

International research collaboration: overcoming the impediments

In science, tensions between competing national interests and collective responsibilities have always existed. Nations compete and cooperate at the same time via differing sets of alliances and bilateral arrangements.

This competition-cooperation tension applies to both national security concerns and also to less sensitive scientific and technological work.

The result is that gaps in scientific and technological capability between nations are unlikely to disappear via a simple process of

convergence. The existence of these capability gaps are themselves a source of power and competitiveness for the most capable nations. Possessing what others want, and being able to do what others would like to be able to do, provides many commercial and security advantages. These

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advantages are not given away lightly. Complex trade-offs therefore need to be made between the advantages that arise from allowing other nations to catch-up via technology transfer and capacity-building and the commercial and military disadvantages that may arise as these nations also become stronger high-tech competitors.

Against this geopolitical backdrop to global science and technology, there is a growing recognition of the need to improve the efficiency and the effectiveness of those areas of research that address collective international interests. This is especially important in regard to addressing major global challenges – areas in which there tend to be collective security concerns – broadly defined as health, environment, climate change, energy and food security etc. In such cases the advantages of more effective international

cooperation tend to outweigh the disadvantages because of both the collective benefits and the enormous collective costs of failure.

In order to address these challenges, barriers to researcher mobility need to be lowered. Open and/or

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reciprocal relationships via which researchers in one country can access research mechanisms in another country need to be built-up. Impediments to stronger bilateral and multilateral research cooperation need to be identified and targeted for reduction. It also requires new forms of

standardised ‘agile’ contractual arrangements that make it easier to exploit synergies between existing research projects via international cooperation without long delays and high transaction costs. Moves in this direction should reduce unhelpful duplication of efforts in research and allow the economies of scale and scope associated with coordinated global research to be better exploited.

European programs increasingly support the cooperation of European countries with countries outside of Europe. A significant example of this is the launch of a set of inter-connected projects which aim to raise the awareness of Europe-based researchers for funding opportunities that support collaboration with colleagues in a range of non-European nations. Projects with this pragmatic focus, funded by the European

Commission, are now underway in Australia, Brazil, Canada, China, India, Mexico, New Zealand, Russia, South Africa, South Korea, and the USA. These projects target both research and innovation support programs.

The Australian project is led by the International Bureau of the German Federal Ministry of Education and Research and also involves the Forum for European-Australian Science and Technology cooperation (FEAST), the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the British Council. The various national projects are cooperating over the development of a standard database architecture that aims to make it easier to understand and compare different nations’ research

funding arrangements. In addition to aligning efforts with those in the other participating countries, the Australian project is also carrying out some exploratory work on the potential for developing measures of openness and reciprocity in access to national research funding systems.

Details of this new collective initiative, which is known as ACCESS4EU, can be obtained from: <http://www.access4.eu/>.

These moves to develop a more coordinated relationship between the European Union and a range of non-EU countries collaborating with the EU in research may point the way toward more effective multilateral coordination over these matters in the future.

Institutions, agencies and non-government organisations that offer research and innovation support programs accessible by overseas nationals are encouraged to contact FEAST to discuss their engagement with this new initiative.

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