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Lessons of the European Research Networks

Abstract

The scientific research is one of the most dynamic fields of activity, the influence of which is felt at all the levels of the economic and social life. The increased focus on the scientific research, as essential factor in the process of economic and social development of the European area in general and of the national area in particular, reveals the need to investigate the European research networks, which represent successful collaboration and action patterns, in the perspective of the national research infrastructure development programs.

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The scientific research is one of the most dynamic fields of activity, the influence of which is felt at all the levels of the economic and social life. The increased focus on the scientific research, as essential factor in the process of economic and social development of the European area in general and of the national area in particular, reveals the need to investigate the European research networks, which represent successful collaboration and action patterns, in the perspective of the national research infrastructure development programs.

The research networks established at European level have different organization and action forms, structured by fields of interest and categories of members. With a history of several decades, they can decisively influence, through their activities, the decision-making process at the level of the European economic and social policy.

The scientific research history at European level was marked by a series of important events, which contributed to the consolidation and development of the general framework, as well as to the mediatization of its potential benefits, at the economic and social level. Thus:

- The research bases at European level were marked by the Euratom Treaty of 1956, whose objective was research development in the field of atomic power; the European

- countries gradually extended their research scope to other energy sources;
- In January 1974, by the resolution of the Council of Europe, the activity of co-coordinating the national research policies and of the EU policy on scientific research was regulated;
 - After 1980, the research at EU level was also extended to other areas of interest, mainly to promoting general competitiveness;
 - The support provided to the scientific research at EU level was based upon the EU framework programs, whose goal was to encourage the co-operation between institutes and researchers from different countries;
 - The first EU framework program, named Esprit, was adopted for the period 1984-1994, when the focus was laid on the role of information technology in increasing global competitiveness; Esprit included three framework programs: the first (1984-1987) that focused upon energy, industry and environment, the second (1987-1991) that focused upon the informational society and the third (1991-1994) that focused upon information technology;
 - FP4 (1994-1998) followed, which continued the activities of the previous programs, at the same time focusing upon the socio-economic research development;
 - FP5 (1998-2002) marked a change of focus in European research, i.e. the shift of the focus from technological performance to sustainable development and creation of a "friendly" informational society;
 - FP6 followed next (2003-2006) – which was designed as a financial instrument for the support to the establishment of the European Research Area (ERA);
 - FP7 (2007-2013) – support instrument for the EU policy targeting economic growth and employment opportunities;
 - In total, the funding from the EU budget, through the framework programs (1984-2013), exceeds 86 billion euro.

The present and future socio-economic challenges, such as economic growth, which is more and more dependent on research-innovation, as well as the climate changes, cannot be approached only through local or national policies. Thus, in March 2000, in Lisbon, the Council of Europe launched the idea of an ambitious concept – creation of a European Research Area (ERA).

This concept represents a vision of the future of research in Europe, based upon an internal market of science and technology, targeting to join the research of excellence, competitiveness and technology, by creating a better co-operation and co-ordination between all the European relevant actors, at all levels. Among the measures of action proposed by ERA, the following are worth mentioning:

- Promoting the co-operation between the national organizations and research programs;
- Integration and development of existing initiatives (e.g. COST);
- Identification of research centers of excellence from Europe;
- Improvement of the environment for research partnerships and private investments;
- Elimination of barriers that hinder the researchers' mobility in Europe;
- Co-ordination of the activity regarding the evaluation of quality and national policy impact in the field of research-development;
- Creation of a network of high-performance trans-European data for the scientific communication.

In close connection to this European Research Area concept, a proposal was launched in Barcelona in the year 2002, by the leaders of the EU Member States, according to which, by the end of 2010, the European countries should allocate at least 3% of their GDP to research and development. This objective was unanimously accepted, in the first place due to the positive correlation between the R&D expenses and the increase of competitiveness. Yet, under the background of stagnation in the last decade of the share of expenditure allocated to research from GDP, in most EU Member States, only a 0.3% increase can be noticed in the year 2005 (Eurostat). At the same time, in the same year, only two European countries reached and even exceeded the objective established at Barcelona, in 2002: Sweden, by 3.86% of GDP and Finland, by 3.48%.

In order to get an overall picture of the research sector at European level, we shall next present several representative examples of European research networks.

The European Science Foundation (ESF)

Established in the year 1974, the European Science Foundation puts together 78 organizations from 30 European countries, which are working in the scientific research area. Since its establishment up to the present moment, ESF has co-coordinated a wide range of pan-European scientific initiatives, being able to fast respond to the new challenges due to its flexible organizational structure. The main objectives of the European Science Foundation are the following:

- Supporting all the science and research branches at European level, by developing co-operation in the field of scientific research, analysis of the strategic issues in the research area, counseling in the research policy area, encouraging the researchers' mobility and ensuring the free circulation of information and ideas;

- Supporting co-operation in the use of the existing facilities as well as in planning new facilities;
- Planning, launching and co-ordination of collaboration in research activities;
- Promoting the collective rights and interests of the member organizations in the relation with the public authorities and the public and private entities.

As regards the acceptance as member of foundation, any national research organization located in one of the countries that are members of the council of Europe, which provides significant support and/or coordinates research activities and receives the largest part of support from the respective state, is eligible to obtain full membership of the European Science Foundation.

Several research networks activate under the European Science Foundation, with the following main objectives: discussion, planning, analysis and co-ordination of the research activities in the respective areas. They pool the researchers from the member organizations in order to evaluate the possibility of scientific research development and implementation at European level. Many times, these lead to other ESF activities, namely: European programs and conferences in the field of research.

Romania is represented at the level of the European Science Foundation by the National University Research Council (NURC). Established in late 1994, as integrating part of the higher education reform strategy, NURC obtained full ESF membership in 2003. The main objective of NURC is represented by the promotion of quality and innovation in the academic research and fostering the transfer of technology acquired through the research activities. NURC approaches all the ESF disciplines, actively participating to the funding of the research projects and promoting co-operation among researchers.

Map 1. Location of organizations that are ESF members



Source: www.esf.org

The European Network of Agricultural and Rural Policy Research Institutes (ENARPRI)

ENARPRI was established in the year 2003, at the initiative of the Center for European Policy Studies (CEPS) and brings together leading national institutes and research teams from 13 countries of the European Union.

The main ENARPRI objective is the establishment of an institutional structure that will lead to improved exchange of information and policy research insights. It will also contribute to the development of tools and methods and the organization of EU wide research programs that are closer aligned with the interests and demands of the users of the policy research. In addition, there is scope for significant spillover effects and economies of scale within the network by avoiding overlap in the development of models for quantitative evaluations and in developing policy scenarios, and by linking comparative advantages of various institutes through network collaboration. The ENARPRI activities are co-coordinated and managed by CEPS. The central theme of the Network is represented by the impact of the regional, bilateral or multilateral trade agreements which the European Union has concluded or is negotiating, including the World Trade Organization, EU enlargement, Euromed, Mercosur, as well as the multifunctional model of European agriculture and the sustainable development of rural areas. The activities developed within

the Network include the following, among others: organization of conferences and workshops, publication of working papers and policy papers, as well as the formulation of joint research programs.

In conclusion, the expected results of the activities developed under ENARPRI are the following:

- Creation of an institutional structure linking key research institutes with major benefits for improved exchange of information and policy analysis both on the short and long term;
- Development of improved tools for impact assessment;
- More effective impact assessment of trade agreements on a variety of important social, economic and environmental indicators and multifunctionality assessment;
- Clearer analysis of the need for EU policy adjustments.

European Development Research Network

EUDN was established in late 2000, through the efforts of the Center for Development Research (ZEF), which followed the EU and World Bank directives with regard to setting up a European research center, similar to the Global Development Network (GDN), launched by the World Bank in December 1999. EUDN is a network that is addressed to the individual researchers coming from different research institutes from Europe. At present, it brings together 61 researchers of different specialties, mainly from the economic development field.

The main EUDN objectives are the following:

- To facilitate the exchange of ideas between the researchers activating in the field of economic development, on one hand, and the decision-makers in the political field, on the other hand, targeting the improvement of the research community impact upon the decision-makers and the European cooperation in the development field;
- To strengthen the relations between the groups of researchers in economic development, in order to strengthen the European research capacity in the elaboration of development studies, in general, and economic development, in particular;
- To train the young researchers through PhD programs or workshops, as well as to facilitate the PhD or post PhD student exchanges between the European institutions and between the European institutions and the institutions from the developing countries.

These EUDN objectives turned into practical activities, and a series of international conferences and workshops have been organized for this purpose, and in the future researcher exchanges and

schools for PhD students will also be organized. Here are a few examples of works and projects developed in 2006, under the EUDN network: "Explanation of the Heaven global pollution effect", "Commercial unions versus statistic discrimination – theory and application in post apartheid South Africa", "Growth and risk: methodology and micro-evidence".

The European Network for Scientific Research Coordination in Organic Farming

The European Network for Scientific Research Coordination in Organic Farming (ENOF) was promoted by the European Union, funded by the Commission of the European Communities and run by the General Directorate Agriculture. The main ENOF objective is the contact and collaboration between the European bodies activating in the field of education, research, experimenting and mediatization of the technologies used in organic farming. The universities, as well as the public or private research centers are included in this category. ENOF acts as a centralizing unit for the information and results of the research activity, contributing to the identification of priorities in organic farming. The centers that carry out activities in the field of organic agricultural and forestry practices can collaborate with ENOF, as associated laboratories, and can participate to the workshops and other scientific manifestations organized by this.

ENOF has a managing committee, subordinated to the coordinator and five sub-coordinators for each of the following research fields:

- Grain production and pest control,
- Soil fertility and environment issues,
- Animal breeding,
- Economic and legal aspects,
- Crop protection.

The coordinator is the only body directly subordinated to the European Commission. The network also coordinates the editing of a newsletter, NENOF, where the scientific research papers in the field of organic farming are published. In order to disseminate the results and strengthen the collaboration in this field at European level, ENOF organizes a workshop each year. Among these, the following should be mentioned: use of soil resources and biodiversity; role of organic farming; steps towards conversion and development of organic farming; use of resources in organic farming; the future of organic farming systems. Following these actions, ENOF centralized the information and results of the studies and published a White Paper on the research situation in the field of organic farming in Europe.

These are only a few examples of European research networks. Taking into consideration their organization, thematics and approached disciplines, their objectives and directions of action, the programs and initiatives in place, the collaboration with other European and world research organizations and decision-makers, they represent successful models in the field of research and implementation of research results, which may be an excellent starting point in the complex process of reorganization and development of the national research capacity.

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