

The Role of Science in the Reform Process

Norbert Króo, the EPS President, met on 3 February 1995 in Budapest with the Presidents and representatives of physical societies from east and central Europe and the former Soviet Union to articulate the role of science in economic and institutional reform.

Many feel that the European Union (EU) is unconvinced that promoting science and technology (S&T) contributes greatly to the economic and social reform in east and central Europe (E&CE) and the former Soviet Union (FSU). The EU's main instruments to "... help the countries of E&CE and the FSU rejoin the mainstream of European development..." are the Phare and Tacis programmes (see insert). A meeting in February of the presidents of the region's physical societies took up the challenge of developing arguments that could encourage the EU to spend more of the programmes' funds on S&T. The main channel involves strengthening E&CE participation in the EU's 4th Framework programme so the discussions mainly focussed on this possibility. The aim was to integrate ideas and proposals into a report to the European Commission by T. Higgins from Ireland, an expert in science policy and EU programmes, who accepted an invitation by N. Króo to lead the discussion.

Professor Higgins argued that Phare's reluctance to engage S&T in the reform process does not stem from inadequate procedures as there are many ways in which Phare funds could be used to help participation in the 4th Framework. The discussion was therefore structured so as to articulate:

- what are in fact the principle barriers to participation;
- specific ways in which the EU could use fairly modest resources to improve the region's science and technology and to reform scientific institutions;
- the reasons why S&T can contribute to reforming the region's economies and to promoting integration.



Norbert Króo, on the left, with Professor Tom Higgins from Ireland who led the discussion on European Union initiatives for east and central Europe.

Mainly Government-level Problems

Many of the participants felt that 4th Framework participation is essentially politically motivated with the aim of harmonious development of E&CE and the evening out of imbalances that encourage, for instance, skilled people to leave the region. The region's S&T community can play a useful role. However, generally speaking, it is experiencing a crisis that is affecting applied science to a greater extent than basic research (except in Russia where both areas are in difficulty). The situation is not being tackled adequately because:

- on the scientific community side: scientists lack the skills needed to understand, cooperate and compete within EU programmes. They also lack a clear vision of the potential advantages.
- on the industry side: there is no real market for research and development;
- on the government side: priorities and coherent industrial and research policies are lacking; short-term solutions are applied.

Given the lack of a long-term commitment on the part of governments, it is perhaps not surprising that the presidents felt that the main barrier to participation stems from the fact that ministries are unwilling to cover the costs of participation (see insert) in the Framework programme. Second, owing to inadequate S&T structures, governments tend to centralize contacts thus making it difficult for the scientific community at large to know about the programme. Nonetheless, the programme itself must also bear some of the responsibility because its administrative procedures are complicated and basic research is not stressed.

Some Valid Arguments

The presidents felt that the EU can improve the region's S&T by overcoming these barriers, notably by finding ways to use Phare funds:

- to stimulate the formulation of national research strategies;
- to finance participation in the Framework programme;
- to improve information flow and to compensate for centralisation;

However, measures should focus on:

- maintaining "survival support" and the present relatively high level in the quality of education and research;
- government-sector laboratories, notably national laboratories, since they can under-



The European Union's Phare Programme was established in 1989 "to support the development of a larger democratic family of nations within an prosperous and stable Europe". It does this by providing grant finance for economic transformation and to strengthen newly created democratic societies. In the first five years to 1994, Phare made available 4 284 MECU to 11 countries, each of which are responsible (through a Phare National Coordinator or a government body) for their own programmes. The priorities are organizational restructuring, institutional reform and infrastructure development. Tacis has similar aims and modes of action but is directed at the former Soviet Union. It has made available 1870 MECU in 1991-94.

take research activities that were performed by industry before much of it died out;

- the potential customers of research, notably in areas where a high-technology industry can be envisaged;
- east-east contacts and on networks based on medium-sized facilities;
- student mobility and access to facilities.

Convincing Phare that these measures are worthwhile means articulating the role S&T can play in the reform process. The presidents concluded that S&T:

- gives some balance to the reform process, that is often based on privatising institutions;
- stimulates strategic thinking and high standards;
- catalyses environmental protection and the formation of high-technology industry;
- encourages the uptake of modern information technology.

INTAS versus F-IV PARTICIPATION

The EU 4th Framework (F-IV) for 1994-98 includes 232 MECU for E&CE and the FSU split mainly between the INTAS association and participation in F-IV. Member States appear to favour the INTAS structure over having the EC administer spending because it can react more quickly, has higher visibility and is administratively simpler. For 1995, it had been proposed to hand over some 12 MECU to INTAS and 3 MECU to DG-12. The Council of Research Ministers meeting on 10 March 1995 instead gave some 10 MECU for F-IV participation in 1995 and the balance to INTAS. It will decide in June if INTAS should continue (it is mandated until the end of 1996) and the funding level. With a favourable decision, INTAS plans a call for proposals at the end of 1995 (for continuity) with no call for 1995 (there was one 2 years ago). Meanwhile, it will select some existing projects for refinancing as most have only been financed for 1 year (about 500 projects, with the ministers criticising long administrative delays in finalising contracts that arise partly owing to Russian tax legislation). **F-IV participation** has not been finalised but it is likely that F-IV evaluation panels will forward details of successful proposals for joint research projects and for networks that could be financed. There will probably be a call in September/October (3-month deadline) for the 60 MECU for 1996.