

Australian Academy of Science

*Submission to the
Joint Standing Committee on Foreign Affairs, Defence and
Trade inquiry*

Enterprising Australia- planning, preparing and profiting from trade and investment

Summary

Research and Development are now acknowledged by Government as a key drivers of economic growth. However, Australia continues to be seen as an “old economy” despite changes made over the past decade. Australia is not seen as a R&D or S&T economy and hence not a good investment for global corporations. Recent government measures have started to change that perception but the process must be sustained if the message is to be understood internationally. There are some exceptions to build upon, for example medical and bio-technology research, where Australia has a reputation as a contributor to innovation based on research. Some other areas are identified. We give detailed comment on the terms of reference below.

To examine and report on increasing Australia’s trade and investment through initiatives for economic expansion, in particular

1 The role of development agencies in economic expansion such as the Industrial Development Agency in Ireland and the Economic Development Board in Singapore;

The Academy notes that development agencies in many countries have been successful in attracting major investment in manufacturing and hence job creation. Key aspects of their operation appear to be

- The ability to negotiate and decide quickly on a national basis,
- Tax incentive schemes
- National consensus about priorities
- Coordinated and synergistic (with industry) policies for national higher education and infrastructure

2 Reasons for the success or otherwise of development agencies in establishing countries and regional areas as economic leaders;

The Academy draws the Committee's attention to a recent case of failure to attract a major industry to Australia as it may be symptomatic of some problems. Following a meeting on *Science, Technology and the Boardroom* in August last year, a representative from Smith Kline Beecham (now Glaxo Smith Kline) discussed the reasons why they decided Singapore should be the headquarters of their Asia-Pacific research operation. The driving factor in the selection of the location for their regional headquarters was the requirement for drug trialing, which has to be up to the European standard. Their short list was China, India, Korea and Australia. Their criteria were

- Quality of life
- Long-term national positive industry policies,
- Financial incentives and
- geography.

China was eliminated very early but because of SKB's strong interest in the China market they looked first to Hong Kong and then Singapore. Australia failed because of its geographical position, especially its distance from the Chinese market. The attractions of Singapore were

- tax incentives, which were 'irresistible' and part of a long term stable policy of tax incentives
- training grants provided by Singapore for Singapore postdoctoral fellows to be employed by SKB with the objective of teaching these young people to be the very best in pharmaceutical R&D.

Australia's weakness was perceived as its lack of financial incentives, lack of a long-term industry policy and the perception that it was not a "friendly" country for business. Australia is seen as a high-tax country for new start-up operations. Although Australia judges itself to be is one of the lower taxing countries this is not acknowledged by the global corporate world.

3 The comparative role of such development agencies to existing agencies in Australia;

The Academy does not comment on this term of reference

4 Incentives and impediments to foreign investment in Australia such as transport systems, taxation, telecommunications infrastructure, production costs, industrial relations structures, legal systems, federal systems of government and research and development initiatives;

Incentives

- **Political stability.** The advantages to potential investors of Australia's rule of law, political stability and general lack of corruption with the judiciary and government bureaucracies should not be underestimated.
- **R & D Infrastructure.** An important component of Australia's industrial research and development effort is the research of local subsidiaries of large multinational corporations. Traditional attitudes about all research and development having to be done in huge facilities close to head office are changing. Australia is seen as a low-cost research and development provider of excellence by some of these companies. An encouraging and consistent attitude towards multinationals willing to invest in local research and development needs to be fostered. The drop in industry R&D investment may have arisen because overseas companies (many control industry in Australia) see Australia as a technologically undeveloped country, and therefore one to be used only for raw materials and labour.
- **Academic Excellence.** Australia has many academic and research institutions of world standing with first class scientists with international credentials. Some are involved with national and international corporations involved strategic basic research. These links could be further developed in the national economic interest as personal networks account for much of the international links in science. Although these networks are an invaluable asset developed over the lifetime of many outstanding scientists, the Academy is concerned that without adequate nourishment and opportunities for our younger scientists through adequate research grants and opportunities for collaboration these invaluable networks will wither.

For small countries such as Australia, international S&T collaboration can foster

- increased investment in Australia and exports of Australian goods and services,
- promoting internationally Australia's innovative capacity in the public and private sector
- accelerating the rate of technology transfer to Australian business, and
- boosting science and technology intelligence-gathering

Impediments

- We comment on "**federal systems of government research and development initiatives**".

Here we perceive a problem associated with the devolved system of States' own development programs. Australia must face up aggressively to the global economy and the ways in which the national interest can be promoted in cooperation with multinational interests. This requires a balance of negotiating power and one key step towards achieving this should be a "one stop shop" for dealing with international investment. As pointed out in the

Chief Scientist's report in November 2000, "*The chance to change*", the array of State and Commonwealth publicly funded programs and incentives to encourage business innovation is often confusing to international investors.

This is a major political problem because of the federal constitution of Australia and the desire of individual states to run their own agendas in industry. We may take as an example the way in which the North West Shelf of Western Australia and the Timor Gap area near Darwin could or should be exploited in the future. If it were possible for the Commonwealth Government and the states to form the "one stop shop" to allow a properly staged development of the petroleum resources in those areas it seems obvious that Australia could obtain a national advantage in negotiation with multinational companies.

There is also an advantage for the companies themselves because, as with a small country like Singapore, broad ranging agreement can be achieved in four meetings - allowing details to be worked out subsequently.

- **Image.** Government needs to give a clear message that it sees technology development and innovation as one of the selling points for getting overseas companies to invest here. The *Innovation Action Plan* announced by the Government on 30 January 2001 was a step in the right direction as it recognises that excellence in science and technology will influence strongly Australia's future economic health.

5 The adequacy of a skilled workforce in Australia particularly in new growth areas such as, though not limited to, financial services, information technology, E-business, education, pharmaceuticals and health care, and the competitiveness of that workforce;

There is no doubt that the general skill level and breadth of skills of the Australian workforce are growing in response to the broader access to tertiary education but there is a problem at the high-excellence end of our higher education training system. This arises because current DETYA funding policies for tertiary institutions are too strongly linked to student numbers and not to quality of outcomes, particularly in research. Many previously excellent science and mathematics departments are losing international competitiveness.

6 Opportunities for encouraging inward investment and promoting export sales.

The Academy suggests that information technology, sustainable chemical industry, medical and health technologies and environmental technologies offer strong possibilities for investment and future growth.

As an example we take the challenge of Australia's growing deficits in information technology hardware and chemicals which need to be met. Between them, the deficits (cost of imports minus value of exports) may amount to 50 billion dollars per annum by 2010. The opportunity is to make the best use of Australia's great natural resources for sustainable and highly

profitable manufacturing and to benefit from our highly educated population and research system.

In addition, Australia's international treaty obligations on greenhouse gas restriction require industry and government action, and this provides opportunities for export of Australian technology. Globally, there is now the recognition that sustainability issues represent an increased element in company business and that this requires science and engineering input into company boards.