

analysis

Investment over cuts

Concerns about science funding are real, but have been overdone, reports Hanns-J Neubert.

Worries about cuts in science funding have been exaggerated. That, at least, is the evidence from the World Science Forum in Budapest earlier this month, where science funding in a changing global economy was a major topic.

Every public budget is squeezed but rapporteur Vaughan Turekian, chief international officer of the American Association for the Advancement of Science's Center for Science Diplomacy, said countries recognised that research was central to innovation: "Concerns about economy have been good for science funding."

Global economic collapse has refocused science efforts and investment. Finland and Sweden compete to reach investment levels of 4 per cent of GDP next year. Germany, even with a stagnant economy, increased its 2009 science budget by 10 per cent to 9.35 billion euros. "Times of economic crisis are times of innovation", said Annette Schavan, the German Minister for Education and Research. Even Greece, a poor country with an economy in recession, plans modest increases in its research and education budget despite serious cuts in public expenditure.

China, a dominant voice during the forum, saw its research expenditure rise fast during the last five years—up 40 per cent this year—mainly due to heavy industrial R&D investment. European industry's R&D investment was by comparison up 8.1 per cent[what period?].

Even some developing countries are backing science and technology. Gambia, with only 1.6 million inhabitants, is convinced that investing in S&T is the only way forward. Despite her country's brain drain, Fatou Lamin Faye, Minister for Basic and Secondary Education, was delighted about one recent gain: after 25 years abroad, Muhammadou Kah, now vice-chancellor and president of the University of The Gambia, returned as Professor for Information Technology and Communication.

Once-notorious Rwanda has become an African beacon. In 2008 the country spent 1.6 per cent of its GDP on S&T and hopes to achieve 3 per cent in 2012—a share some European countries have not achieved.

But there is a divide. "Some European countries are grasping an opportunity and investing more in science, especially the western ones", said Marc Heppener, Director of Science and Strategy Development at the European Science Foundation. "Some, mostly eastern

European countries, are badly hit and have no choices." The 18 ESF members do not want to reduce ESF's budget.

At present eastern Europe's share of project funding from Framework 7 is only 4.7 per cent. The Mediterranean rim countries get 17.1 per cent, while nearly 70 per cent goes to central and northern Europe, mainly Germany, Britain, France, Italy and The Netherlands.

During the Czech Republic's presidency of the EU Council, which ended in July, Jiri Drahos, president of the Czech Academy of Sciences, tried to re-open a discussion most thought had been settled during 2004's Framework 7 negotiations: cohesion or excellence as funding criteria. Asking for more cohesion, he said: "It should be ensured that research infrastructures are allocated proportionally in all EU regions."

Although supported by Norbert Kroó, vice-president of the Hungarian Academy of Sciences, and despite Hungary's gain of the European Institute of Innovation and Technology, other south-eastern politicians called for patience. Stjepan Mesi, President of the Republic of Croatia, said, "Changes are underway and it will simply take time for them to be completed until balance is achieved."

Drahos' efforts were overshadowed by his government's proposal to cut his academy's budget by half into 2012 and direct most other research expenditure towards industry. This caused scientists to mount a number of demonstrations in Prague under the motto "Murder of Czech Science". Then Czech President Václav Klaus joined in: "It's an illusion to think that science has more importance for the future of the Czech Republic than healthcare, police or public administration." The final decision on the cuts will be one of the first tasks of the government due to be elected in spring 2010.

But even western Europe uses the crisis as an excuse for research cuts. Spain's science budget doubled between 2004 and 2008 to just over 8 billion euros, pushing it above 1.1 per cent of the country's GDP. In 2008, the re-elected government promised to push funding for science to a target of 2 per cent of GDP.

But instead, the newly formed Ministry of Science and Innovation, headed by biotechnology entrepreneur Cristina Garmendia, unveiled a cut of 45 per cent for directly funded basic research. After protests, the cuts were reduced to 15 per cent but are still subject to parliamentary scrutiny next spring.

Science and technology investment has contributed greatly to the economic stability and wealth of states. Even when increasing budgets is not an option, there is a solution. As Turekian told the WSF's science funding session: "There is greater need to build networks, at national, regional and international levels to leverage funds and human resources."

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