

# can distance BE defeated?

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## Introduction

Two well-known books encapsulate much that is particular to the challenges facing Australia today: Donald Horne's *The Lucky Country* and Geoffrey Blainey's *The Tyranny of Distance*. Both titles have become part of the Australian lexicon and are keys to our sense of self as a nation.

Horne's phrase evokes in the minds of many the bounty of Australia possessing a continent rich in natural resources, some of which comprise a large share indeed of the global resource endowment.

The continent has over 20 per cent and, in some cases, much more of the world's known stock of recoverable uranium, iron ore, bauxite, diamonds and mineral sands. Proven black coal resources have centuries of life at current extraction rates and millennia for brown coal. The land currently occupied by mining is 0.01 per cent of the land area.



PHOTO: ISTOCK

Australia's relatively small population means that this bounty can be shared and can support a good living, thanks to the fortune provided by nature and by isolation. Recognition of such a sentiment was reflected in the Prime Minister's recent comment on dealing with climate change, that "we have to make sure that we do it in a way that preserves our natural advantages because future generations will not thank us for squandering a natural advantage providence has given us".<sup>1</sup>

Isolation is Blainey's theme. The continent is geographically separated from the historic centres of major human population or, as Paul Keating once put it more colourfully, "Australia is at the arse end of the universe". (Some might say Keating's comment neglects New Zealand and Tierra Del Fuego, but the point is clear.) Isolation is not just literal physical geography but also a matter of economic mass – and the most prosperous and populous are elsewhere. Canberra is 16,500 kms from Bonn, 16,000 kms from Washington, and 6,000 kms from Tokyo, even in our own Asia Pacific region.

According to some historians, Australia may have had an indigenous population of half a million before white settlement. Noel Butlin (1983) suggested this was a massive underestimate; in his view the number was more like one million. However, disease (and not the frontier violence that has so occupied the culture war historians) decimated this native population, leaving only 250,000

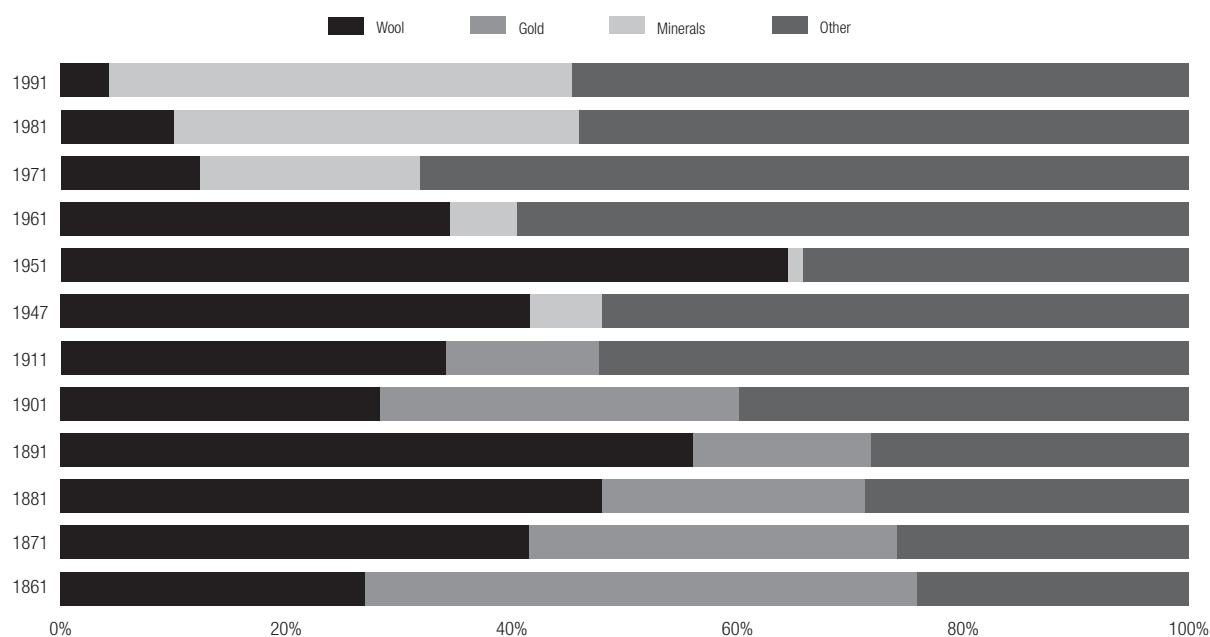
indigenous Australians by 1815 supplemented by 15,000 Europeans; a tiny population for a continent of 3 million square miles. Almost 200 years later the indigenous population has risen back to half a million and the total population has passed 20 million.

### Global integration

One consequence of nature's bounty has been a long historical reliance upon natural, resource-based exports as a major component of Australian trade, as shown in Figure 1. Wool, gold and other minerals alone have never been less than 30 per cent of total Australian exports, putting aside the years of war and depression.<sup>2</sup> The reliance has varied over time and manufacturing and service exports (including sectors such as tourism and education) have expanded. But the natural resource base has remained crucially important and, in circumstances, such as the recent period of commodity price boom in response to China's fast growth, has accelerated to assume renewed prominence. And we have used our resources most efficiently, showing much higher labour productivity in these areas than comparable countries such as the United States.

The implications of bounty and distance for Australia's growth, structure and stability are profound. How we respond to this bounty determines whether we continue

**FIGURE 1 AUSTRALIA'S EXPORT COMPOSITION, 1861–1991**



Source: McLean & Taylor (2001)

as one of the group of countries to escape the “Resource Curse” (Smith 2007). So many countries rich in natural, resource-based products have not used their bounty well and have suffered restricted growth. But countries such as Canada, Australia, and Norway have developed as affluent and stable democratic societies. Whether we should have done even better is open for debate, but the need to ensure that resource wealth flows are not wasted in the manner of the Spains and Portugals of centuries ago or some of the mid-East, African and South American oil countries of modern times remains a policy priority.

The priority is recognised somewhat in Australia through the structural impacts associated with what local economists call the “Gregory Thesis” or, as it is called elsewhere, “The Dutch Disease”. The exchange rate effects of bountiful natural exports inhibit competitive manufacturing and service exports and raise import costs, so placing pressure on urban living standards and employment.

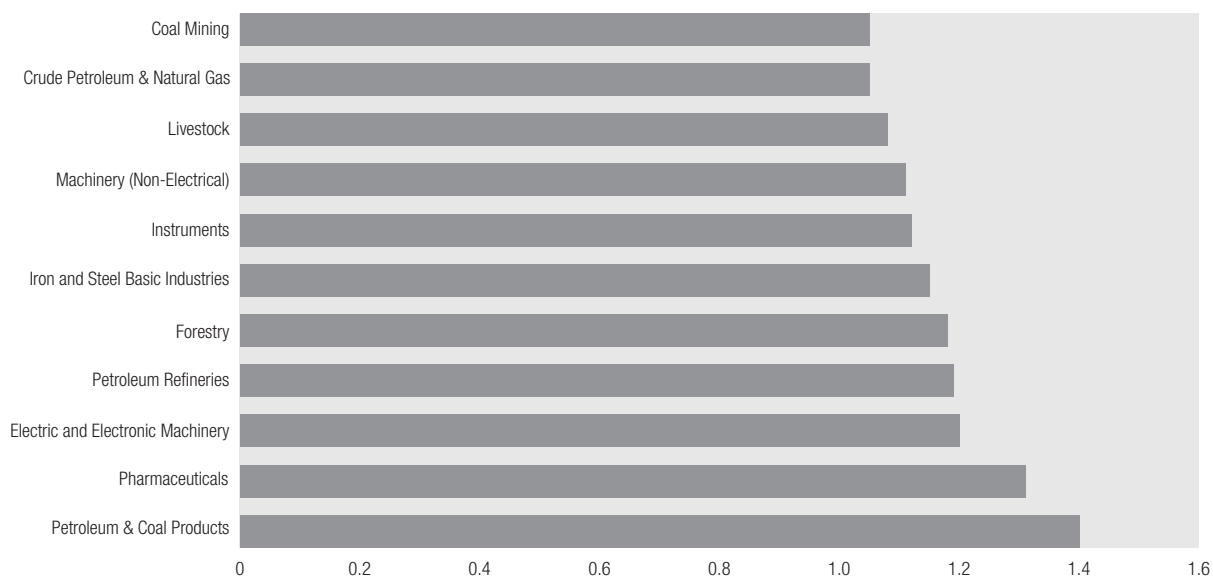
Australia was the world’s first post-industrial society. Most industrial countries went through a major period of transition from land-based production for domestic consumption, though a manufacturing revolution and the growth of urbanisation, to emerge as service societies. In this process, cheaper manufactures elsewhere undercut basic domestic manufacturing, which then remained with specialised high-value-added niches. Australia was really born modern; a society that never possessed a landed peasantry, thoroughly urban from foundation, with well-constructed institutions of modern liberal democracy, the rule of law and efficient administration.

Its distance from markets meant that its natural resource advantages dominated its global trade and not basic manufacturing, which only really grew when forced by artificial protection. There is clear evidence that apart from the costs of transport, which for Australia are large, there are also considerable advantages to scale in manufacturing compared to most natural resource industries. Figure 2 shows this clearly from recent international research (Antweiler & Trefler 2002) on scale advantages in global trade. And Blum and Leamer (2000) have further estimated that exporting a good to a country 1,500 kms away is, on average, equivalent to an import tariff of between 7 and 17 per cent, depending on the type of good. Or, to put the problem differently, if Australia was as close to other economies as is the UK, its trade would be 50 per cent higher (Battersby & Ewing 2005).

The result is a relatively low global integration for Australia. The sum of exports and imports as a ratio to GDP puts Australia at the lower end of the OECD spectrum, as seen in Figure 3.

But at least historically for Australia a relatively efficient domestic construction and service sector was able to flourish, and economic achievement could also embrace urban utilities and construction – as these were largely non-traded – and both could benefit from a healthy, educated, enterprising and growing population. With efficient land and capital-intensive mining and agriculture, and with human-capital-intensive service production, embedded in a rich foundation of institutional capital, Australia still could prosper and grow a high living standard. As Ed Leamer (2006) has shown,

**FIGURE 2 ECONOMIES OF SCALE IN GLOBAL TRADE**



Source: Antweiler & Trefler (2002).

Australia and New Zealand were long the world’s champions in challenging the tyranny of distance, as is seen in Figures 4 and 5. These show how both 30 years ago and in 1990, the two countries did “punch above their weight”, though they have now been joined by some newer success stories.

Redding and Venables (2000) found that market and supplier access explain up to a third of variation in per capita income differences –as signalled in Figures 5 and 6. Similarly, Australian Treasury (Battersby & Ewing 2005) has calculated that Australia’s low global trade integration is above what would be predicted, given our isolation.

Moreover, this was achieved with our own domestic market itself internally fractured by distance. The Australian pattern of settlement is a dispersed one. Its strength for economic activity is its concentration in large cities, more so than the Canadian case, for example. This does generate a range of urban scale economies at least, plus the more recently recognised spillovers in urban density in the form of knowledge synergies and thick markets.

Scale economies in urban areas come from the reduced cost of connection to high overhead infrastructure provision, such as in electricity distribution or suburban road provision. Additional benefits relate to how large conglomerate population areas allow specialised skills and markets to emerge and be viable, ranging from high-level health provision, such as specialised diagnostic and surgical capabilities, to financial, accounting and legal services and education provision. On top of this, the new

areas of recognition relate to how such people interact and exchange ideas, often serendipitously through interpersonal exchange and often in social as well as in work situations.

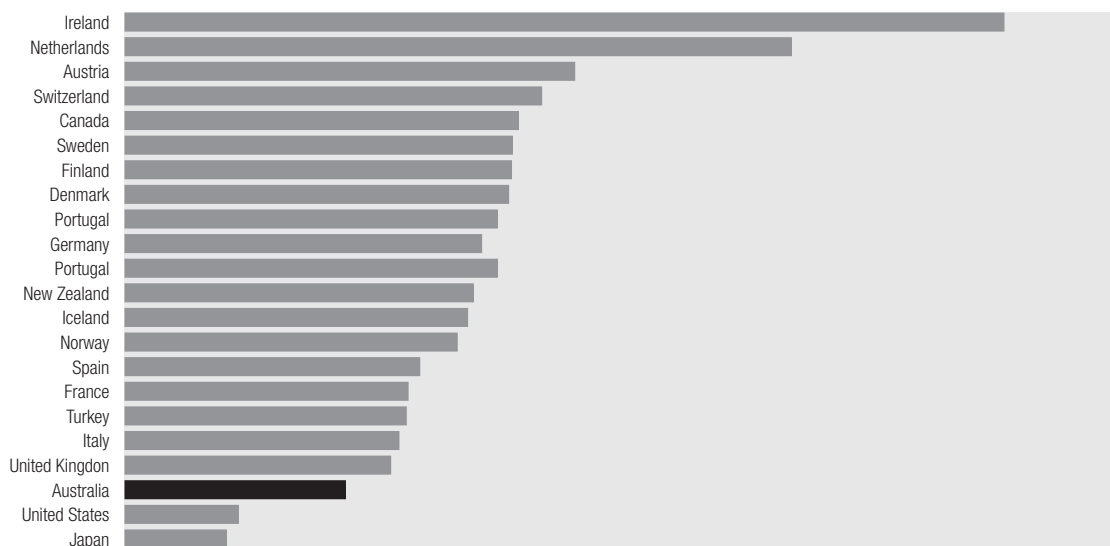
The evidence is that these benefits strongly outweigh the congestion costs that also occur with urban concentration and scale. Indeed, across US cities a doubling of density increases labour productivity overall by 6 per cent on average (Quigley 1998). These notions have been popularised in recent times through Richard Florida’s books, especially *The Rise of the Creative Class*, which is a paen of praise to cosmopolitanism.

But Australia’s cities are far apart. McLean and Taylor (2001) have pointed out that no two Australian cities with a population of over a million are within 600 kms of each other. In California 34 million people live between San Diego and Sacramento, a distance of 800 kms.

But surely all this is history? Has not distance been defeated? The world’s economic mass is moving more in Australia’s favour, transport costs are coming down and modern communications are increasing Australia’s ability to interact with the world and tap its knowledge base. This is certainly happening and can be documented. For example, in the second half of the twentieth century, the proportion of the world’s GDP within 12,000 kms of Sydney increased from 26 per cent to almost 38 per cent (Battersby & Ewing 2005)<sup>3</sup> (see Figure 6).

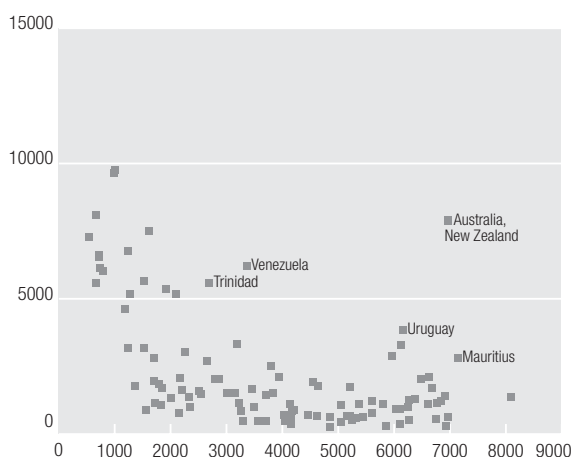
So some things have improved. But perhaps not as much as is popularly believed. In particular, the common assumption that modern communications technology has eradicated distance is not at all clear-cut. This is

**FIGURE 3 TRADE INTENSITIES, 2001**



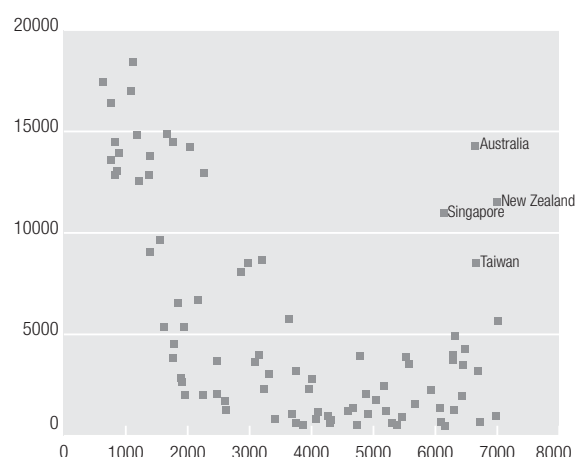
Source: Battersby & Ewing (2005).

**FIGURE 4 GDP PER CAPITA AND DISTANCE TO WORLD GDP, 1960**



Source: Leamer (2006)

**FIGURE 5 GDP PER CAPITA AND DISTANCE TO WORLD GDP, 1990**



Source: Leamer (2006)

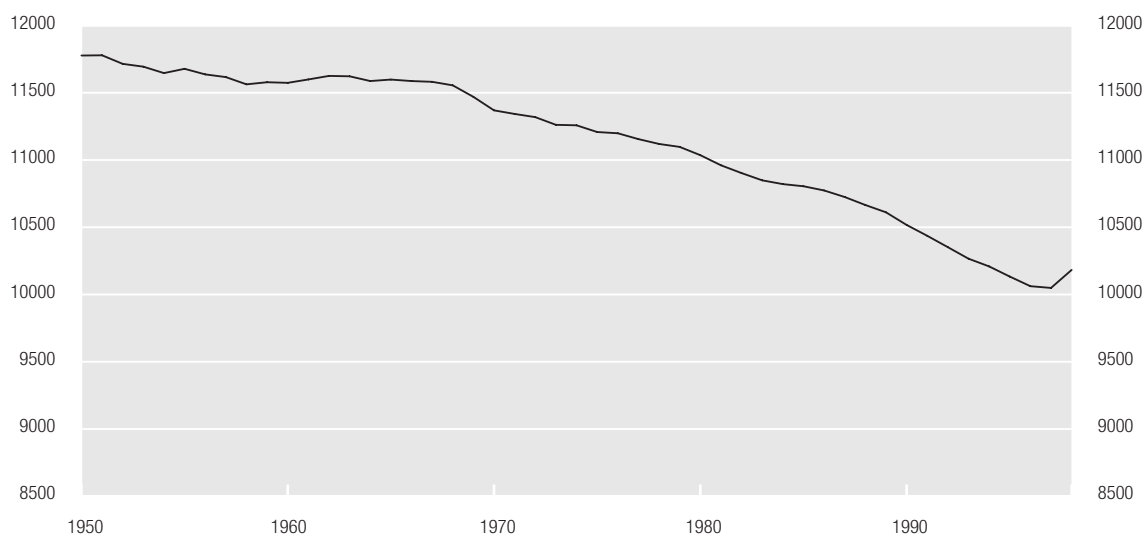
because as the world moves increasingly to become a global knowledge economy, much of the creative, high-level knowledge is tacit, not codified in formal communication, and serendipitous, conveyed in direct personal interaction that is a function of co-location (Levy & Murnane 2004).

Indeed, there is evidence to suggest that the impact of distance is rising and not declining with time. Redding and Schott (2003) have found that comparing 1990 with 1970, a one per cent distance that previously reduced bilateral exports by 1.2 per cent in 1970 did so by 1.5 per cent 20 years later.

In the world of ideas, which underpins value-added economic activity, Keller (2002) has calculated how technology is itself substantially local in use and not global, despite the communications revolution. What he means is that the benefits from spillovers in using knowledge decline dramatically with distance. The amount of spillovers, meaning use of knowledge beyond formally contracted parties to the technology development, declines by half on average for every 1,200 kms.

If we use Keller's calculations to look at the average benefit to small industrial countries from the R&D in the G-5 nations of the US, UK, Japan, France and Germany, it is all too abundantly clear how proximity pays great dividends in access to technology, as is shown in Figure 7.

**FIGURE 6 AUSTRALIA'S REMOTENESS: DISTANCE TO THE REST OF THE WORLD'S GDP**



Source: Battersby & Ewing (2005)

### National positioning

What does this add up to? Should Australia fear globalisation and turn inwards? The historical record shows countries that do this severely limit their growth potential and performance. In the extreme case, the people of nations such as Cuba, North Korea and Myanmar are paying a heavy price for national isolation. And Australia acted out its own more modest version of this tendency in its reaction to the Depression of the 1890s – a reaction that led to the building of a security-seeking state that was in the end incompatible with sustained achievement and prosperity. The twentieth century saw the erection of the apparatus of tariff walls, reduced skilled migration, foreign investment controls and fixed exchange rates at our border, alongside a domestic system of protection through extensive minimum wage fixation, state ownership of utilities and growing, high progressive personal income taxation over time to support a growing array of welfare provision (Kelly 1994).

It might have been difficult to do otherwise in times conditioned by two Great Depressions and two World Wars in a span of under 60 years. Indeed, Australia's distance may have been a most welcome advantage for those times. It meant that we were a nation whose soil was not rent by wars and where the global transmission of depression was more muted than it might have been, serious as it was.

But in a post Second World War era characterised by a long period of economic expansion without depression and global war, Australia was slow in reintegrating itself internationally, even given its location. That slow reintegration was a result of tardiness in freeing up the national impediments of high tariffs and rigid wage structures that could allow both traded productivity and internal

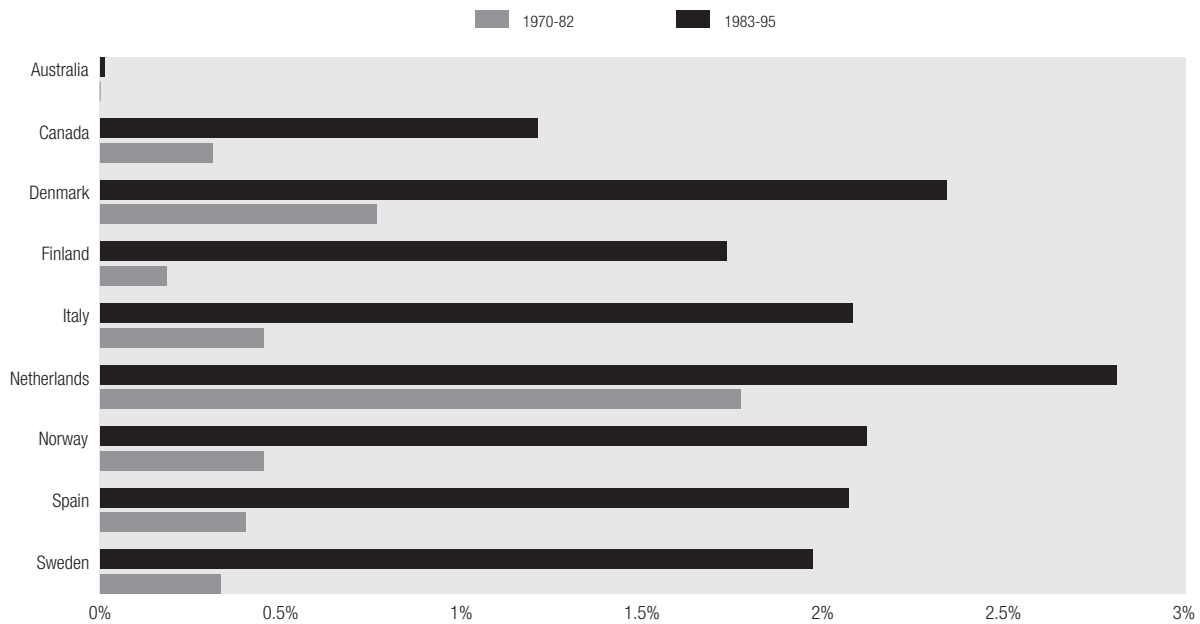
non-traded productivity to improve. Europe, by comparison, grew strongly in the earlier post-war period, particularly pursuing aggressive tariff reduction in the run-up to greater effective and formal integration.

The country that had boasted the world's highest per capita income in 1890 (Australia) had fallen to less august status by 1980. Only the period of liberalisation that arose from the mid-1980s to the present, in response to warnings of becoming the "Poor White Trash of Asia" or a "Banana Republic", has allowed Australia to regain something of its former standing and cease its otherwise ongoing gradual decline into faded gentility.

In the process, our policy settings have improved sufficiently to have made the transition to a more liberalised and open economy while protecting the least advantaged in the population better than almost any other OECD economy. In this sense, we have shown that national policy in a globalised world can indeed make a difference. The idea that globalisation totally debilitates national autonomy is shown to be false. If anything, it turns a nation towards more creative directions in policy for building national capability, rather than simple adoption of self-defeating protectionism.

Australia has benefited mightily from the period of micro-economic reform, national competition policy, adoption of new global technologies and good macro-management. But more is now needed if the country is to continue to defy the tyranny of distance and "punch above its weight" (Davis & Rahman 2006). The reforms to date were necessary but not sufficient conditions for continued success. To them must be added the reforms needed for rebuilding human and knowledge capital and infrastructure, not just to average OECD performance, but to world's best standards. Ongoing care for natural,

**FIGURE 7 G-5 R&D SPILLOVER IMPACT ON OTHER COUNTRIES**



Source: Keller (2002)

social and institutional capital is needed to complement this. Only if we do this across these many fronts and get the balance right can we defy distance as we did in the nineteenth century. Because of distance, the policy task is even more important for Australia.

It is little known and little understood that Australia's earlier achievement as world's best practice by 1890 sprang not just from the luck of possession of natural resources. It was also the result of having the most skilled, educated and urbanised workforce in the world and the most innovative populace. Australia spent more on education across more of its people than any other country; it chose its migrants carefully for their skills and it had the highest per capita patents of any country (Pope & Withers 1989, 1996; Magee 2000). It was dynamic, flexible, open and free.

But there were some co-conditions for this success. One was good governance. While a democratic pioneer, Australia's polity had degenerated into "crony capitalism" by the 1890s and the public and private investment processes had spread into increasingly unsustainable activities not subject to serious business testing (Butlin 1964). The resultant collapse was predominantly internally generated, though it was precipitated by a sudden loss of confidence by foreign investors and migrants, who caused a rapid drying up of global lubrication of an economy with serious domestic structural flaws that had not been recognised in time. The resultant shocks from that Depression of the 1890s led to decades of introversion.

### Future policies

There are lessons here. They are that openness and flexibility are essential; investment in national capability in business, human and knowledge capital is also essential; and good governance must underpin the corporate and political processes and ensure a fair social safety net.

Policies directly related to distance should be specified as the core of such a far-sighted package. Two particular requirements are for Australia to ensure it has telecommunications and transport provision at best practice and people movements correct. These are Australia's essential links to the global community. In the nineteenth century, Australia's achievement of world-leading productivity was underpinned by massive investment in steam shipping, railroads and the telegraph and in accepting overseas immigration. In the modern global knowledge economy, the two contemporary equivalents are investment in the best telecommunications and transport arrangements that we can devise, and ensuring again that a dynamic immigration and visitor entry program is in place.

### Telecommunications and transport

In relation to telecommunications and transport, the principal focus required is broadband. This is the defining technology of the globalised economy and crucial to reducing the disadvantage of our distance from the world's knowledge centres. Regrettably, past policy from government of both persuasions has positioned Australia poorly among industrial countries in terms of the timely introduction of, and access to, new tech-

nology. This extends back to the introduction of colour television and through to pay television, mobile phones and broadband today. In each case Australia has been a laggard in permitting introduction of these advances in communications. Yet, in each case once change is permitted, Australia's take-up rate of these technologies is typically very rapid and the pay-off from information and communications technology (ICT) has contributed mightily to sustaining our growth (Parham 2004). This is called "catch-up".

In the case of broadband, according to OECD Communications Outlook 2005, Australia ranks 23rd out of 32 OECD countries in terms of broadband access rates. At the same time, Australia is the only OECD country where half the broadband users download at 512 kilobytes a second or less. It is, of course, easier for geographically smaller countries such as Korea or Japan to provide such infrastructure, but we also fall well behind similarly placed countries to Australia such as Canada. Such have been the national logjams in this area that state and territory governments have been seeking to compensate for the national problems in policy and regulation in this sphere.<sup>4</sup> And local possibilities for a decentralised policy have been recently defined for Australia (Gans 2006).

Two particular requirements are for Australia to ensure it has telecommunications and transport provision at best practice and people movements correct.

Indeed, in order to keep information transaction costs down and to allow the "new economy" industries to flourish (including "virtual" supply chains for export), and to contribute better to economic growth and social benefit (Economides 1996; Skilling & Boven 2007)), it may be that such a move away from a national solution to a more decentralised strategy is opportune. In particular, on a global basis, broadband Internet access is peaking and the next phase of global internet usage is likely to be a move from "wired" (DSL, optical fibre and cable modem) to "wireless". This is being driven by growing notebook take-up and handheld mobile internet use, and many developing country markets are moving straight to this technology, leapfrogging the tethered connections (Ipsos 2007).

Australia could anticipate this. What is needed is a new broadband strategy premised on opening up and facilitating decentralisation. Opening up access to Telstra exchange interconnection and street conduits ("the last mile") on a local basis for conventional broadband, and

removing major regulatory obstacles to new wireless broadband are the core new steps needed for Australia itself to "leapfrog" in provision, competition and procurement in broadband instead of being a perennial bridesmaid in telecommunications.

Greater progress is also needed on rationalisation of transport infrastructure arrangements. Public transport and storage is about 4.5 per cent of GDP and total share of GDP going to freight logistics is at least double this,<sup>5</sup> and personal transport arrangements should also be added. Yet international and national transport needs are arguably under-appreciated in the policy domain. Climate change, environment and energy policies are bringing a new focus, but underlying economic dimensions in terms of personal and business costs, quality and effectiveness remain crucial for competing from a distance. Ongoing emphasis on sustained improvement is therefore essential.

The main challenges are actually domestic, especially land transport and its relationship with ports. Particular attention must be paid to upgrading infrastructure in key transport corridors, to be facilitated by new technology and improved co-ordination across governments and modes.

The major test of advance here will be the next round of AusLink funding and it is important that this proceed on a systematic basis and not be undermined by more immediate electoral opportunism, whereby projects proceed in isolation and without proper evaluation. The process should be informed by supply and logistics chain frameworks (CEDA 2004).

On the international transport front, we must continue progress in expanding international air route access and travel options for passengers in particular. Dedicated air freight is already a more open market subject only to airport capacity issues.

### Immigration movements

Regarding people movements, more progress has been made than in telecommunications and transport. Indeed, in many respects, Australia's immigration arrangements perform well by the benchmark of the national interest. Other countries have begun to emulate the points system by which we manage the immigration inflow, and our post-arrival and support services overall have produced more successful integration of settlers than in most comparable countries.

The actual levels of immigration are close to what is required to maximise per capita income growth, and comprise a reasonable balance of economic, family and humanitarian entry. A figure of 1.25 per cent annual increase of population should remain a target for policy for net migration and natural increase. Much more than this runs into absorption problems and much less undermines investor certainty and confidence.



Short-term entry for business, study and tourism and visits has been liberal, though subject to essential security requirements in visa management, and cross-border flows have risen steadily. Australia offers on-shore conversion from temporary to permanent settlement for those meeting settlement standards, and the system has built in a welcome capacity to distribute settlement to regional priority areas around Australia. Attention to the “global diaspora” of Australians overseas, has also been added to the armoury of migration policy.

There have been past problems with matters of restrictions on aged parent entry, but this has evolved to strike a better if not perfect balance between family reunion entitlements and minimising taxpayer burdens. Humanitarian entry arguably lost sight of true refugees most in need for some time, focusing instead on Australia-linked humanitarian entry, but this too has been somewhat redressed. However, concerns do still remain over denial of family reunion for valid refugees on bridging visas and on the mandatory offshore detention policies adopted.

One other issue, and one more directly relevant to the economic effects of distance, is the recent expansion of guest-worker visas (such as section 457 visas) to help meet labour shortages. These programs have been sensible in restricting their ambit to professional, managerial and skilled workers, but they do carry big risks for individual worker exploitation and worker over-stay and removal, for creating a segmented group of workers and because of ongoing pressure to expand to less skilled areas. These features may begin to undermine public support for broader permanent immigration. Such support is always fragile and easily led by populism.

At the same time, it is a myth anyway that this guest-worker process solves worker shortages. A small, highly targeted program can help, where local training takes too long to fill the gap or the need is transitional, but a large-scale program soon creates as many jobs as it fills. As such programs grow, spending by and on behalf of the guest workers merely creates new job needs and new shortages elsewhere. The policy becomes one of “a dog chasing its tail”, even though individual employers think they are finding solutions to their problems and governments can claim they are assisting business in meeting its requirements. The bigger picture and much research (Castles et al 1998) says otherwise and the policy ultimately becomes self-defeating.

Reasonable quotas for high priority areas with long skill formation characteristics are a better way forward, rather than an open-ended, demand-driven guest-worker program. The program should be capped at present levels until a comprehensive, thorough, independent and expert review with balanced terms of reference is completed.

In sum, Australia has developed a strong and dynamic immigration program. But its sustainability depends upon maintaining the legitimacy of that program, and present refugee and guest-worker policies may need reform to support this.

### Third and Fourth Wave reform policies

Of course, beyond the directly distance-linked priorities, many other policies directed at enhancing value-adding in any production sphere, irrespective of distance, can also kick in and, by encouraging or enabling us to be smarter in all and any spheres, help Australia stand out as the nation that is most competitive from afar.

The complementary policies that are needed include especially:

- sustained progress on the so-called “Third Wave” reforms directed at human capital, business regulation and energy, and also health, but with primary focus on human capital as the source of sustainable advantage. This must cover all levels of education, but especially early childhood education, more delegation in government school systems, and reduced regulation of universities; and new initiatives in innovation with this notion being defined broadly and as much directed at business culture and practice in knowledge management as at R&D production itself (Green 2007); and
- anticipation of “Fourth Wave” reforms directed at the institutions of public governance themselves, whereby we need to fix up the structures of federation and the policy capacities of the bureaucracy.<sup>6</sup> If international competition is muted by distance for Australia, we should seek to get domestic competition right. Much has been done to achieve this under micro-economic reform, but this process has left the core government structures themselves relatively untouched. Yet the fact is that while Australia has the advantage of federal arrangements that permit more cross-government competition than in a unitary state, we have the most centralised federal system of the major developed economies. The highest priority should be given to reducing overlapping roles and responsibilities in government and improving incentives for co-operation when overlap is inevitable. Australia is well out of step with international best practice in these areas, and recent estimates suggest that there is a reform bonus of some \$4,188 per head for pursuing best practice fiscal decentralisation (Twomey & Withers 2007).

## Conclusion

Currently Australia is ranked third in the UNDP Human Development Index after Norway and Iceland. It is world number 15 in GDP and 14 in GDP per capita, but it is falling down the competitiveness scale once again, with the 2006 World Economic Forum rankings having the country slip to number 19 and especially our innovation ranking down to 24. We have a strong base in macro-economic environment with which to recover some ground, which requires both progress from government and private companies, especially in telecommunications and knowledge acquisition. And we must maintain, but carefully manage, our immigration momentum.

Progress by government on the New Reform Agenda of COAG in areas such as human capital, infrastructure and water and energy is essential, as is some substantial bootstrapping by private companies in the acquisition, development, and management of knowledge and innovation. A centrepiece of the reforms must be to enhance the policies that help us defeat distance in areas of transport and communications and international population movement.

If this is done, "smart growth" can offset the otherwise increasingly evident prospect of gradual long-term productivity decline and the fate of being only a Quarry Economy.

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## AUTHOR'S NOTE

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## ENDNOTES

- 1 Prime Minister, Transcript of address, 2 November 2006.
- 2 See Mclean & Taylor (2001).
- 3 Also see updates in Battersby (2006) and Dolman, Parham & Zhang (2007).
- 4 See, for example, New South Wales, 'People First: the NSW Government ICT Strategic Plan' (July 2006); Queensland, 'Communication and Information Strategic Plan' (2006); South Australia, 'South Australia's Broadband Strategy' (October 2006); and Victoria, 'Broadband Framework: Pathway to the Future' (April 2005).
- 5 Industry Steering Committee (2002).
- 6 L. McIntosh (2007).