Introduction to Part II

Science and technology (S&T) is one area with relatively little to show in terms of harmonization and cohesion between the policies of European Union (EU) member countries. There is ample evidence that European National Innovation Systems (NIS) remain rather dissimilar due to historical, cultural and other factors related to the development stage and consequent needs and capabilities. The work underlying this part of the book demonstrates the same phenomenon in one specific area of S&T policy: cooperation in R&D.

Diversity is increasingly viewed as a strength of the European Innovation System. Still, the more recent concept of a European Research Area presupposes a certain degree of cohesiveness and basic goal harmonization across member states. One way the Commission has tried to address the discrepancies – in terms of R&D funding levels, areas of focus, and specific policy tools – has been through formal Community programmes to support R&D since the early 1980s. Framework Programmes on RTD (FWPs) were first established in 1984. They have been successive four-year programmes supporting R&D in somewhat broadly defined, and yet selective, technological areas. Cooperative R&D has been the most frequent organizational mode of the RTD undertaking supported by the Framework Programmes. Cooperation involves business firms, universities, and government institutes based in more than one member country in any combination.

The two-year research project on intra-European R&D collaboration whose results supported the discussion in Part I of this book also appraised the underlying policy climate affecting the formation and conduct of cooperative R&D in Europe. Consortium partners prepared policy position papers for their respective countries as well as for the European Union as a whole, for Japan and for the United States. Japan was included because it has been a pioneer in the past few decades in cooperative industrial research. The United States was included because it has introduced significant policy changes since the early 1980s, first creating the legal infrastructure for cooperative R&D and then putting in place various programmes to support cooperative RTD.

Policy position papers summarized the S&T policies related to cooperative RTD during the past couple of decades. In addition, the papers investigated competition policies and the intellectual property rights (IPR)
policies that directly affect both the incentives of economic agents to participate in, and the returns from, cooperative RTD.

The papers indicated extensive differences between the policies of individual EU member states. Policy decision-makers across industrialized countries have typically actively promoted cooperative R&D during the past couple of decades but have tried to do so through largely different approaches. Policies have ranged from the almost complete indifference to the issue of R&D cooperation until recently (Ireland), to refocusing attention (UK), to lukewarm policies in anticipation (Greece, Italy), to well established, specialized network systems (Sweden), to highly determined programmes to assist cooperative industrial R&D (France, Spain). The level and type of support has varied widely as have the specific programmes, their technological focus, and the numbers and kinds of economic agents that have participated. Amidst this variability, the European Commission’s policies have played a boosting and cohesive role. The visibility (and funding) of European programmes has increased to the extent that member state governments perceive them as complements to their own S&T policies.

As expected, the policies of Japan and the US have also been quite different from those in Europe. In Japan, the emphasis on cooperative RTD continues. Government-sponsored RJVs, however, seem to have made the transition in the 1980s from mechanisms for assisting whole sectors to catch up with world best practice to mechanisms for creating a broader technological superstructure to assist a large group of high technology sectors. The US has followed a rational approach to increasing attention to cooperative R&D. During the 1980s, it changed its institutional structure and relevant legal system. During the first half of the 1990s, it tried to put in place specific programmes to actively promote cooperative R&D. Political developments and the decreasing pressure from the ‘competitiveness camp’, due to particularly favourable economic conditions for the American industry in the second half of the previous decade, lessened the attention of policy makers to research partnering. Cooperative R&D is still considered a potent S&T policy mechanism, however, surely to surface again as soon as the currently relentless pace of economic growth slows down. Policy experts are currently focusing their attention on the value of RJVs in assisting industry to decrease the high levels of uncertainty associated with opening up new emerging product markets.

The EU approach seems to have been the reverse of the US approach, but equally rational. Faced with a wide collection of nationally-based S&T policies, the Commission tried first to put in place its own supra-national programmes for cooperative R&D before harmonizing policies across its member states. Harmonization efforts and ‘cohesion’ efforts have contin-
ued, of course, but the process has naturally been a slow one due to path dependencies and vastly different S&T capabilities among the European core and the periphery. The Commission apparently hoped that a series of well-established and funded Framework Programmes for R&D would increase the chances of success for these efforts. And, in fact, support for the sixth Framework Programme was drummed up under the argument that, having succeeded to bring the European players together with the first five FWPs, Europe now needs greater coordination between policies at different levels of governance (EU, national, regional) and R&D efforts that meet a critical minimum mass necessary to sustain and enhance the international competitiveness of European industry. The first five FWPs may well have accomplished their core mission. What came out clearly in the consortium’s work is that EU policies have become a force well reckoned by individual agents and by member state governments. National and regional governments have increasingly shaped their policies at the image of those of the European Commission.

The rest of this part of the book consists of seven chapters. The first six deal with the policies of individual countries and one region. Chapters 8 to 13 appraise the policies of the European Union, the United Kingdom, France, Italy, Spain and of the United States of America respectively. Consortium partners have contributed the chapters on the United Kingdom, Italy, and Spain. Another expert has contributed the chapter on France. The coordinating partner is responsible for the chapter on the United States. Chapter 14 closes this Part by tracing the common policy threads across countries.

NOTES

2. In addition to FWPs, cooperative RTD is also being supported through the structural programmes. Structural funds usually supplement member-state funds and are distributed by member-state agencies within their national territory.
3. See also Vonortas (2000) for a comparison between the EU and US S&T policies in general, and collaborative R&D policies in particular.

REFERENCE