The promotion of regional innovative networks – Lessons from the German InnoRegio-Programme

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In recent years the promotion of regional networks and clusters has moved more and more into the focus of innovation policy. Policy makers place great hopes on that type of programme. Therefore, the following questions can be asked: Do these programmes bring about the results which they are designed for? Can regional innovative networks be promoted? Do they ease and/or speed up the innovation process in companies?

In the following these questions will be discussed illustrated by the experiences with the German InnoRegio-programme, a programme for the promotion of regional innovative networks in less favoured regions.

Aim of the programme

In 1999 the programme was launched by the Federal Ministry of Research and Education (BMBF). Its aim is to strengthen innovation capacities of the companies involved by funding the institutions which build up and manage regional network formation (mainly technology transfer offices) as well as collaborative research projects between network partners (mostly companies, universities, research institutes and educational facilities). In addition participants were encouraged to try out social innovations like new forms of organisation and steering patterns of communication and interaction. In deviation from the traditional promotion policy this programme is not addressed to individual companies but to regional groupings that have formed for specific projects.

Programme implementation

The initiatives involved were chosen in a three stage procedure:

- The initial, so-called "qualification phase" ran from April 1999 to October 1999, when participants from the regions put forward their first concepts. There were no limitations with reference to objectives, topics, or composition of the initiatives in concrete terms.
- Out of 444 applicants 25 networks were selected in November 1999 for the next so-called "development phase", by an independent jury. Main criteria for selection were the importance for the region, how well the participants complement each other, and the innovative quality of the approach. The applicants were awarded up to about € 153,400 to draw up a more detailed version of their concept. In this phase the initiatives were also given non-financial support through facilitators who monitored the communication and organization process and through consultancy on subject areas and technical aspects of the promotion. The concepts were handed in in June 2000.
- In October 2000 the jury initially recommended 19 initiatives for promotion in the so-called "realisation phase" and called them " InnoRegios". Another six initiatives were

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given the possibility of developing their concepts in more detail by June 2001. Four of them were successful, so that all over all 23 initiatives were selected for promotion for a period of six years (from the end of 2000 to the end of 2006). The promotion comprised two components:

- First, the formation and the management of the network was supported financially for the whole realization phase. In the first two years the management was financed completely by the ministry and in the following 4 years 70% of the costs. The responsibility of the network manager was to organize communication and decision processes between the participants, to keep the network together and to develop it further.
- Second, the projects run by the participants of the network were financed. The projects were chosen by the initiates themselves with the approval of the BMBF and its administrative body. Activities eligible for funding were R&D projects, qualification measures as well as services for the improvement of the network infrastructure. Normally, about half of the project costs were subsidized. Projects run by universities were financed totally.

The BMBF provided a total of € 255 million for this program. Thus, the InnoRegio programme was at that time the most important corner-stone of the ministry's innovation policy for eastern Germany.

The 23 InnoRegio networks cover a broad spectrum of activities. The networks are active in the areas of medical technology, renewable resources, biotechnology, micro-system technology, mechanical engineering, manufacturing technology, circular-flow economics, environmental technology, and automotive technology. Various branchesof the service industry may also be included here, such as those offering travel and tourism for disabled people, or establishing consultation and treatment services for people with diabetes. Restriction to one strictly limited technological field was the exception rather than the rule: usually, each network includes more than one field.

The size of the networks is very different as well. Taking as a yardstick the support volume given by the ministry, twelve networks can be classified as small (less than € 10 mill.), six as medium-sized (€ 10 mill. up to € 15 mill.) and five as large (more than € 15 mill.).

According to the InnoRegio approach to mobilize regional economic potential wherever in eastern Germany, there were also no restrictions concerning the location of the participants' network. Thus, the networks involved are spread all over the region. Seven networks are located in agglomerations (mainly Berlin, Dresden), nine networks in medium dense regions and seven networks in rural areas (like the northern parts).

The beginning of the realization phase brought some initial difficulties. The participants complained in particular that the approval process was too complicated and took too long. These problems were mainly due to the complexity of the promotional approach, to which all partners involved initially had to adjust. Some measures introduced helped to accelerate the procedure, e.g. more intensive consultancy for applicants and close cooperation of all involved in the so-called "promotion management team".

In the course of 2002 – more than one year after the start of the realisation phase – the initial difficulties had been overcome. All in all about 1100 projects were promoted. Most of the projects were R&D projects (87%), some of them aim at the improvement of vocational training (6%) and some are services for the function ability of the network concerned (7%). Most of the projects run for two to three years.

680 partners were involved. Two third of them were companies, mostly from manufacturing (machinery, automotive, electrical engineering, textile industries) and from the service sector. Half of the companies have less than 20 employees.

Conceptual framework

The concept of the InnoRegio programme is based on the interrelation between networking and innovation which is founded in theory and has been proved empirically. It can be outlined as follows:

- Innovations are based on the production and exchange of knowledge. They are particularly accelerated by handing on tacit knowledge.

- Common interests and complementary competencies are essential, and confidence is the basis of the process. Geographical proximity helps to create common experience, which in turn helps to build up confidence and cooperation.

- Regional networks defined as a system of potential partners such as companies, universities, research facilities or intermediate institutions are a vehicle to speed up innovations or make them easier and are thus essential for successful co-operations.

- Strengthening innovativeness makes the individual protagonists more economically efficient, it creates spill-over effects and externalities that over the medium to long term help other protagonists in the region in their value creation and competitiveness.

- The networking of regional protagonists in the innovation process - or regional innovation systems, as they are also called - should in principle evolve spontaneously from the interests and needs of those involved, and be self-directing. But in view of the many obstacles, such as high start-up costs, lack of confidence and the 'free rider' problems associated with this, state promotion can be helpful in this initial phase.

Evaluation approach

In order to evaluate the program[2] the following questions are according to the model outlined above central:

- Effects on network development (short term)

  Has the InnoRegio-Program led to the formation of a regional network that is functioning successfully and permanently viable? What factors determine the process of network formation generally and specifically in the case of InnoRegio?

- Effects on innovation processes and performance of companies (mid term)

  Has the participation and collaboration with other partners eased and accelerated the innovation activities in companies involved and thus, their competitiveness?

[2] The programme was evaluated on behalf of the BMBF by the DIW Berlin and its partners between 2000 and 2004.

- Effects on the regional economy (long term)

  In how far has the regional economy been strengthened by direct and indirect effects (spin-offs, intensified linkages, improved image)?

Further, the evaluation team had to feed back the processes analyzed regularly to the Ministry (reports) and to feed back results to the network participants (workshops, newsletter, etc.).

In order to give answers to these questions a system of reliable empirical indicators was established for …

- the analysis of the effects on network development (i.e. competences, completeness, communication, identification, efficiency of the management, funding …)
- the analysis of the effects on innovation processes (i.e. knowledge flow, interaction, kind of economic usability of the results of the projects, absorptive capacity, market performance, …)
- the analysis of effects on the regional economy (i.e. location factors, image…..)

The evaluation draw upon several sources of information, such as the applications and status reports of the networks, the data bank of the Ministry on projects funded, 5 annual surveys (2000 to 2004) about projects, participants and stakeholders (N=700 per year), interviews with participants and stakeholders (N=850), an additional survey about companies in the regions for generating a control group, N=6200), and a survey about those initiatives which did not win the competition.

Based on these information a consistent and rich data base with a mixture of "hard facts" (employees, turnover, funds…), and "soft facts" (assessments, motivations, ambitions, …) was created which allow comparisons over time and between networks.

Experiences

- Effects on network development (short term):

  The analysis concerning the functioning and the performance of the InnoRegio networks has shown that the majority of the networks developed into functioning and clearly focussed networks. It can be stated that in general the formation of regional innovative networks can be established. However, some of the InnoRegios showed some deficits, either because of less focussed targets, or the lack of appropriate participants, or the shortcomings in organisation, communications and management. All in all, there seem to be four factors which decide the issue:

  - the existence and the mobilisation of entrepreneurial and scientific potential in the region,
  - a clear and business oriented target,
  - the realistic belief of benefiting from the participation, especially in the short run and for companies, and
  - an effective network management.

  Essential for judging the effectiveness of the promotion is the stability of the networks. The experiences are mixed in this respect. On the one hand some participants – also those who were partner in successful InnoRegios – were doubtful about extension of

their participation ahead of the end the programme, on the other hand some participants were even willing to pay for their participation in the network.

- Effects on innovation processes and performance of companies (mid term):

  The investigation had to start with the analysis of the innovation potential and the absorption capacity of the companies involved. In fact, the participating companies were innovating companies with substantial R&D-activities. The conversion of inventions into innovations – which means the successful introduction of new goods into the market – takes time and requires market performance and substantial financial resources. The companies involved are – according to their self-assessments - economically more successful than comparable companies without support. However, problems may occur in the course of the costly phase of commercialisation because of the limited financial potential.

  As a second precondition, the funded projects should fit to the needs of the companies and expect that the outcome will correspond to the needs of the market. This is ensured as the projects carried out by the InnoRegio participants mostly aim at the improvement of existing or the development of new products and processes.

  Last but not least, it is expected that companies use the expertise of other participants. It is shown that the intensity of knowledge exchange is high and there is a close relationship between the transfer of knowledge and the success of R&D projects. Apart from that immediate advantage by the funded R&D-projects most of the participants – companies as well as universities etc. – benefited from the network also in other ways.

- Effects on the regional economy (long term):

  Until the end of the evaluation in 2004 the programme was still in action and transmission effects such as spin-offs, regional producer linkages or regional image are to be expected rather in the long run.

The evaluation of the InnoRegio-programme did not only focus on the effects concerning the participating networks but also on the initiatives which were rejected during the initial competition. It was analyzed in how far the participation in the competition affected the formation or strengthening of the applying initiatives. It is shown that two fifth of the initiatives continued their activities, partly by using other sources of public funding. This result can be judged as a positive impact of competition policies in general.

Conclusions

The evaluation of the InnoRegio-programme has shown that …

- under certain preconditions regional innovative networks can be created,
- participants in networks benefit from their participation, and
- the whole process takes time.

An open question is the stability of the InnoRegio networks over time. As the evaluation ended in 2004, it was not investigated if they still exist ahead of the end of the programme.

It has also become clear that regional initiatives are complex systems and the promotion of them bares some risks. To minimize risks some aspects should be considered:

- a thorough analysis of the regional potentials for initiatives prior to the start of a program,
- an effective process of selection of applications, e.g. by a competition procedure,
- feed back to the participants in the program in order to encourage to improvements, and
- a monitoring system to provide policy makers with timely information in order to alert program managers to act.

Based on the experiences with the InnoRegio programme and considering changes in the general economic set-up in regions the Ministry created some follow-up programmes, like

- in 2001 “Innovative regionale Wachstumskerne” (commercialisation of inventions),
- in 2001 „Innovationsforen“ (early stage of initiatives),
- in 2002 „Zentren für Innovationskompetenz“ (young scientists at universities),
- in 2005 „InnoProfile“ (junior researcher and innovations in small and medium enterprises).