Bulletin 4 of 6

The role of science, research and technology in lifting Australian productivity.

9 June 2014



Collaboration critical to innovation and productivity

Effective collaboration between businesses and between business and publicly funded research is a critical enabler of innovation. Additionally, international collaboration is critical to the increased productivity and competitiveness of Australian firms.

Collaboration with publicly funded researchers can help businesses access new technologies, ideas and markets. International collaboration facilitates access to new markets and networks and assists with the early adoption of technologies developed elsewhere.

New analysis of 8,000 Australian small to medium businesses, found that innovative firms that collaborate are more productive than their non-collaborating competitors. The strongest benefits arise from collaborations with research organisations*.

Collaboration increases the economic and social dividend from publicly funded research but there are significant systemic barriers to increasing collaboration between business and research organisations. Our levels of collaboration are low by OECD standards.

The Excellence in Research Australia (ERA) system provides a measure of the quality of Australian research and has a particular focus on publications in high ranking journals. While Government funding is provided to universities on the basis of the ERA, it unfortunately and inadvertently discourages researcher-business collaboration. There is no parallel incentive to the ERA to reward university researchers who collaborate with business.

We can learn from successful approaches to catalysing collaboration both in Australia and overseas.

There is strong evidence that innovation intermediaries, ideally operating outside government but with government support, are effective in overcoming barriers to stimulate networks and collaboration. Intermediaries such as technology brokers, incubators, accelerators and clusters make use of vouchers and other schemes to effect outcomes.

Knowledge Transfer Partnerships is a long running program in the United Kingdom that partners businesses with academic institutions. Numerous evaluations of the program have found that the businesses involved added sales, value, and on average created three additional jobs. The return on investment has been on average five to one.

The importance of collaboration is currently under-recognised in Australia with new initiatives needed to fully capitalise on research, support development of innovative businesses and access knowledge from overseas.

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On 3 June 2014 ACOLA released *The role of science, research and technology in lifting Australian productivity*. This bulletin is designed to continue the discussion around the role that science, research and technology plays in the Australian economy and in lifting productivity.

For more information or to arrange an interview contact Rebecca Skinner, Communications and Project Manager on 03 9864 0925 or 0400 684 993 or rebecca@acola.org.au

^{*} Is science-based innovation more productive? A firm-level study. Found at http://acola.org.au/PDF/SAF04Reports/Effect%20of%20innovation%20on%20firm%20performance%2029May2014.pdf

Quotes

"The report found that collaboration is essential to innovation but that current measures to encourage collaboration are inadequate. One program, 'Researchers in Business' is relatively small but supports Australian small to medium sized businesses to embed a researcher from CSIRO, ANSTO, AIMS and the Universities, to develop an idea into a commercial product or service. The project team spoke with the executives of many companies that have had a researcher in their business and found universal praise for the program. Discussions with some of the researchers involved indicated that the experience had given them new insights into understanding the needs of Australian industry. I hope that in a time of budget restraint this successful and proven program for linking Australian research with the needs of Australian industry will not only survive but be expanded."

Professor Tom Spurling AM

Centre for Transformative Innovation | Swinburne University of Technology

CSIRO Board Member

"New econometric research using a database of about 8000 small and medium sized businesses shows that innovation has a clear, unambiguous and positive effect on productivity. In fact, we found that firms which innovated were 21 per cent more productive a few years after then had introduced an innovation compared with their earlier productivity. Organisational and managerial innovations, and innovations sourced from science were shown to have the largest effect on productivity."

Professor Beth Webster

Director, Intellectual Property Research Institute of Australia, Professorial Fellow, Melbourne Institute of Applied Economic and Social Research