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Working Paper

Cohesion policy in the light of place-based innovation support: New approaches in multi-actors, decentralised regional settings with bottom-up strategies?

Arbeitspapiere Unternehmen und Region, No. R1/2010

Provided in Cooperation with:

Fraunhofer Institute for Systems and Innovation Research ISI

Suggested Citation: Stahlecker, Thomas; Koschatzky, Knut (2010) : Cohesion policy in the light of place-based innovation support: New approaches in multi-actors, decentralised regional settings with bottom-up strategies?, Arbeitspapiere Unternehmen und Region, No. R1/2010, Fraunhofer-Institut für System- und Innovationsforschung ISI, Karlsruhe, <https://doi.org/10.24406/publica-fhg-295082>

This Version is available at:

<https://hdl.handle.net/10419/45027>

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Working Papers Firms and Region
No. R1/2010



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Karlsruhe 2010

ISSN 1438-9843

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Abstract

According to the Barca report and the OECD, the place-based development approach is a new paradigm of regional policy. It underlines the necessity to distribute policy design and implementation among different policy levels in order to tailor policy measures to the specific local conditions. Place-based initiatives inherit a strong bottom-up element in public governance. Taking the innovation orientation in European cohesion policy as a starting point, it is the objective of this paper to analyse whether the recent implementation of structural and cohesion policy shows indications for place-based policy designs and governance. Germany is used as a case study, because it can be expected that in federal systems multi-level and bottom-up policy structures are already strongly evident. The major question the paper seeks to answer is whether the recent experiences from German cohesion policy formulation and implementation allow to identify starting points for the future design of European cohesion policy.

Key words: place-based approach, cohesion policy, multi-level governance, innovation policy, Germany

1 Introduction

The OECD has called the place-based approach to regional development "the new paradigm of regional policy" (OECD 2009). Economically, the idea is rooted in the concepts of market failures and government failures that create inefficiency (underutilisation of resources, for example, regarding innovation potentials) and social exclusion in specific places. Places are defined through the policy process from a functional perspective as regions in which a set of conditions conducive to development apply more than they do in larger or smaller areas. The place-based approach points to the responsibility to distribute policy design and implementation among different levels of government, with a role being played by special-purpose institutions, like public bodies, agencies, public-private partnerships. While upper policy levels governing the exogenous intervention (e.g. implementation of cohesion policy or national innovation policies) set the priorities, rules and general objectives for using the funding provided, regional or local levels of government have the task to implement these principles according to the specific characteristics of the respective "place". A fundamental part of the place-based approach is that it allows responses to be tailored to local conditions, rather than imposed uniformly top-down. Obviously, institutions and public bodies such as local government are central to shaping the success or failure of place-based initiatives.

The cohesion policy¹ (CP) implemented by the European Commission, particularly the efforts being made to use CP to support innovation, research and technological development, appears to be – due to its importance for achieving the Lisbon-related objectives – an interesting policy field to shed light on issues regarding the specifics of tailored interventions in the form of new innovation policy instruments and the role played by regional or local authorities. Innovation, and research that can be a pre-condition for it, tends to be under-produced by society due to market failures, uncertainty or asymmetries of information. These require public interventions which – in many EU countries – are undertaken at many political and administrative levels. As for the EU as a whole, the innovation gap between the EU and the two main competitors, the USA and Japan, although diminishing, justifies the Lisbon objectives in general, and innovation policy intervention in particular.

Depending on the political system, the process of defining objectives, setting priorities, designing and implementing the respective instruments, can be a complex process, especially in federal systems like Germany, where innovation policy is the responsibility of the federal states and thus of a multitude of public institutions at the different administrative levels (multi-level, multi-actor systems). In line with these complexities, the process of drafting the so-called Operational Programmes for Germany – which are the basis for implementing the EU strategy in the European regions – turned out to be barely coordinated with the superior level. In consequence, each of the sixteen German federal states created their own hierarchies of objectives, priorities, instruments and mechanisms for implementation and monitoring. In parallel, the federal government was involved in drafting the National Strategic Reference Framework, but had no or few competencies for issuing instructions from the top.

In the light of the place-based approach, the significance of innovation policy in addressing the Lisbon objectives, and the specific characteristics of the German federal system, the aim of this paper is to analyse whether lessons-learned from the ongoing

¹ Cohesion policy was enshrined in the Treaties with the adoption of the Single European Act (1986). It is built on the assumption that redistribution between richer and poorer regions in Europe is needed in order to balance out the effects of further economic integration. Through three and soon four generations of Structural Funds programmes, the Union has invested around € 480 billion in the "less favoured" regions since 1988. As from 2007, the EU Cohesion policy will revolve around three new priorities or 'objectives: (1) Convergence (formerly Objective 1), (2) Competitiveness and employment (formerly objective 2), and (3) Territorial co-operation. According to the Commission (COM 2007/474) in the current programming period it has become a major source of investment in support of the "Lisbon Strategy" in fields such as RTD and innovation both in the least developed region regions where capacity for these activities needs to be created, and in the more advanced regions where they need to be reinforced.

implementation of cohesion and structural policy instruments in Germany can be used to identify starting points for a reorientation of the European cohesion policy framework following the concept of the place-based approach for the period from 2013 onwards. The paper is structured as follows: in the following section the place-based approach and its implications for policy implementation is shortly described, followed by a discussion of the links between this approach and the RTDI (research, technology, development and innovation) orientation of recent cohesion policy, and the formulation of research questions. Section 3 is devoted to an analysis of EU cohesion policy in Germany and the identification of experiences which could be used for a reorientation of European cohesion policy following the concept of a place-based development policy from 2013 onwards. The final section 4 summarises the findings and draws conclusions about the lessons which could be learned from the German experiences for new cohesion policy approaches.

2 Theoretical and conceptual approaches

2.1 The place-based approach to regional development

The policy concept of the place-based development approach, what the OECD calls the "new paradigm of regional policy" (OECD 2009), has been experimented with in various parts of the world in the past two decades. Its general objective is to reduce persistent inefficiency (e.g. underutilisation of resources resulting in income below potential in both the short and long-run) and persistent social exclusion (primarily, an excessive number of people below a given standard in terms of income and other features of well-being) in specific places. Places are usually defined as "functional regions". Barca (2009) defines place – within the context of a policy – as a social concept, a contiguous/continuous area within whose boundaries a set of conditions conducive for development apply more than they do across boundaries. According to Barca (2009: 5), a *place-based development policy* can therefore be defined as:

- a long-term development strategy whose objective is to reduce persistent *inefficiency* (underutilization of the full potential) and *inequality* (share of people below a given standard of well-being and/or extent of interpersonal disparities) in specific *places*;
- through the production of bundles of *integrated*, place-tailored *public goods and services*, designed and implemented by eliciting and aggregating *local preferences and knowledge* through *participatory political institutions*, and by establishing linkages with other places; and

- promoted from outside the place by a system of *multilevel governance* where grants subject to *conditionalities* on both objectives and institutions are transferred from higher to lower levels of government.

The place-based approach goes beyond the traditional dilemma of fiscal federalism whether to decentralize or centralize any given public function. Central elements of this approach are that the responsibility for policy design and implementation is allocated among different levels of government supported by both contractual relations and trust, with a role being played by special-purpose organizations (agencies, public-private-partnerships, etc.). More specifically, the authority governing the exogenous intervention sets the priorities, rules and general objectives for using the funding provided, leaving it to lower levels of government to implement these principles according to the context as they see fit. This requires an intelligent coordination mechanism between the different policy levels and flexible forms of exchange, negotiation and mutual learning. According to the Mission statement of the Territorial Development Committee of the OECD (2009a) such a strategy "is place-based, multilevel, innovative and geared to different types of regions", and aims at institutional building/strengthening, improving accessibility to goods, services and information, promoting innovation and entrepreneurship.

The place-based approach has recently been singled out by Barca (2009) within the context of an agenda for a reformed cohesion policy. In the so-called Barca-Report it is argued that the approach can be particularly effective since it responds to the need for tailoring interventions and economic institutions to local conditions; a need that has been forcefully stressed by recent advances in the theory of growth and development. Further, a place-based approach – under which the Union sets the framework for intervention in support of regional development and jurisdictional Regions and Nation-States have responsibility for designing it and for selecting the regions and projects supported - is the only policy model that is compatible with the EU's hybrid form of government and limited democratic legitimacy.

One of the most important fields of public intervention under the Cohesion policy framework is – according to the Community strategic guidelines and in line with the renewed Lisbon strategy – certainly the priority "encouraging innovation, entrepreneurship and the growth of the knowledge economy by research and innovation capacities, including new information and communication technologies". Koschatzky and Stahlecker (2010) point to the merger of cohesion policy with the Lisbon agenda and the adoption of a much stronger focus on knowledge and innovation. In consequence, the former balance-oriented European (and subsequently national) regional policy converted to a new policy in which both the sometimes contradictory objectives 'conver-

gence' and 'growth' are equally combined and pursued. The total budget for cohesion policy which is available for the period 2007-2013 amounts to EUR 347 billion, complemented by national co-financing of about EUR 160 billion.

2.2 The place-based approach and its linkage to regional RTDI policy

As pointed out above, the local place and the region becomes the focal point for public policy interventions, particularly under the Cohesion policy framework. For instance, place-based policy targets specific neighbourhoods or communities for integrated interventions that respond to location-specific challenges, and engage fully the ideas and resources (Bradford 2005). The aim is both better government policy and more efficiency. In political terms, the place becomes a locus for the mobilization of collective action. With regard to innovation, the process typically involves *promoting the place* as a knowledge center. Thus, regions or the places can be regarded as key actors in the definition of technology and innovation strategies, and the design and implementation of the respective measures and instruments.

Possibilities and opportunities of the implementation of policy instruments and measures towards certain locations are particularly discussed in regional policy concepts. According to Kulke (2004), regional policy strategies are more than the adoption of policy instruments in microeconomic activities. In fact, they constitute a bundle of measures aiming at one or more policy goals (e.g. raise the employment of a region, the competitiveness or the technological capability). In parallel, incentives for the settling of private economic activities are implemented, the construction of the physical and institutional infrastructure as well as transport and communication networks are established. With a view to regional RTDI policy measures, the funding of research institutes, technology transfer centres, single-firm R&D and innovation funding, joint research activities as well as networks, cluster-related measures and the support of regional innovations systems are the most popular approaches.

The intervention of the government in technological development and innovation – be it on a regional or national level – is not indisputable (Dreher 1997, p. 26-31). The "market failure" rationales in RTDI policy are dominant for neoclassical welfare economics as a meta-rationale for government action and inaction (Laranja et al. 2008). Despite alternative perspectives such as "learning failure", for example, the dominant discourse of public policy intervention in all policy spheres continues to be very much framed by the view that policy intervention is justified only in circumstances where markets clearly fail to allocate resources so as to optimise overall social welfare (Howlett and Ramesh 1993). According to Laranja et al. (2008), typical policies associated with the market

failure rationale are those directed at compensating for market failures in the less than optimal allocation of private resources to science and those oriented towards the diffusion and transfer of technology-information.

Another rationale for regional RTDI policy can be derived from the so-called systemic institutional approach to innovation. These systemic institutional approaches accept that beneficial externalities are created because of the non-rival nature of technology. But these approaches are seen as being specific to the institutional context that promotes and shapes the learning interactions. These approaches have latterly taken a regional turn, emphasising the importance of "institutional thickness" and governance structures underpinning regional innovation "systems" or "networks" (Amin 1999, Cooke et al. 1997).

The concept of regional systems of innovation was first developed by Cooke (1992). A regional innovation system can be understood as a concentration of interacting private and public organisations, formal institutions, and other organisations that function according to organisational and institutional arrangements and relationships conducive to the generation, use and dissemination of knowledge (Doloreux 2004). According to Asheim and Coenen (2005), it consists of a knowledge and institutional infrastructure supporting innovation within the industrial structure of a region. Regional systems are not national systems in miniature, but respond to different rationales, institutional and governance settings which can be found at the sub-national territorial level. This can be provinces and federal states, any functional spatial entities like metropolitan areas, or any other places within a country exhibiting functional or systemic characteristics. It is a distinct element of the concept that a region or a place does not offer all factors and institutions necessary for innovation, but that it is a part of a superior, i.e. national system, and has to cooperate with other regional or national systems in order to merge all necessary resources at the specific territory (Cooke et al. 2004, Asheim and Gertler 2005).

An important part of the (regional) innovation system is the research system which overlaps with the former to a certain extent, but comprises research aspects which do not have direct impacts on innovation activities. Since research creates new knowledge and improves the already existing scientific knowledge base, the knowledge derived by research activities is an important input in innovation activities. Nevertheless, new knowledge is also created during the innovation process. This knowledge can be specific (and sometimes tacit) and confined to those individuals or organisations which are involved in the knowledge generation process, or it can be of non-specific character, become codified and enrich the general knowledge base.

The approach of the regional innovation (and research) system emphasises the dynamic, cumulative and social nature of the innovation (and research) process and the network of relationships between the structure of production and the institutional setting in which they are embedded (Asheim and Gertler 2005). Like the concept of the innovative regional milieu (Maillat and Lecoq 1992), a regional innovation system consists of formal and informal networks featuring mutual economic and technological interdependencies. Schätzl (2003) points to the following constitutional characteristics of such networks:

- Formal, informal and social contacts between many regional actors (firms, labour force, clients, and institutions) allow for network action, encourage collective learning and reduce uncertainties in the course of technological change; this may result in the solving of problems, synergies as well as the reduction of transaction costs.
- Regional delineation of networks: crucial for the innovation dynamic is the spatial proximity of the different actors; "face-to-face" contacts, the mobilisation of intraregional human capital, trustful cooperation between mostly small and medium-sized enterprises, flexible supply chains, an innovation-oriented cooperation of business and policy, etc. require regional networks.

In general, the concept of (regional) innovation systems and the network approach (as well as many other national and regional concepts, see for example the cluster approach) stresses the importance of learning in the innovation process and underline the specific character of tacit knowledge and its implications for spatial proximity and the necessity of being embedded in certain spatial contexts for technological development and innovation (MacKinnon 2002). However, whether a regional(-ised) research and innovation policy could be effective depends very much on the concrete policy concept, but also on the ability of the policy-makers to coordinate RTDI policy, especially against the background of a multitude of governance mechanisms and layers that subsist in countries with a federal constitution.

2.3 Collaboration in RTDI governance: Horizontal and vertical networks

As already pointed out above, policy measures implemented at the regional level have gained in importance, particularly as regards RTDI policy. According to Koschatzky and Kroll (2007), top-down policy design – in many European countries – has been replaced by bargaining and substantial regional autonomy; regional interests and pre-conditions for policy measures are taken more and more seriously. In consequence, policy coordination in the form of multi-level and multi-actor governance has become an essential issue in many countries and regions. For Cooke (2002), the term govern-

ance is the key to the theoretical discussion about the importance of the role that policy and politics play for innovation systems. Fürst (2001) defines regional governance as weakly institutionalised, network-oriented modes of cooperation between regional actors to achieve common goals of regional development. Referring to technology and innovation policy, important goals could be an increase of R&D activities of the industry sector, the exploitation of technological and innovation potentials or an increase of the amount of (innovative) start-up companies. Relevant regional actors could be, for example, universities, technology-oriented enterprises, knowledge-intensive business service firms (KIBS), regional government or administration, project management organisations, intermediaries (e.g. technology transfer offices, venture capital firms) or non-university research institutes.

The term "multi-level governance" refers to actors on the different policy or administrative levels. Particularly EU funding activities or national RTDI policy initiatives implemented at the regional level are often characterised by a mix of quite complex financing mechanisms (co-financing). As for RTDI policy, regional multi-level and multi-actor governance often go hand in hand as some of the most popular funding schemes designed by national governments as well as the EU focus on innovations networks which a priori involve various actors. It is also important to note that, from the regional viewpoint, it is far more necessary in RTDI promotion to interact with other policy fields and administrative levels for which the regional administration is not responsible. This is one example of the so-called multi-level governance in which lower authorities have to coordinate their action with upper policy levels.

The need for improved policy coordination between the regional, national and European level especially in fields like RTDI has been accentuated by many authors (Koschatzky and Kroll 2007, Fürst 2001, Kuhlmann and Edler 2003). However, extensive research is still necessary to find out more about the mechanisms and impacts of different RTDI policy instruments under specific regional conditions. Institutional, technological and political regional path dependencies may result in barriers to (radical) innovation. As a matter of fact, neither does an ideal model of regional RTDI policy exist (Tödting and Tripl 2005, Isaksen 2003), nor is it adequate to expect that good practices can be replicated without any adjustments.

2.4 Conclusions and research questions

The theoretical and conceptual considerations underlined that place-based innovation and technology policy designed and implemented on the regional level is built on collaborative, multi-level governance. One size-fits-all policy delivered from above is not conducive to integrated place-sensitive solutions (Tödting and Tripl 2005). Govern-

ance is about the collective capacity to set policy directions, implement them, and adjust as circumstance warrant (Bradford 2005). Place-based integrated RTDI policies are complex policies with shared responsibilities involving different levels of government, specialized organizations (and private actors) regarding policy design and implementation. While according to the place-based approach the higher policy level is responsible for setting priorities, rules and general objectives, the lower levels have the task of implementation with regard to the specific regional or local contexts. This mix of top-down and bottom-up approaches provides scopes for a stronger contextualization of policy instruments and measures than they could be developed by top-down structures only. Nevertheless, this place-based policy framework is subject to several serious risks. Its chances of success depend on how it is designed and implemented, how risk is reduced and what form of governance and coordination between the different policy levels is adopted. These are important issues for cohesion policy, particularly in a decentralised environment like Germany.

The ongoing European cohesion policy in the period 2007-2013 was not yet able to adopt the principles of the place-based development policy approach, because the Barca report was only published in 2009. Nevertheless, especially federal systems or nations with a set of autonomous provinces fulfil certain criteria of the interaction between higher and lower (national) policy levels. It seems therefore worthwhile to analyse the experiences with priority setting, implementation and coordination of cohesion policy in a federal system like Germany. Against this background, the major research question the paper tries to find answers to is whether the recent experiences from German cohesion policy formulation and implementation allow to identify starting points for the future design of European cohesion policy according to the principles of the place-based approach. Additionally, the following questions will be addressed:

- How can policy interventions be tailored according to specific regional and local needs?
- How do the different policy levels interact in the way of multilevel governance and how are coordination mechanisms and learning processes between these levels organised?
- Which role does innovation play in this decentralized cohesion policy framework and is this policy objective a specific challenge in the framework of place-based policy approaches?
- What can be learned from the German experiences with regard to a pronounced context specificity in policy instruments, to the necessary coordination arrangements and to learning exchanges between the different policy levels?

By integrating these different aspects, the analysis will contribute to the increasing interest in the efficiency of cohesion policy in a multi-actor, decentralised environment with a bottom-up approach.

3 Analysis of the ERDF funding procedures in German regions

3.1 Methodological approach

As mentioned above, the place-based approach underlines that the responsibility for policy design and implementation is allocated among different levels of government, with a role being played by special-purpose organizations. In the federal system of Germany, the different levels are the federal level (Bund), with the Ministry of Economic Affairs and Technology having the competency for the administration and coordination of the European Regional Development Fund (ERDF) and cohesion policy, the federal states, having the competency for the strategic design and implementation of the operational programmes (OPs), and below the federal states the administrative districts (Regierungsbezirke) with the regional councils pursuing different administrative tasks, like budget-administration, controlling and approving of funding proposals, and finally organizations on the local level being responsible for the implementation of concrete measures, like firms, universities, agencies for business or technological development, the local administration, etc. On the whole, these different political-administrative levels are responsible for the different "places" playing a certain role within the ERDF funding procedure (nation, region (=Bundesländer), administrative districts, counties and cities).

For the empirical investigation of this paper, the administrative hierarchy of the federal system of Germany appears to be crucial for understanding the political and administrative procedures related to the design and implementation of the ERDF structural funds. The following empirical analysis is based on quantitative and qualitative data and information provided by the different funds administrations (regional level) for the ERDF in Germany. This information had been gathered within the context of the elaboration of the 2009 strategy report on the status of the implementation of structural funds

and the results achieved.² For the report, all 18 German Operational Programmes of the ERDF (as well as 18 OPs for the European Social Fund (ESF)) were analysed in-depth. Here it was necessary to form uniform categories in order to bring the great variety of heterogeneous descriptions in the Operational Programmes under a common linguistic denominator. These categories form the framework for the classification of the promotional activities and instruments of the Operational Programmes and their evaluation.

3.2 The place-based approach in terms of tailoring interventions

In general, cohesion policy in Germany is oriented to the overall goals of accelerating the convergence process and strengthening regional competitiveness and employment. Based on the regional differences in development levels, the first overall goal holds true, especially for the east German (convergence-) regions; the focus of structural promotion for all other regions is the increase of regional competitiveness and employment as well as overcoming still existing structural problems or supporting structural change in individual sub-regions.

The investigation of the contributions of the Operational Programmes to strategic goals like promotion of innovation, development of knowledge-based society, or enhancement of the attractiveness of regions for investors, and the three cross-cutting targets (sustainable development, reduction of regional disparities, equal opportunities) has shown that the European Structural promotion in Germany in the ERDF (as well as in the ESF) is outstandingly linked with all relevant national initiatives and programmes. The programmes are designed to complement the existing national programmes and initiatives and thus demonstrate synergy potentials with them.

However, due to the fact that the strategic goals of the Lisbon Strategy as well as important national initiatives (e.g. High-Tech Strategy, SME initiative of the federal gov-

² The general background is that at the end of 2009 the Member States of the European Commission had to submit a strategy report indicating the status of the implementation of structural funds and the results achieved. Starting from the general objective of strengthening the economic and social cohesion of the enlarged European Union, the contributions of the structural funds interventions to the priorities of the National Strategic Reference Framework have been presented. In addition, the contributions to the overall aims and strategies of the European Union, as manifested in the further developments of the Lisbon Strategy, the Göteborg Strategy and the European Employment Strategy, were reported as well. The report was compiled by Taurus Eco Consulting Trier together with Fraunhofer Institute for Systems and Innovation Research Karlsruhe on behalf of the German Ministry of Economic Affairs and Technology.

ernment) and even the National Strategic Reference Framework (NSRF) are quite universal, there is still room for tailored interventions from the regional point-of-view. Obviously, the strategic goals and frameworks can – due to their variety and relationship to specific regional strengths and weaknesses – take the special problems and potentials in the regions very well into account. The mixture of (modern) promotional instruments that can be observed in German regions provides targeted offers for the entire range of problem-, technology-, branch-, human resources- and also infrastructure-related promotional needs.

The combination of the different instruments applied and priority-setting in the regional programmes are designed to meet the region-specific requirements. For instance, regarding R&D and innovation potentials, bottlenecks in the innovation-fostering infrastructure and concrete branch-specific needs and technological priorities are different in each region and sometimes addressed by different instruments. Although, the whole spectrum of the technologies and branches regarded as drivers of growth are covered in the German ERDF programmes. Growth drivers and future(-oriented) sectors for German economic development lie particularly in knowledge-intensive production and service sectors, which are mostly regionally concentrated (Gehrke et al. 2010). Examples for German growth drivers are the various areas of mechanical engineering and automotive construction (with huge potentials in the state of Baden-Württemberg for instance), the transport and logistics branch (Bavaria), chemical industry (Northrhine-Westphalia, Saxony-Anhalt) as well as the high-tech branches (e.g. micro-systems technology, nanotechnology, ICT and biotechnology), renewable energies, the health system and the creative and cultural industries.

Tailored interventions to address the specific needs and characteristics of a region can also be observed in the field of network and cluster promotion and the horizontal objectives. In Germany, the promotion of clusters and innovation networks represents an integral part of national structural policy. The central starting points thereby consist in shaping company collaborations along increasingly systematic and strategic lines. Based on the strengths, weaknesses, opportunities and threats (SWOT)-analyses and complementary investigations carried out by different regions, promotion is geared to the specific competence fields and strengths of the states, respectively of regions within the states, in certain sectors, technologies or leading markets and should "strengthen strengths" as well as hone the competence profiles. Further to differences as regards the concrete branches or technologies to be supported by cluster initiatives, the process on how clusters are selected and respective initiatives are implemented differs as well (top-down selection process with the regional Ministry making the decision, e.g. in Bavaria, vs. selection processes in a cluster competition, e.g. Hessen, Northrhine-Westphalia, Baden-Württemberg) (Kiese 2008).

As for the cross-cutting goals, tailored interventions are observable as well. Under the horizontal objective "sustainable development" for instance, the expansion of renewable energies, increase of energy efficiency, prevention of flood water risks, coastal and avalanche protection measures, largely depends on regional pre-conditions (and surely the political will to these priorities). Furthermore, depending on the pre-existing policy-mix, a tendency towards combining different instruments to address a multitude of goals can be observed (e.g. qualification of senior employees and new modes of working organisation, support of productive investments in combination with energy efficient technologies). The horizontal goal "sustainable urban development" appears to be a further example on the existence (and importance) of region-specific interventions: The activities of urban development and conservation promote the improvement of the supply structure of socio-cultural and recreational facilities. As a complement to the enhancement of the "hard location factors", in the current funding period the focus is being increasingly directed towards improving the "soft location factors" in the towns and regions, in order to increase the attractiveness as places to live and work. These action areas include activities in the sectors social infrastructure, urban governance and urban transportation.

3.3 The place-based approach in terms of multilevel governance and coordination

In line with the "Lisbon-orientation" of the cohesion policy, the European Commission deliberately retreated from the programming of the regions and the implementation of the individual measures: instead, the Commission concentrates on the strategic direction of the cohesion policy. However, the Commission still formulates concrete guidelines, for instance regarding the abidance of the Lisbon appropriation, which was central for the approving of the Operational Programmes. For this purpose, a special code system was provided. Notwithstanding, the strategic governance of the reformed cohesion policy resulted in a field of conflict of the regional approaches for the determination of the funding priorities in relation to the overall European objectives (Becker 2009). In the whole, regional- and infrastructure policy of the EU member states and its regions have to be adjusted to the European guidelines. Specific regional funding priorities have to be subordinated to the European objectives which are quite broad and universal (e.g. increase the competitiveness and innovativeness of the industry). Under this framework, the regions (and countries) are in a position to act quite autonomously – though depending on the degree of regional autonomy in a specific country.

In Germany, due to its federal system with shared powers, the particular process of programming and implementation of the ERDF (and ESF) structural funds turns out to

be quite complex and risky. Becker and Zaun (2007) underline that in comparing the evolutionary process of the National Strategic Reference Framework of different countries, the handling of legal specification of the structural funds ordinance appears to be quite different in terms of the involvement of all relevant regional, local, societal actors as well as the social partners in compiling the NSRF. For obvious reasons, the governance and coordination of structural funds interventions in a multilevel and decentralised environment forms a major challenge regarding the efficiency of the administration and ultimately the desired output and impact of the funding measures as a whole.

In nearly all federal member states, like in Germany, the implementation of the European regional- and structural policy lies basically within the competencies of the regions (in Germany: Bundesländer). The federal states in Germany adopted the analysis and strategic direction of the NSRF as well, whereas the federal level defined the "superstructure" for the national state (bottom-up approach). In the light of interaction and coordination mechanisms as well as the organisation of learning processes, the particular process in the drafting of the NSRF seems to be crucial, as it allows a better understanding of challenges in multilevel policy arenas.

Basically, coordination takes place horizontally, on the federal level and the regional level, vertically between federal level and regional level (federal states), the regional level and the district level (administrative districts³) and between the districts and the executing agencies on the county/local level (e.g. agencies for business or technological development, universities/higher education institutions, firms, local administrations, etc.). Thus, all political and administrative levels are somehow involved in the implementation process. On the federal level, the leading federal department is the Ministry of Economic Affairs and Technology (BMW_i) which coordinates both structural funds (ERDF, ESF), i.e. it coordinates the national position regarding overall topics for the structural funds between the federal level and the federal states, it bundles the interests and priorities and represents these at the committees responsible for the EU structural policy at the European Council and the EU Commission. Relating to the ERDF the BMW_i acts as coordinating unit with respect to all ERDF related topics and is the major contact for the Commission as well as federal states on the national level. Further federal departments pursuing a coordinating role are the Ministry of Labour and Social Affairs (department in charge for the ESF), the Ministry of Transport, Building and Urban Development (department in charge for the ERDF federal programme "Transport"), the Ministry of Finance (in charge for financial control), as well as three ministries con-

³ In the three federal states Berlin, Bremen and Hamburg (city states) administrative districts are missing.

tributing to the implementation of the cross-cutting objectives (the Ministry of Education and Research, the Ministry of Environment and Nature Conservation and the Ministry of Family, Seniors, Women and Youth).

Vertical coordination – between the federal level and the level of the federal states – primarily occurs between the BMWi and the respective ministry in charge of the funds administration. Depending on the administrative setup of the region, the funds administration units in the federal states are usually established at the Ministries of Economic Affairs, sporadic also at the Ministries in charge for Science, Research, and Education. Coordination in relation to the implementation of the operational programmes during the funding period is formally organized by bi-annual meetings of the programme managers (ESF and ERDF) with the BMWi, the steering group and the social partners (possibly under participation of the Commission). Topics relate to the current implementation status of the OPs, methodological issues, like indicators selection and measurement aspects, handling of guidelines/specifications put forward by the Commission (often at short-notice), presentation of best practices, discussion of documents submitted by external evaluations – if any. Apart from these meetings, coordination takes place in the course of additional task forces (study groups), for instance established in the fields of indicators, gender/equal opportunities, environment, urban development, etc. These task forces are moderated by the BMWi, or a selected person from the funds administration of a certain federal state (e.g. a unit within the funds administration being in charge for a certain measure or initiative). These formalized meetings and coordination efforts pursue primarily three major objectives: on the one hand, the BMWi fulfills its function as the national administration body and is responsible for reporting to the Commission, on the other hand coordination is needed due to quite heterogeneous approaches, strategies, and implementation procedures in the regions – which go back to the drafting of the OPs. Third and closely linked to the second objective, policy learning appears to be crucial, as similar policy objectives are sometimes addressed by different policy instruments or tools and as a rule in combination with a multitude of other instruments (policy mix).

Finally, the regional and the local level are closely interlinked within the context of policy implementation. The funds administrations from the regions usually delegate certain tasks and procedures (e.g. examination of applications, advise of possible funding recipients, accounting and financial controlling, project monitoring, etc.) to downstream public authorities and therefore make use of special competencies being available on the location.

3.4 The place-based approach in the light of promoting innovation

A place-based approach in terms of a "cohesion policy" under which the European Union sets the framework for intervention in support of regional development and jurisdictional regions and nation-states having the responsibility for designing it and for selecting the regions and projects to be supported, according to Barca (2009), should concentrate resources on a limited number of priorities. In line with the "Lisbon-orientation" of the structural policy, innovation has surely been selected as a core priority: *"Place-based interventions, building on the strengths and taking account of the weaknesses of previous experience as regards cohesion policy in this area, could complement policies aimed at developing a European Research Area, by selecting in each region a limited number of sectors in which innovation can most readily occur and a knowledge base built up"* (Barca 2009: XVII). Through such an approach - defined in the current policy debate as "smart specialisation" - the most could be made of the present diversity of industrial agglomerations, networks and further innovation related institutions and organisations.

In the programming and implementation of the ERDF structural funds in Germany, innovation plays a crucial role. Related activities in the ERDF funding scheme in German regions are primarily promoted under the thematic priorities "Promotion of innovation, research and development, knowledge-based regional development and education". The National Strategic Reference Framework (NSRF) which constitutes the national strategy for the German structural funds intervention, refers to these priorities and thus, ascribes these fields of intervention a top priority for Germany as a whole.

The strengths and weaknesses analyses carried out prior to the current ERDF funding period (2007-2013) point out considerable weaknesses in innovation potentials for the convergence regions (Eastern German Bundesländer, without Berlin). Action is needed to strengthen research and development, not only in industry but also in the field of public R&D and networking with the corporate sector. In addition, substantial efforts are required to further develop existing advantages in the area of human resources by investing in education, to which the ERDF can contribute by investing in educational infrastructure.

The promotion of the "Regional Competitiveness and Employment Regions" (RCE regions) (Western German Bundesländer plus Berlin) is based on a better provision of potential factors. This is more about successfully encountering the high international competitive pressure with an increase in (entrepreneurial) reactions, i.e. flexibility and adaptability. The development and realization of new ideas, knowledge and technolo-

gies in marketable products, efficient processes and target-oriented problem solutions are the main development paths in this context ("high road to competition").

With its numerous and varied promotional approaches, which range from fostering R&D and innovation, innovation financing, knowledge and technology transfer via the promotion of networks and clusters, as well as branch-related innovation promotion up to modernization of the research and educational infrastructure, the central core of the Lisbon Strategy will be addressed.

The various promotional contents are closely coordinated and mutually reinforce each other in synergetic fashion. Thus the structural-technical as well as personnel promotion of the non-university research institutions strengthens application-oriented research with reference to specific competences and encourages profile building. This makes them more attractive for cooperation projects with SMEs, which for their part are searching for special skills and partners for their R&D projects and in addition could profit from an improved knowledge and technology transfer. Besides the financial promotion of specific individual R&D (collaborative) projects, in the German ERDF programmes the general improvement of financing conditions for innovations in SMEs by means of special actions to improve access to capital for technology-oriented and innovative (young) firms is promoted.

Approx. € 5 billion of ERDF funds are allocated for the priority "Promotion of innovation, research and development, knowledge-based development and education". About two thirds of these funds are apportioned to the convergence regions and one third to the RCE regions (cf. table 1). Thus approximately 35 % of all funds fall to this particular priority, whereby the relative share of all ERDF funds for the RCE regions of this regional type is somewhat higher than for the convergence regions. Of the total funds planned for this priority, by the end of 2008 24 % were approved and 5.8 % spent. The implementation took place somewhat more rapidly in the RCE countries than in the convergence ones.

Table 1: Financial data of the thematically funded group R&D and Innovation Promotion (in €)⁴

	ERDF funds (indicative) 2007-2013	Cumulative result until 31.12.08 (approved funds)	Cumulative result until 31.12.08 (spent funds)	Relative rele- vance of the thematically funded group*
Sum RCE	823,625,147	155,925,279	17,038,422	17.4%
Sum conver- gence	1,594,860,266	419,492,533	77,792,517	16.2%
Sum RCE and convergence	2,418,485,413	575,417,812	94,830,939	16.6%

* Share of planned ERDF funding for a thematically funded group from the total of ERDF funds for the Operational Programmes

Source: own data compilation

With over 16 % of the indicatively estimated funds in relation to the total resources of the ERDF, the relative relevance of the group "*R&D and Innovation Promotion*" is far above average. It is of special importance in achieving the structural policy goals of the European Union within the ERDF promotion framework in Germany. In terms of the share values, no significant difference of the thematically funded group can be seen in the relative relevance between RCE and convergence states. In absolute figures, the funds available for this thematically funded group are higher in the convergence states (by the factor 2) than in the RCE states.

At the inter-company level, *network and cluster promotion* in Germany aims to additionally support horizontal and vertical cooperation in particular in the R&D and production area in specific competence and technology fields, as well as lead markets. The relative relevance of network and cluster promotion is on the whole under average, compared to its indicative budget (2.4 % of the total resources). The relatively low financial relevance of the thematically funded group is explained by the comparatively low financial resources required for the individual promotional activities and the fact that network and cluster promotion is linked with R&D/ innovation promotion, as well as with the extension of university infrastructure. In the RCE states, the promotion of networks and clusters carries more weight than in the convergence states, which in view of the national SWOT /strengths-weakness analysis can be regarded as appropriate (cf. table 2).

⁴ The states Bremen and North Rhine-Westphalia do not in general supply any indicative information about thematically funded groups, but actual values. The indicative information is extrapolated on the basis of the average values of the other RCE states.

Table 2: Financial data of the thematically funded group Networks and Clusters (in €)

	ERDF funds (indicative) 2007-2013	Cumulative re- sult by 31.12.08 (approved funds)	Cumulative result by 31.12.08 (spent funds)	Relative rele- vance of the thematically funded group*
Sum RCE	184,753,692	40,931,514	7,938,691	3.9%
Sum conver- gence	165,161,134	19,195,069	4,372,762	1.7%
Sum RCE and convergence	349,914,826	60,126,583	12,311,453	2.4%

* Share of the planned ERDF funding of a thematically funded group in the total ERDF funds of the Operational Programmes

Source: own data compilation

The present financial data for *innovation financing* show that with approximately € 652 million spread over the two target regions, a considerable funding volume is available to finance innovations (cf. table 3). The relative relevance of the promoted group, however, shows that with a share of on average 4.7 % its importance is rather under average, whereby this lies considerably higher in the RCE states at 7.7 %. When interpreting the data it must be taken into account that the above statements refer only to the comparatively narrow definition of innovation financing, respectively of the instruments named above.⁵

Thus, based on the allocations made in this section of instruments or measures to the thematically funded group "Innovation Financing" over all target regions, by 31.12.2008 already 39.5 % of the funds were approved and around 18 % of the originally indicative appropriations have been spent. Considerable differences between the RCE and convergence regions are striking: in the RCE states by 31.12.2008 at least 28.5 % of the indicative appropriations could be spent, while the corresponding figure in the convergence states was merely 8.6 %.

⁵ The data supplied by the VB could not be unambiguously assigned to the thematically funded groups "Innovation Financing", "Industrial Investment Promotion" and "Start-up Promotion", in particular in the case of several expenditure codes for one measure (e.g. venture capital funds).

Table 3: Financial data of the thematically funded group Innovation Financing (in €)

	ERDF funds (indicative) 2007-2013	Cumulative result until 31.12.08 (approved funds)	Cumulative result until 31.12.08 (funds spent)	Relative relevance of the thematically funded group*
Sum RCE	313,529,144	148,448,009	89,468,467	7.7%
Sum conver- gence	338,767,643	109,263,983	29,229,858	3.4%
Sum RCE/ convergence	652,296,787	257,711,992	118,698,325	4.7%

* Share of the planned ERDF funding of a thematically funded group in the total ERDF funds of the Operational Programmes

Source: own data compilation

In summary, we can note that the promotion of research and development, innovation and education within the ERDF in Germany is highly suitable, both from its content and financial provisions, to overcome the weaknesses in the area of the education system and the financing of research and development in enterprises which were recently determined in the experts' report of the DIW (DIW 2009) on the innovation indicator Germany. The relative relevance of the thematically funded innovation related groups pointed out above gives strong hints to a concentration of resources to this particular priority. This observation is in line with what the place-based approach aims for: to create a Europe-wide critical mass of interventions in a few policy areas, capable of having an impact on issues of European-wide relevance.

4 Conclusions for a place-based policy approach

The major objective of this paper was to analyse whether experiences from the implementation of cohesion policy in Germany already exhibit indications of a place-based development policy approach and whether these experiences can contribute to a new design of cohesion policy formulation and implementation according to the principles of the place-based approach from 2013 onwards. Regarding the research questions we formulated in section 2.4 we come to the following conclusions.

As we were able to show, even within the framework of overall policy objectives, as formulated by the European Commission and executed through the National Strategic Reference Frameworks, there is still enough room for tailored interventions at the regional level. This is especially the case when the different Operational Programmes and the NSRF are formulated in parallel and when objectives which try to provide answers to specific regional needs can be integrated into the overall set of the more general goals of the European cohesion policy. In countries like Germany where the fed-

eral states have distinct political responsibilities it is not possible that the national government sets priorities alone, but they have to be formulated in a negotiation process between the federal and the federal states level. The federal states by themselves have to pay attention to the regional variation within their boundaries, so that through the regional parliaments and other public organizations bargaining processes with regard to a balanced distribution of funds are also common practice. These negotiations in the national and regional policy arenas lead to a set of policy measures within the OPs that address specific regional and local needs.

Due to its federal system with shared powers, the process of the programming and implementation of the ERDF structural funds in the regions turns out to be quite complex and risky. Obviously, the governance and coordination of this kind of intervention in a multilevel and decentralised environment forms a major challenge as regards the efficiency of the administration and ultimately the desired output and impact of the funding measures as a whole. Basically, coordination takes place horizontally – particularly on the levels of the federal administration and the level of the federal states (regional level) – as well as vertically, between the Commission and the leading federal department of the structural funds (BMW_i), between the BMW_i and the federal states, and – with the exception of the "city states" – between the federal states and the administrative districts. On the horizontal level, coordination is mainly carried out in the form of interministerial working groups or within the respective ministries in the form of task forces in which the units in charge for the different policy measures are represented. Vertical coordination in the course of the implementation of the operational programmes is formally organised in the form of bi-annual meetings between the programme managers, the BMW_i, the steering group and the social partners. Apart from these meetings, additional task forces (study groups) responsible for different topics have been established. On the lower level, the regional funds administration usually delegate certain tasks and procedures to downstream public authorities on the district level. Policy learning is crucial on all coordination levels, especially taking into consideration that usually similar policy objectives are addressed by different instruments or tools and often in combination with a multitude of other instruments. Ex-ante and ongoing evaluations are constitutive characteristics on many policy levels, for instance with a view on the strategic reporting and the yearly monitoring reports.

In line with the Lisbon-orientation of the cohesion policy, innovation related measures are crucial in all operational programmes. In the German ERDF funding schemes, these activities are primarily promoted under the thematic priorities "Promotion of innovation, research and development, knowledge-based regional development and education". With its numerous and varied promotional approaches, which range from fostering R&D and innovation, innovation financing, knowledge and technology transfer via

the promotion of networks and clusters, as well as branch-related innovation promotion up to modernization of the research and educational infrastructure, the central core of the Lisbon Strategy will be addressed. On the basis of current financial data, we found strong evidence that a concentration of resources to this particular priority can be noticed. However, a major challenge with regard to the framework of a place-based policy approach appears to be the smart allocation of the budget across European regions and an efficient implementation of the relevant measures.

An important aspect in achieving a high degree of context specificity in policy instruments is a well functioning governance system in which the different policy levels have clearly formulated own responsibilities. The more complex the political system is, the more necessary is a coordination and exchange mechanism through which the different levels can interact. It is also necessary that each level possesses an own set of implementing organizations in order to avoid goal conflicts in cases when a superior organization is assigned with implementation issues at a lower level. The German experience shows that such institutional set-ups cannot operate from scratch, but need a longer time of experiences and continuous learning. The German experience also shows that a certain degree of flexibility in policy-making is also necessary. There is no clear top-down or bottom-up division of labour. In the formulation of the OPs all federal states extensively exploited the freedoms they had in setting own priorities and in interpreting the Community Framework in the most flexible way. The federal government did not set guidelines which all the federal states had to follow strictly, but formulated the NSRF in a way that it was in conformity with the European regulations, but reflected, coordinated and adjusted the different needs of the federal states in a comprehensive manner. Whether this kind of negotiated framework is beneficial for the further implementation of cohesion policy is too early to evaluate.

One of the important conclusions from our analysis is that place-based policy approaches cannot be implanted in all European countries in a uniform manner. Place-based approaches require an adaptation of the governance structures in the way that there is sufficient chance for formulating and implementing regionally or locally tailored policy measures. Countries with autonomous regions or provinces or with federal systems have an advantage in this respect because they already have good starting conditions for such kind of coordinated bottom-up and top-down policy approach. This relates to a final aspect of our analysis. Although the place-based approach became popular only in 2009, major of its elements can already be found in Germany's cohesion policy. Responsibilities for policy design and implementation are allocated between different levels of public governance (federal level, federal states, regional and local level), special-purpose organizations are involved in implementation and execution, priority setting is a shared responsibility between the federal government and the

governments of the federal states, and lower levels are in charge of implementing the measures according to the specific context needs. It is therefore worthwhile to take the German example as one among other European countries for a critical review of experiences in cohesion policy priority setting and implementation in order to design a European cohesion policy which follows the principles of the place-based approach to a large extent. Policy learning in this respect is a helpful tool or the further improvement of European structural and development policy.

5 References

- Amin, A. (1999): An institutional perspective on regional economic development, *International Journal for Urban and Regional Research*, 23, pp. 365-378.
- Asheim, B.T. and Coenen, L. (2005): Knowledge bases and regional innovation systems: comparing Nordic clusters, *Research Policy*, 34, pp. 1173-1190.
- Asheim, B.T. and Gertler, M.S. (2005): The Geography of Innovation: Regional Innovation Systems. In: Fagerberg, J.; Mowery, D.C.; Nelson, R.R. (eds.): *The Oxford Handbook of Innovation*, New York: Oxford University Press, pp. 291-317.
- Barca, F. (2009): An Agenda for a reformed cohesion policy. A place-based approach to meeting European Union challenges and expectations. Independent report prepared at the request of Danuta Hübner, Commissioner for Regional Policy, April 2009.
- Becker, P. (2009): Die europäische Kohäsionspolitik und ihre Modernisierung, SWP-Studie, Stiftung Wissenschaft und Politik. Berlin: Deutsches Institut für Internationale Politik und Sicherheit.
- Becker, P. and Zaun, N. (2007): Die neue strategische Planung der europäischen Kohäsionspolitik in Theorie und Praxis. Diskussionspapier der Forschungsgruppe EU-Integration 1/2007, Stiftung Wissenschaft und Politik. Berlin: Deutsches Institut für Internationale Politik und Sicherheit.
- Bradford (2005): Place-based Public Policy: Towards a New Urban and Community Agenda for Canada. Research Report F/51. Ottawa: Canadian Policy Research Network.
- Cooke, P. (1992): Regional Innovation Systems: Competitive Regulation in the New Europe, *Geoforum*, 23, pp. 365-382.
- Cooke, P., Uranga, M.G., Etxebarria, G. (1997): Regional innovation systems: institutional and organizational dimensions, *Research Policy*, 26, pp. 475-491.
- Cooke, P. (2002): *Knowledge Economies. Clusters, learning and cooperative advantage*. Routledge: London and New York.
- Cooke, P.; Heidenreich, M.; Braczyk, H.-J. (eds.) (2004): *Regional Innovation Systems, Second Edition*. Routledge: London and New York.
- DIW [Deutsches Institut für Wirtschaftsforschung] (2009): *Innovationsindikator Deutschland 2009*. Berlin: DIW.

- Doloreux, D. (2005): Regional innovation systems in Canada: a comparative study, *Regional Studies*, 38, pp.479-492.
- Dreher, C. (1997): *Technologiepolitik und Technikdiffusion. Auswahl und Einsatz von Förderinstrumenten am Beispiel der Fertigungstechnik*. Baden-Baden: Nomos.
- Fürst, D. (2001): Regional Governance – ein neues Paradigma der Regionalwissenschaften? *Raumforschung und Raumordnung*, 59, pp. 370-380.
- Gehrke, B., Legler, H., Schasse, U., Grenzmann, C. and Kreuels, B. (2010): *Regionale Verteilung von Innovationspotenzialen in Deutschland. Studien zum deutschen Innovationssystem 3-2010*. Hannover, Essen: Niedersächsisches Institut für Wirtschaftsforschung, Wissenschaftsstatistik GmbH im Stifterverband für die deutsche Wissenschaft.
- Howlett, M. and Ramesh, M. (1993): Patterns of Policy Instrument Choice: Policy Styles, Policy Learning and the Privatization Experience, *Review of Policy Research*, 12, pp. 3-24.
- Isaksen, A. (2003): National and Regional contexts for innovation. In: Asheim, B.; Isaksen, A.; Nauwelaers, C.; Tödtling, F. (eds.): *Regional Innovation Policy for Small-Medium Enterprises*. Cheltenham: Edward Elgar, pp. 49-77.
- Kiese, M., 2008: *Clusterpolitik in Deutschland: Ein interregionaler Vergleich aus institutioneller und politisch-ökonomischer Perspektive*. Hannover: Leibniz-Universität Hannover
- Koschatzky, K. and Kroll, H. (2007): Which Side of the Coin? The Regional Governance of Science and Innovation, *Regional Studies*, 41, pp. 1115-1127.
- Koschatzky, K. and Stahlecker, T. (2010): A new Challenge for Regional Policy-Making in Europe? Chances and Risks of the Merger between Cohesion and Innovation Policy, *European Planning Studies*, 18, pp. 7-25.
- Kulke, E. (2004): *Wirtschaftsgeographie*. Paderborn: Schöningh.
- Kuhlmann, S. and Edler, J. (2003): Changing governance in European research and technology policy - Possible trajectories and the European research area. In: Edler, J.; Kuhlmann, S.; Behrens, M. (eds.): *Changing governance of Research and Technology Policy - The European Research Area*. Edward Elgar: Cheltenham, pp. 3-32.
- Laranja, M., Uyarra, E. and Flanagan, K. (2008): Policies for science, technology and innovation: Translating rationales into regional policies in a multi-level setting, *Research Policy*, 37, pp. 823-835.
- MacKinnon, D. (2002): Learning, innovation and regional development: A critical appraisal of recent debates, *Progress in Human Geography*, 26, pp. 293-311.
- Maillat, D. and Lecoq, B. (1992): New Technologies and Transformation of Regional Structures in Europe: The Role of Milieu, *Entrepreneurship and Regional Development*, 1, pp. 1-20.
- OECD (2009): *Investing for Growth: Building innovative regions*. Policy Report, Meeting of the Territorial Development Policy Committee at Ministerial level (31 March 2009), GOV/TDPC/MIN (2009)1. Paris:OECD

-
- OECD (2009a): Background Report: Territorial Development Committee, Meeting at Ministerial Level (31 March 2009), GOV/TDPC/MIN (2009)2. Paris: OECD.
- Schätzl, L. (2003): Wirtschaftsgeographie 1 – Theorie. 9th edition. Paderborn: Schöningh.
- Tödtling, F. and Trippi, M. (2005): One size fits all? Towards a differentiated regional innovation policy approach *Research Policy*, 34, pp. 1203-1219.

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