

**SUMMARY REPORT ON WORKSHOP
"SCIENCE FUNDING IN TRANSITION - CHANGING PARADIGMS AND FIRST
EXPERIENCES OF IMPLEMENTATION"**

Introduction

The workshop "Science Funding in Transition - Changing Paradigms and First Experiences of Implementation" was jointly organised by the German Ministry for Education and Research and the OECD within the framework of the project "Steering and funding of research institutions". It took place on 6-7 May 2002 at the Wissenschaftszentrum Berlin.

Participation was limited to 50 experts in order to facilitate discussions during the workshop. It included members of the ad hoc WG, additional experts from participating countries, but also experts from countries which are not permanently participating in the work of the ad hoc WG (i.e. Ireland).

The workshop was chaired by Steve Shugar, Canada, who is also chairing the ad hoc WG's sub-group on priority setting. Dietmar Braun, University of Lausanne, Switzerland, was the workshop rapporteur.

Workshop objectives

The primary objective of the workshop was to provide a survey of changes in OECD member states' policies governing public funding and steering of research institutions. In detail, the workshop aimed to achieve the following:

- Understand how priority setting in different parts of the science system influences the availability of financial resources for research and training activities, and identify unintended impacts of this activity.
- Examine new mechanisms for funding public sector research (universities and government research institutions) and to identify strengths and weaknesses of these new approaches.
- Describe and identify methods to assess and evaluate research performance in the context of using increasingly priority setting procedures and introducing new funding schemes.

Issues discussed

Balancing academic, political, economic and societal demands is one of the major tasks of increasingly complex priority setting procedures. The workshop therefore discussed questions such as the reasons for priority setting exercises, the players involved in priority setting, the balance which had to be found between increased setting of priorities and institutional autonomy, and the different techniques employed for priority setting.

The allocation of funds is one of the major instruments to enforce priorities, therefore the issues related to funding are very similar to those related to priority setting. Many governments have embarked on reforms of their funding system by trying to reduce the percentage of "funding without strings" for public research

institutions or by introducing more performance-based approaches for institutional funding. Finding the right balance between different demands is a particular challenge in this connection. The workshop therefore discussed whether an appropriate balance between different funding mechanisms can be found and what this balance might be (general programme funding vs. institutional funding, fixed funding vs. variable funding, centralised vs. decentralised funding). It also dealt with the question whether competition always was the best way to ensure the best use of limited resources, and if so, how competitive funding instruments should be designed in order to be efficient.

Since priorities can only be enforced and more performance-based competitive funding instruments can only be introduced if clear output criteria are established, the workshop also discussed new and improved methods of evaluation and controlling. Questions relating to how the effectiveness of different priority setting and funding approaches could best be measured and what assessment criteria should be established were discussed.

Highlights of presentations and discussions

An extensive summary and fair judgement of the workshop's outcome is provided in the rapporteur's report. However, some of the country examples discussed and more general results are highlighted below.

Some interesting examples from different countries showed how governments are reforming their science systems. Experiences with such reforms could serve as input for reforms in other countries.

The Canadian example (Canada Foundation for Innovation) described the attempt to set priorities and enforce them and - at the same time - maintain a balance between different demands on the priority setting process (e.g. top-down vs. bottom-up, centralised vs. decentralised, formal vs. informal) and the complex set of players involved (government, research institutions, industry). The enforcing of priorities in the example described (funding of selected infrastructures) was facilitated by the fact that this was a new programme with new additional funds.

A presentation on the reform of a large part of Germany's public research institutions (the Helmholtz Association) described how in future priorities (strategic and thematic priorities) would be enforced by changing the funding structure for these institutions from institutional funding to a more programme-oriented competitive funding. Contrary to the Canadian example this reform is implemented within the existing framework of funding levels. It therefore met with resistance on the side of the institutions. This reform has just started, and it will be interesting to see whether it can really be successful without injecting additional funds.

An example from the Netherlands described a new funding instrument (funding of virtual institutes) called Leading Technological Institutes which aims at getting industry more involved in basic research and at facilitating transfer of research results to innovation. Within the framework of this system business would take the initiative to establish such virtual institutes and public research institutions would respond to such initiatives. The government's role in this scheme is to match funds earmarked by industry and to facilitate co-operation between the private sector and public institutions. This was yet another example where the setting of priorities is backed up by additional funds.

A presentation from the Australian Research Council described how changes in the funding of public sector research (focus on strategic and thematic priorities) had led to a structural reform of the major funding agency with the aim of supporting and facilitating the intended changes.

Evaluation has become one of the key issues for funding agencies and research institutions. Presentations on this issue demonstrated that various evaluation criteria and procedures are still being under discussion

and vary very much between countries. While ex ante evaluation procedures seem to be well established, performance and ex post evaluation is still lacking clear criteria. Improvements in this area must still be made.

General findings

All countries have adopted a more strategic thinking in their science policy approach taking account of the systemic context in which such policy is embedded. This is also reflected by the fact that there is a development towards setting strategic priorities taking account of societal needs as well as of merely scientific and thematic approaches.

Most governments have embarked on reforms of their science systems aiming at more flexibility of organisational and funding structures. More competitive funding instruments are introduced by nearly all countries to achieve this aim. Such reforms seem to be most accepted when they come with increased funds. Introducing reforms with existing funding levels meets with more resistance.

There are no generally applicable answers to the questions raised during the workshop. They depend very much on the context questions are asked in, on tradition, general cultural beliefs and political choices. In this connection "best practices" may be difficult to define. What works in one country may not work in another. However, reform approaches in the various countries are very useful to stimulate discussion within and among countries and experiences with such reforms - good or bad - can initiate similar reforms in other countries or lead to avoid similar mistakes.