

AMCER

ADVANCED MONITORING AND COORDINATION OF EU R&D POLICIES AT REGIONAL LEVEL

Applied Research 2013/2/18

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This report presents the results of a Targeted Analysis conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU27, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

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This basic report exists only in an electronic version.

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Main findings

The analysis of the Regional Innovation Systems of the AMCER regions¹ reveals that despite the current economic and financial crisis, the regions which have already managed to build up a knowledge-driven regional economy (at least to a certain degree) are likely to have better, more sustainable, and less volatile growth perspectives

A further challenge is the rise of general unemployment and the long-term and youth unemployment figures that remain high in most of the regions. The population development and the Demographic Change are challenging all the regions studied. The regions are facing lower population growth, demographic ageing, and outmigration. The availability of human capital (secondary and tertiary education) is often sufficient. However most regions are confronted with high numbers of early leavers and a low participation rate of adults in further education (e.g. Tuscany, PACA).

Furthermore, in many cases regions need to increase their R&D capabilities. Additional spending and personnel will help to strengthen the competitiveness of the regions in terms of knowledge and technology production. Moreover, in some regions the structural change towards a more diversified and knowledge based economy has to be fostered. Existing potentials in high-tech sectors have to be strengthened. For this, SMEs play a crucial role. But so far, SMEs in the AMCER regions are not so strongly involved in innovation activities. Additionally, the link between businesses and research institutions is in some cases rather weak. More support is needed to support and encourage SMEs to conduct R&D.

In terms of the participation of AMCER Regions in EU RDI programmes, the analysis carried out in the context of the project, notably on the programmes contacts databases, indicate that AMCER regions have benefitted from their participation in EU programmes. Certain regions, possibly given their existing RDI capacities and potentials have been more successful than other in attracting FP 7 funds, this is the case notably of regions with a strong network of HEI, and/or with a strong relationships between research and innovation notably through SMEs. Some however are less successful than the national or EU average. However it is difficult to establish a clear link between their participation in EU programmes and their respective overall economic performances.

As noted already in academic research and also in conclusions of the ESPON KIT project, in many regional situations increasing R&D investment does not have a significant automatic and immediate impact on growth and job creation because technological change, as an outcome of research, is only one way to generate wealth.

¹ The AMCER stakeholders Regions involved in the project are: Tuscany Region, Italy (lead stakeholder); Andalusia, Spain; Brittany Region, France; Catalunya, Spain; East of England, United Kingdom; Flemish Government, Belgium; Lower Saxony, Germany; Ostrobothnia, Finland; Provence-Alpes-Côte d'Azur Region, France.

In the context of monitoring the EU R&D programme, the information concerning effective localisation of project beneficiaries is in some cases biased (Headquarter effect) by the fact that the projects are allocated to national R&D organisations or companies which Headquarters are located in regions which are different from those where effectively and ultimately the RDI activity is performed. Following the AMCER research, the influence of Headquarter effect is estimated at 7,5% of the total participations. Therefore a significant number of the AMCER regions participation in FP7 (5 590 over 74 460) had been misplaced.

In most regions² the number of ingoing participations identified is considerably higher than outgoing participations. The analysis of the headquarter effect highlighted a high number of participations that would have been otherwise attributed to other regions in the country. Ingoing participations mainly concern research organisations; while private commercial and public organisation are less prone to generate a headquarter effect.

This effect can in some cases significantly distort the image of the overall RDI activity performed in a given region for the purpose of monitoring, allocation of support resources, prioritisation of public support actions, avoidance of duplication of resources, etc. that the authorities in charge of regional policies should be carrying out in the context of their normal monitoring and strategic planning actions.

The analysis of regional participation in FP7 showed that the weight of each region in total national FP7 is generally lower or equal to that of their weight in gross domestic expenditure on R&D. Tuscany and Catalunya are the only two exceptions to this.

SME in the regions analysed account for an average of 15% of FP7 funding. However, there are considerable differences among them. In Flanders for example, SME account for 43% of total national SME participations, while in Brittany SME participation represents only 4%.

In terms of employment, a part of the AMCER regions specialized in medium knowledge intensive sectors. Exceptions are Catalunya, East of England and PACA with stronger share in High knowledge areas; on the other end Andalusia and Tuscany have a stronger concentration on low knowledge sectors.

Patenting activity also vary significantly, with some regions where this activity is supported by dedicated intensive patenting organizations or significant technology corporations. Sometimes patenting activities are strongly focussed on one or two key areas (notably electrical engineering).

² Only in Catalunya, East England, Flanders and Tuscany the rate is lower than 10%

2 Options for policy development

Contribution to regional smart specialisation strategies

The European Commission has released guidelines for regional smart specialisation strategies which aim at coordinating existing tools within the EU policies and Regulations. The individual RIS3 strategies would take the form of an annex to the Operational Programmes for the next Financial Framework of Cohesion programmes.

The AMCER project results could constitute a useful contribution for the participating regions in the context of preparation of their respective Smart Specialisation Strategies and more generally in the context of the planning for the next cycle of the EU Financial Framework 2014-2020.

Indicators provided by AMCER such as participations indicators, numbers of patents, clusters analysis contribute each to the design of indicators for the Regional innovation smart specialisation strategy that have to be delivered jointly with the next ERDF Operational Programme for the 2014-2020 programming period.

In particular, AMCER results on FP 7 participation, collaboration patterns, possible headquarter effects, main R&D sectors to be targeted, etc. should contribute notably to assessments concerning: identification of priorities; definition of an action plan with a coherent policy mix; and monitoring and evaluation.

AMCER approach can also contribute to the identification of 'niches' or specific domains for (present and future) competitive advantages, from an international stance, inform on the positioning of the regional economy in international value chains and on identification of specific key assets.

The AMCER analysis is based specifically on the drawdown of EU/FP7 (cooperation programme) funding and should be assessed in this context. It may not give a complete picture of regional/localised strengths and specialisations on the ground.

Therefore, for the participating regions, on the basis of the Commission guidelines for regional smart specialisation strategies, the AMCER project results can contribute to preparation of Smart Specialisation Strategies and more generally in the context of the planning for the next cycle of the EU Financial Framework 2014-2020.

Issues related to the data on EU Programmes on RDI

It should also be noted that access to EU databases have been problematic and has created substantial delays in the project implementation, which had not been foreseen in the planning phase of the project. Among the challenges encountered during the project implementation, it should be noted that the quality of the data collected by the EU about the performance of the EU RDI programmes could be improved to provide useful, readily accessible conclusions for policymakers and practitioners within regions.

The AMCER activities and research have demonstrated that EU databases should be improved in the context of the next Framework Cycle till 2020, by integrating geographical information and localisation, notably in order to effectively localise the research departments that effectively carry out the work related to the EU programmes.

Possibly this should be made into an effective reporting/monitoring requirement in the programme manual. Concerning the CIP, the monitoring structure should converge towards the FP structure. The ultimate aim would be to make the regions more self-reliant in terms of data analysis concerning the EU programmes.

At regional level, links should be established (or enhanced where existing already) between the administrative departments in charge of EU Programmes and those implementing ERDF by establishing effective communication and coordination mechanisms. Possibly the administrative capacity should be concentrated in the context of regional agencies together with standardised and mandatory set of procedures. For Member States like the United Kingdom this may be a challenge given the absence of English regional agencies.

In the context of the planning for the next Financial Framework, the European Commission could also provide guidelines concerning data harmonisation. In this context, the regional scoreboards prepared in the context of the AMCER project could serve as a basis or model as a possible way to harmonise the data coming from different sources/programmes.

It should be noted that there is no regional agenda within the Framework Programmes which were not conceived to have a territorial dimension and were not evaluated on a geographical basis. Rather the FP was and would continue within next cycle to support excellence.

Each financial instrument has its specificities and focus, and it is not the purpose of the present report to assess them. However, it appeared in the course of the project activities and in particular in contacts with regional stakeholders that better coordination and exchange of information should be sought between the bodies in charge of their implementation at Commission level (DG Regio and RTD) and the authorities in charge of regional policies in charge of RD policies and ERDF implementation.

Confidentiality aspects should be taken into account: for example, information related to individual financial contributions should not be divulged. It is also considered by some regions that the information about failed applications to R&D programmes should be kept confidential.

3. Recommendations for policy development

1) Participating AMCER regions and countries

At regional level, better coordination is needed between services in charge of the follow-up of the ERDF programme and the services in charge of the monitoring of the FP/CIP.

Notably, links should be established (or enhanced where existing already) between the administrative departments in charge of the ERDF participation analysis and FP/CIP participation monitoring through effective communication and coordination mechanisms in order to develop a common frame for monitoring and for developing indicators.

Possibly the administrative capacity could be concentrated in the context of regional agencies with standardised and agreed procedures. The exception to this could be Member States like the United Kingdom given the absence of regional agencies.

2) European regions generally

In order to improve coordination, benchmarking and monitoring efforts, the following aspects would be useful:

- A set of common definitions among the programmes would be useful. For instance, a common approach for counting the regional participations, in particular for those participations spread into many laboratories.
- A set of common scientific themes would also be useful, based on FP7 common themes, in order to improve comparability and monitoring.
- For the planning for the next Financial Framework, compatible and coordinated guidelines concerning data harmonisation could be devised.
- The AMCER regional scoreboards could serve as a basis or model as a way to harmonise the data coming from various sources/programmes.
- A common set of indicators for monitoring R&D participation, these indicators should be useful to feed regional policies.

3) European Commission

On principles, there should be a structured and coordinated debate, possibly in the context of the Smart Specialization Strategy process concerning an overall and coherent approach combining:

- Territoriality elements of RDI programmes,
- Access to data by authorities in charge of regional policies,
- Harmonized monitoring approach and indicators,
- Coordination with other related programmes (EU/national).

The ultimate aim would be to make the regions more self reliant in terms of data analysis concerning the EU programmes.

Permanent and effective governance mechanisms of coordination of financial instruments should be devised to improve the management, performance and efficiency of the synergies between Horizon 2020 programme and Common Strategic Framework (CSF) Funds, notably ERDF but also ESF as it concerns Human Resources support for R&D.

EU databases should be improved in the context of the next Framework Cycle till 2020, by integrating geographical information and localisation, notably in order to effectively localise the research departments that carry out the work related to the EU programmes. Possibly this should be made into an effective reporting/monitoring requirement in the programme manual.

However, improvements of the information provided by contracts' databases FP7 database has been noted. Within those surveyed during the course of the AMCER project, the FP contract database appears as the most complete and reliable database. DG RTD has significantly improved the quality and the reliability of the data. The FP7 database provides useful information on the localisation of research departments.

Concerning the FP7 database the recommendation would be to always request (make mandatory) the information about the localisation of the research department. CIP sub-programmes' databases should adopt the same structure as that of the FP7.

In order to better understand SMEs' role in regional RDI development, it would be useful for the data concerning their participation in EU programmes to be collected in a systematic way on the basis of common definition (possibly harmonized with Cohesion Funds requirements).

4. Need for further analysis/research

Regional typologies for R&D

Further investigate the possibility to achieve Regional typologies on the basis of the results of the KIT project and taking account of the other similar classifications of regional performance in terms of knowledge, innovation, research and development, such as Erawatch, the RIM and RIS.

Regional Innovation Systems (RIS)

Consideration may be given to further explore the possibility of using the Regional Innovation System model of analysis on the basis of Cooke's approach³ to complement place-based analysis of RDI regional systems.

AMCER methodology and approach

The AMCER methodology which integrates the RIS analysis approach, together with the effective results and effects of the regions' participation in EU RDI programmes, and with their overall performances in terms of RDI output, can usefully contribute to:

- The design of targeted and comprehensive innovation policy strategies
- Complement place- based analysis of regional RDI systems
- Improve efficiency and effectiveness in design, delivery and assessment of RDI policies and programmes at regional level.
- Develop related monitoring tools to monitor regions' performances in RDI policies and programmes.

In particular, the AMCER project results can constitute a useful contribution for the participating regions in the context of preparation of their respective Smart Specialisation Strategies and more generally in the context of the planning for the next cycle of the EU Financial Framework 2014-2020.

Therefore as expressed by some of the stakeholders in the AMCER project, further consideration could be given at making the AMCER approach of collection, analysis and dissemination into a permanent and ongoing process also for other regions.

³ COOKE, P.: Regional Innovation Systems: Competitive Regulation in the New Europe. In: Geoforum, 23, p. 365-382. 1992. COOKE, P.: Introduction: origins of the concept. In: BRACZYK, H.-J., COOKE, P., HEIDENREICH, M. (Eds.): Regional Innovation Systems: The Role of Governances in a Globalized World. (1. Ed.). London: UCL Press, p. 2-25. 1998. COOKE, P.: Introduction: Regional innovation systems – an evolutionary approach. In: BRACZYK, H.-J., COOKE, P., HEIDENREICH, M. (Eds.): Regional Innovation Systems: The Role of Governances in a Globalized World. (2. Ed.). London: UCL Press, p. 1-18. 2004.

Background

European Union (EU) R&D policies have a substantial impact on regional R&D systems and territorial cohesion, both at a European level and in the regions. Against the backdrop of the aims of Europe's 2020 strategy, policymakers need sound territorial evidence on the state of R&D activity, investment and support structure in their regions to improve the impact of EU funding programmes on more competitive R&D systems.

The AMCER- Advanced Monitoring and Coordination of EU R&D Policies at Regional Level, aims to equip the 9 regional actors with an accurate picture of their R&D systems, EU R&D Policy activity and its territorial impacts. This should provide these regional actors with the evidence needed to formulate and manage R&D policy more effectively.

A broader aim of the AMCER project is to provide a framework for the analysis and monitoring of the impact of EU R&D policies at regional level, for creating strategic knowledge and building better synergies between regional and EU R&D policies.

The project proposes general guidelines with a set of recommendations in order to improve the monitoring at regional level and moving toward an harmonised methodology that other regions can use. The recommendations suggest how data collection can be improved by region and delivered by European Commission so that it contributes more effectively to the management of R&D policy and territorial cohesion initiatives.

AMCER project is an ESPON priority 2 Targeted Analysis Based on User Demand project, (Targeted analysis based on user demand: European perspective on development of different types of territories). Therefore the project was carried out at the express demand of a group of stakeholders regions through the ESPON 2013 Programme.

The AMCER stakeholders Regions involved in the project are: Tuscany Region, Italy (lead stakeholder); Andalusia, Spain; Brittany Region, France; Catalunya, Spain; East of England, United Kingdom; Flemish Government, Belgium; Lower Saxony, Germany; Ostrobothnia, Finland; Provence-Alpes-Côte d'Azur Region, France.

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It shall support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory.

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