chain model in the view of the management strategy formation of the knowledge and their mobilization.

The present approach has an integrative character taking into consideration both the territorial, social, economic and technological aspects, from the perspective of a diagnosis based on quantitative and qualitative assessments. The theme of the project will allow the network members on the basis of some planning, development, implementation initiatives (based on research and practice results) to have the chance of mobilizing and increasing the capacity of

social and economic analysis. KMM due to its strong interdisciplinary and integrator character will support more efficiently the increasingly bigger administration of complexity of all economic systems or processes being an essential factor for the creation of new and innovative knowledge.

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