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Conclusions and perspectives: adapting old policy institutions to new challenges

Claire Nauwelaers and René Wintjes

Innovation has climbed higher on policy agendas everywhere, not only in developed countries but also in emerging economies. As a relatively young policy area, it is designed mainly as a trial and error process, with no simple and universal model to follow. Moreover, innovation not only serves economic purposes, but has invaded other policy agendas. As a possible solution to a diversity of problems it has been included in the missions of almost any traditional policy field, including science policy, competition policy, environmental policy, foreign policy, regional development policy, education policy, etc. Hence, the need for new conceptual frameworks and policy intelligence tools to feed policy-making is expanding dramatically.

This book is about how to increase policy intelligence by combining quantitative and qualitative assessments of Innovation Systems, and by taking a forward-looking perspective on the conditions for an innovative Europe of tomorrow. A number of new developments and new challenges have been identified throughout the chapters, which, together, help pave the way towards future innovation policies for Europe.

New Challenges for Innovation and Innovation Policies

First, it has been pointed out that quantitative and qualitative methodologies for innovation analysis are both relevant, as they all result in valuable inputs to the policy-making process. Since both have their limitations and strengths it is however very important to find the good balance in their use. The data and indicator availability, especially for the New Member States, has improved the opportunities for quantitative assessments, but there are still many non-codified aspects when trying to measure innovation performance and assess impacts of policies.

Second, besides improvements in data availability we have also witnessed a conceptual change in the thinking about policy in general and innovation

policy in particular. Adapting past policy to the needs of the future implies a cyclical process of reinventing the need for governance and public policy, the rationale of intervention, the appropriate level of governance, and the degree of integration between related policy areas and between innovation systems is optimal.

There is still a long way to go to translate such a changing conceptual framework into the reality of policy-making. Although the level of intelligence for policy-making has grown over the last decade — including improved evaluations, availability of data, an expanded range of indicators, growing international benchmarking possibilities — and despite the new institutional and systemic processes for setting policy priorities and for policy learning, we must conclude that today we still do not know much about the relationship between innovation policies and innovation performance. This relationship becomes even more complicated to assess when the link with other policy areas is taken into account. This was notably put in evidence in the discussion of the indirect link between structural fund interventions and education identified in Chapter 4, and of the direct link between environment policy and innovation policy, discussed in Chapter 6. Several chapters point to the need for policies to get out of the restraint of so-called ‘RDTI’ policies, the need to address innovation in low-tech sectors or services, the need to look for more demand-oriented policies and to develop policies which take into account the global dimension of knowledge creation and diffusion. The broadening of the scope and the integration of related policies has transformed our thinking of policy-making from a linear concept towards a systemic concept of innovation policy. Such a concept calls for increased attention to the linkages between policies in a ‘policy mix’ perspective. It is also in line with the rise of policies that serve more than one objective and policies that involve a variety of stakeholders. These developments have created new complexities in policy-making. Given the diversity of possible trajectories for innovation, policy needs to be sensitive to that. This can be seen as a third significant challenge for contemporary innovation policies.

Fourth, all chapters point, in one way or another, to the importance of human capital for innovation. In some chapters this is also related to social capital. Because of the increased mobility, the ageing of societies and the changing need for human resources there is also an increased need for policies that address the attraction and training of human resources, and to promote labour participation. This implies that innovation policy is no longer only aiming at influencing the behaviour of companies, but also the behaviour of knowledge workers and their households. This also implies that innovation policy is no longer merely restricted to interventions in the economy, but also extends to interventions in society at large.

The importance of non-technological and non-economic aspects of innovation has been emphasized in several chapters. It is no longer only the quality of the economy or the quality of the national system of innovation, in the end it is the long-term quality of society that matters. This includes the quality of governance and politics, as it is part of society. More and more the overall objectives refer to knowledge societies, which goes beyond knowledge economies. This brings us to the conclusion that we witness a shift in the rationale for innovation policy in Europe. What kind of new challenges, and what kind of institutional failures call for policy intervention? After market failures and system failures, society failures could very well be the next generation of failures that justify innovation policy intervention. That would constitute a fifth new perspective with dramatic influence on the shape of innovation policies.

Sixth, many old governance dilemmas remain relevant, such as the ‘equity versus efficiency’ policy dilemma. In this respect, a key question in innovation policy remains how to strike a balance between backing losers and picking winners, and between cohesion and competitiveness. The trend seems to be towards ‘backing winners’ and to promote embeddedness of, and spill-overs from these winners. This also brings us to the balance between policy oriented towards correcting weaknesses (e.g.: address system failures, as indicated by research based on Innovation Scoreboard) or towards investing in strengths (e.g.: as indicated by competitiveness poles in France, and the Innovation Programmes and the ‘Peaks in the Delta’ policy in the Netherlands). In this strengths – weaknesses dilemma, it is important to note the diversity in the stages of development and in the innovation trajectories: history and geography matter and policies are different according to stages of development, as argued in Chapter 9. As suggested by the results in Chapters 2 and 3, at a low stage of development it is important to work on weaknesses and at a higher level of development there are benefits of specialization and support to strong factors. Moreover, there are different ways to be strong in innovation and there are different routes or trajectories to increase strength in innovation performance.

Within the context of all those new or renewed challenges for innovation policy, a key problem that is occupying many innovation policy-makers in Europe is: how to align yesterday’s institutions to tomorrow’s challenges? This need for alignment or adaptations calls for a continuous, dynamic, social process of policy-making, including horizontal institutions, priority setting and policy learning activities. The quality of governance will therefore increasingly become an important driver for innovation performance of future knowledge societies in Europe.

Ingredients of Innovation Policies for the Future

The way forward for Europe is to move towards knowledge societies: from 'given' advantages based on cheap and abundant natural resources, material investments and hard physical labour towards 'constructed advantages' based on capabilities of societies to create and develop knowledge-based industries and services. These capabilities include policy-making capabilities which are based on more general qualities in governance and government. The capabilities include much more than carrying out or funding R&D activities, and it certainly includes the dynamic partnerships between the public and private domains.

Therefore, as argued already in Chapter 9, the 3% Barcelona goal as an input with a quantitative and R&D focused objective is not sufficient. It has become as such a weak signal for the Member States. Europe needs to address much more issues than the level of its R&D intensity. These other policy issues include policy outputs, qualitative and softer (less technological) objectives, and a vision on innovation in a broader sense, targeting creativity, sustainability and well-being in society. And besides, Europe needs to realize that knowledge creation, accumulation and diffusion has become an international and even global process, rather than one that can be contained as endogenous process in a 'fortress Europe'.

In order to move forward innovation policies to reach such ambitious, multi-purpose societal goals, packages of interlinked policies and platforms of interlinked stakeholders are necessary, and different policy mixes will be relevant at multiple levels of governance. Some of the 'new' goals address global challenges, other challenges are more society specific. The extent to which the challenges are global or local has an impact on what the most appropriate level of governance is. However, as we have learned from the development of multinational companies, going global does have some first-mover advantages. Opening up the research and innovation programmes in Europe to foreign participants could also generate first-mover advantages in a globalizing context.

The chapters of this book point towards the danger of naive benchmarking. Even when the goals of policies are the same for a number of countries or regions, or sectors, the difference in the specific contexts may call for different policy solutions. Learning from policies in other policy environments is an ingredient for developing new policy recipes, but only one ingredient, and it should be used with care and skill. Learning from one's own experience and learning from interaction among stakeholders in a system or cluster is the most important way to improve policies. As such it should be built-in at each phase of the policy cycles.

To sum up, and capitalizing on the various contributions of the authors of this book, we argue that crucial new directions for tomorrow's innovation policies could be the following ones:

1. They should incorporate the notion of open innovation, give a premium on hybrid endeavours to innovative public – private partnerships;
2. They should be more influenced by the demand-side, be more user-driven. That includes breaking disciplinary boundaries in research, to cater for more problem-driven research;
3. They should confer a key role to human resources, place a priority on nurturing, recruiting and retaining talent (which is more than high-level education);
4. They should pay more attention to the co-evolution of technical and social features, as the latter ones often appear as necessary conditions for the success of policies;
5. They should be systemic, horizontal and take into account interactions between a wider range of policy objectives and instruments from various areas (policy mix approach);
6. They should take into account the local dimension and cultivate knowledge-based localized nodes. This implies a stronger role for regions, but also a risk, because regional governments might be more subject to myopic visions (see below);
7. They should recognize the limitations of national-level policies and become increasingly internationalized, following the ERA concept but getting out of the restricted research policy view. The idea of ERA rests on critical masses creation and avoiding duplications on a European scale, which is an idea that makes sense for the development of large basic research infrastructure. But, nurturing creativity might just work better by stimulating a more diverse environment, including competing approaches and taking advantage of Europe's diversity. And the internationalization should not be limited to Europe, but be open worldwide;
8. The combination of the previous two points raises a key question: what is the 'right' level for various components of innovation policy, and what are the best combinations between various government levels? As long as policy-makers are myopic, i.e. they are not equipped/mandated to assess the consequences of their policies outside their own jurisdictions, it will be very difficult to determine the contours of such multi-level governance. Hence, policies would

need to be supported by new tools to make these cross-border dimensions of policies more visible;

9. They should place a premium on developing absorptive and learning capabilities rather than redistributing funds or ‘transferring’ knowledge from elsewhere (the old Structural Funds or Phare philosophy, which showed limited effectiveness);
10. They should be driven by considerations of effectiveness, be the result of policy learning, be based on policy intelligence tools, and avoid naive benchmarking. Today, with evaluation and assessment of impacts of policies still in infancy, there are not enough incentives to engage in ‘right’ policies, especially in the pursuit of long-term goals. There is a need for innovation in policy.

These points constitute a rich agenda for policy-makers as well as for researchers. The authors of this book continue to investigate them and hope that through cooperation with policy-makers an improved understanding of coming challenges for innovation policies will be translated in more efficient policies to secure the welfare of European citizens and societies.