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Australian research going global

The fact that Australia's Prime Minister used his first speech in Brussels to draw attention to the existence of the Forum for European–Australian Science and Technology cooperation (FEAST) was extremely encouraging. As the Prime Minister noted, Europe is Australia's major research partner, illustrated by the number of academic publications tracked adequately by Thomson publications data. Thomson is a key data source used to assess research performance, though it is limited in that the humanities and social sciences are not covered effectively. According to this dataset, the early 1990s marked a point of divergence between Australia's research collaboration with Europe and the United States (Figure 1). There is no consensus view that explains this trend, and FEAST is now investigating it.

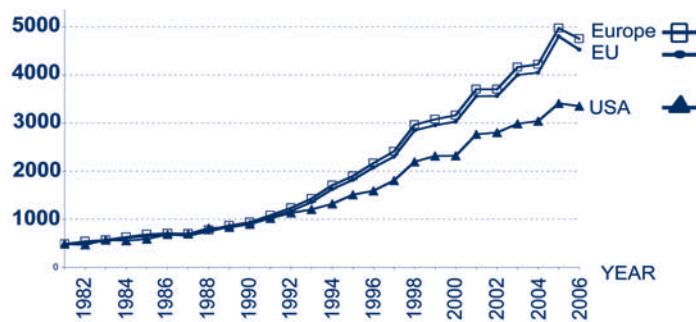


Figure 1: Australian Research Collaborations with European Union, Europe and USA as reflected in Thomson ISI tracked publications.
 Source: Thomson data analysed by the ANU's Research Evaluation and Policy Project

Furthermore, FEAST's analysis reveals that most of the growth in Australia's research publications is associated with international collaboration rather than purely domestic efforts. The output of purely domestic papers is growing by around 200 per year whereas papers with international authors are growing by roughly 600 per year (Figure 2).

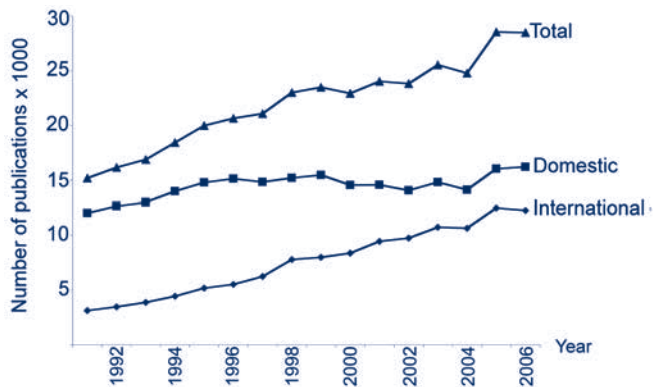


Figure 2: Number of publications by Australian researchers as tracked by Thomson ISI. Graph reflects the total number of papers (Total) or where either only Australian researchers were involved (domestic) or these were co-authors as part of an international collaboration (international).
 Source: Thomson data analysed by the ANU's Research Evaluation and Policy Project

FEAST has been monitoring these trends and examining the best practice strategies to support these developments. Our general conclusion is that academic-to-academic collaboration between Australia and Europe is going pretty well in the sense that collaboration is growing and is yielding useful results.

In regard to strategy and policy, we recommend that international

engagement should be treated as part of the 'core business' of doing research – not as an optional extra requiring targeted funding. From our perspective, the rules and regulations surrounding research funding that restrict scope for international collaboration are a key impediment preventing researchers from building these relationships. The reason is simple. Restrictions on the use of funding for travel and other costs of international collaboration limit the scope for conducting internationally engaged research. A more permissive approach to research funding would allow international collaborative relationships to be configured 'bottom up' in line with researchers' collective aims.

Minister Carr's recent announcement that the Australian Research Council will now be adopting a far more internationally engaged approach, involving a move toward truly global competition for funding for research to be performed in Australia, is therefore extremely welcome and commendable in its clarity of purpose. This aligns Australia with international trends in research policy – for example the new European Research Council (ERC) adopts a similar approach.

The overall result of these international trends will be that research will become more 'borderless' and better able to exploit synergies and avoid wasteful duplication. We are moving toward a global knowledge commons in which the nationality and geographical location of researchers will matter much less than the webs of global relationships in which these researchers are embedded.

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These webs of often complex relationships will increasingly constitute the critical intangible 'asset', from which public policy will seek to obtain a social, environmental and economic pay-off. It is not hard to see that understanding and tracing the outcomes from spending on research and innovation is set to become far less about the direct benefits arising for a nation and region/city. By contrast, it will be far more about the ways in which each nation, region and city performs research as part of a wider network that contributes to global advances – advances that are then drawn upon in a more 'customised' manner to address specific national, regional and indeed city-based challenges and opportunities. *The generation of useful research outcomes is the product of a complex global system of research and innovation.*

This has profound implications for how we go about both appraising potential research projects and evaluating the progress and outcomes that past projects have generated. Policy-makers must stop searching for the holy grail of easily traced 'smoking gun' audit trails that link research to useful outcomes via simple domestic causal chains. They must learn to accept that research generates useful outcomes by a process that often cannot be traced in a simple manner, precisely because a complex, but far more powerful, system of cause and affect is at work on a global scale.

Readers interested in strategic approaches to intensified research and innovation engagement with Europe can access presentations from FEAST's recent conferences in Melbourne and Sydney at:

www.feast.org/strategy2008/. *FEAST is funded jointly by the European Commission and the Australian Government and is hosted by The Australian National University on behalf of Australia's research community.