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





Innovation key to building Australia's future manufacturing industries

Despite the apparent decline of manufacturing in Australia, the sector still has an important place in our economy. Manufacturing accounts for around 7 per cent of GDP (\$104 billion), 11 per cent of employment, and 25 per cent of business research and development.

Internationally, manufacturing is becoming more interconnected with the services sector. Businesses are providing much greater value for their customers by integrating service delivery around their products. The continued profitability of Australian manufacturing will depend on enhanced service integration, and increased participation in local and international value chains.

Another trend towards a more innovative manufacturing industry is being driven by advanced manufacturing technologies, such as 3D printing, continuous flow processing, and biomanufacturing, many of which also have great potential for enhanced service integration. Taking advantage of these trends will require investing in the innovative capacity of our small and medium enterprise-dominated manufacturing sector.

Government has a critical role in supporting the development of innovative capacity, particularly in small and medium businesses. This includes providing knowledge infrastructure, network connections, assisting in skills development, and access to strategic and operational advice. Governments around the world invest strategically in innovation capability and measures to ensure that firms can profit from innovation investment.

Innovation support policies in Australia have predominantly focussed on broad, non-targeted schemes such as R&D tax concessions. With a few exceptions, like the highly successful Cooperative Research Centres, government innovation support programs in Australia have been small-scale, complicated to understand, and constantly changing – making it difficult to evaluate their success and hard for businesses to plan for innovation. In contrast, international programs like the US Small Business Innovation Research Program or Manufacturing Extension Partnership are long-standing, large, consistent, and effective at building innovative capacity in industry.

To build an innovative future manufacturing industry, Australia must develop a strategic approach – learning from international approaches – to support innovation in this important sector.

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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.

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