

Can Distance Be Defeated?

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Synopsis

Australia and Argentina are countries of New World settlement with significant land area and substantial natural endowment. They are also countries at great distance from the world's economic mass. This paper looks at the effect of distance and its impact on the Australia's economic development. How this might also apply for Argentina is an issue that will hopefully emerge at the Seminar.

A focus on distance may seem quixotic. Has not distance been defeated? The world's economic mass is indeed moving more in Australia's favour, transport costs are coming down and modern communications increase Australia's ability to inter-act with the world and tap its knowledge base.

This is helpful but not sufficient. As the world moves increasingly to become a global knowledge economy, much of the creative high-level knowledge needed is tacit knowledge conveyed in direct personal interaction based on co-location.

So while growth in the last two decades has been good, and micro-economic reform policies appropriate, these have largely produced once-only gains from "shake-up" of old inefficiencies. Australia has been in "catch-up" mode. More is now needed if the country is to continue to defy the tyranny of distance and punch above its weight, as it has during its best times in the past.

The principles for this are clear: openness and flexibility are essential; investment in national capability in business, human and knowledge capital is also essential; and good governance must ecological sustainability. Within these principles, distance-related policies will be central to Australia's response to its location, especially in transport and communications and in international population movements. These policies would help shrink distance if not themselves over-turn its disadvantages for Australia.

The many other policies directed at enhancing value-adding in any production sphere irrespective of distance could then also kick in if Australia wishes to stand out as a nation that is one of the world's best long-distance competitors. Whether such notions apply too for Argentina is for Seminar exploration. But it is worth bearing in mind that Argentina is 9907kms from world economic mass, as opposed to 10183kms for Australia. Only New Zealand is further.

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 percent 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 percent of the land area.

The relatively small population of the continent does mean 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 is 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"¹

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 16,500kms from Bonn and 16,000kms from Washington, and it is 6000kms from Tokyo even in our own Asia Pacific region.

According to some historians Australia may have had an aboriginal 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 two hundred years later the aboriginal population has risen back to half a million and the total population has passed 20 million.

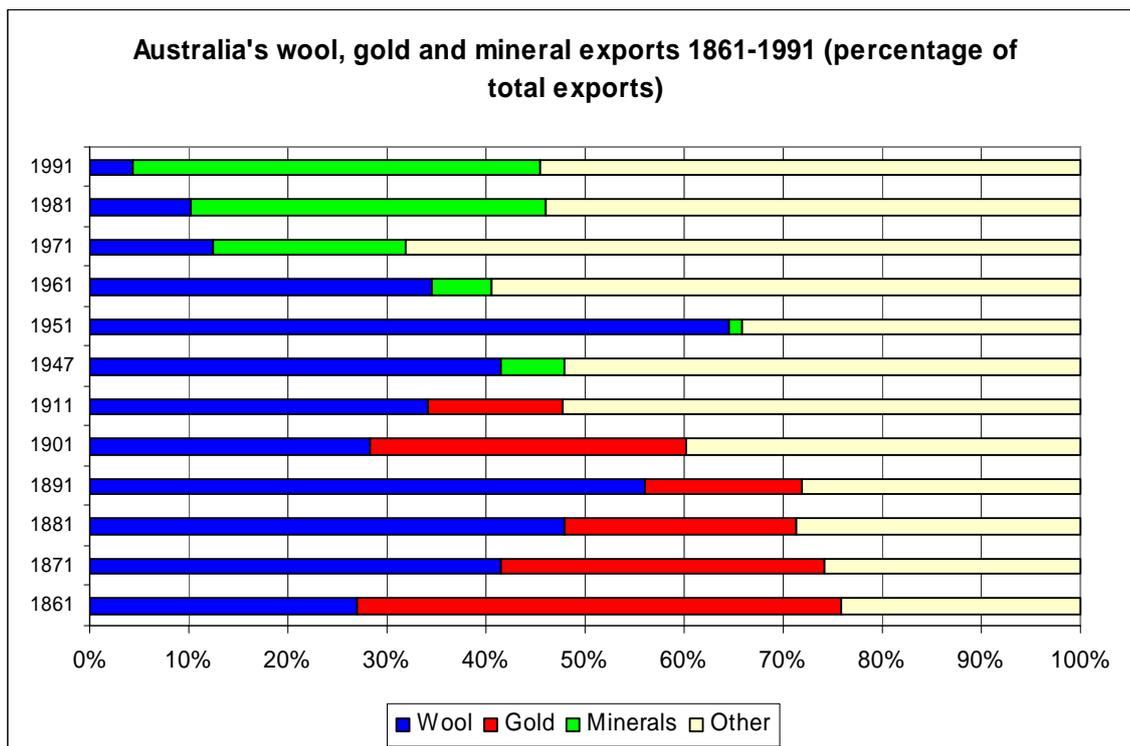
Global Integration

One consequence of nature's bounty has been a long historical reliance upon natural- resource-based exports as a major component of Australian trade. This is seen in Figure 1. Wool, gold and other minerals alone have never been less than 30% of total Australian exports, putting aside the years of war and depression². 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 USA.

¹ Prime Minister, Transcript of Address, 2 November 2006

² Source is Mclean and Taylor (2001)

Figure 1. Australia's export composition, 1861-1991



Source: McLean and Taylor (2001)

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 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.

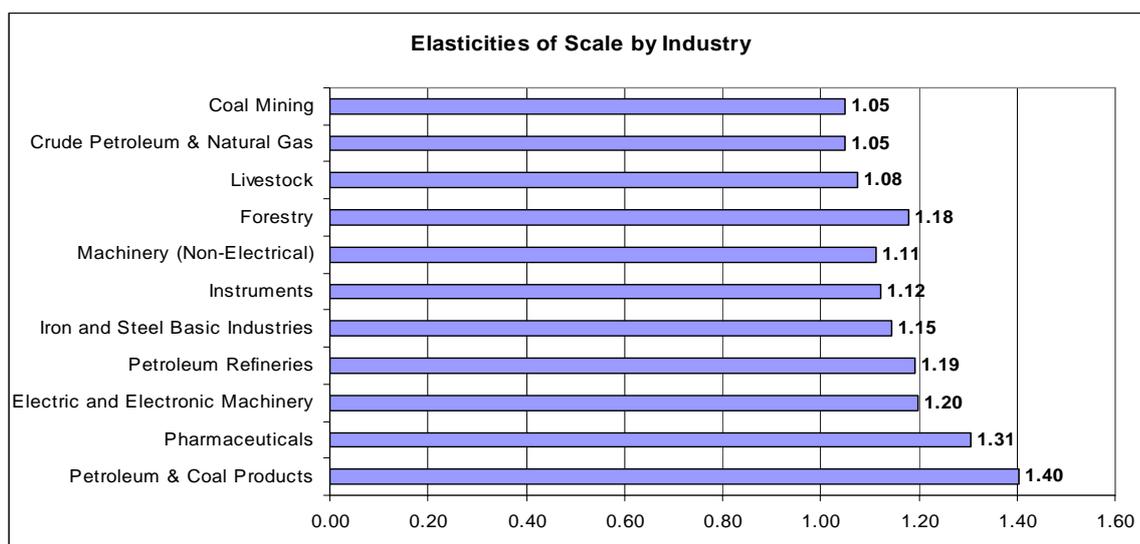
The priority is recognized somewhat in Australia through the structural impacts associated with what local economists call the "Gregory Thesis" or, as it is called elsewhere, "The Dutch Disease". The exchange rate effects of bountiful natural exports inhibit competitive manufacturing and service exports 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 urbanization, to emerge as service societies. In this process, cheaper manufactures elsewhere undercut basic domestic manufacturing, which then remained with specialized 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 force-fed by artificial protection. For 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 and Trefler, 2002) on scale advantages in global trade. And Blum and Leamer (2000) have further estimated that exporting a good to a country 1000 miles away is, on average, equivalent to an import tariff of between 7 and 17 percent, 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% higher (Battersby and Ewing, 2005).

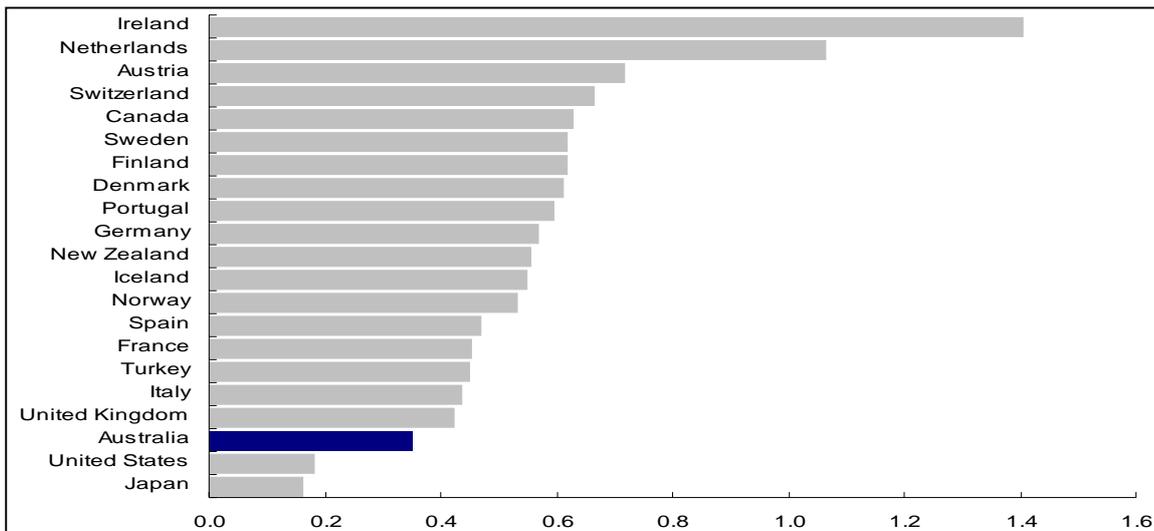
Figure 2. Economies of scale in global trade



Source: Antweiler and Trefler, 2002

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.

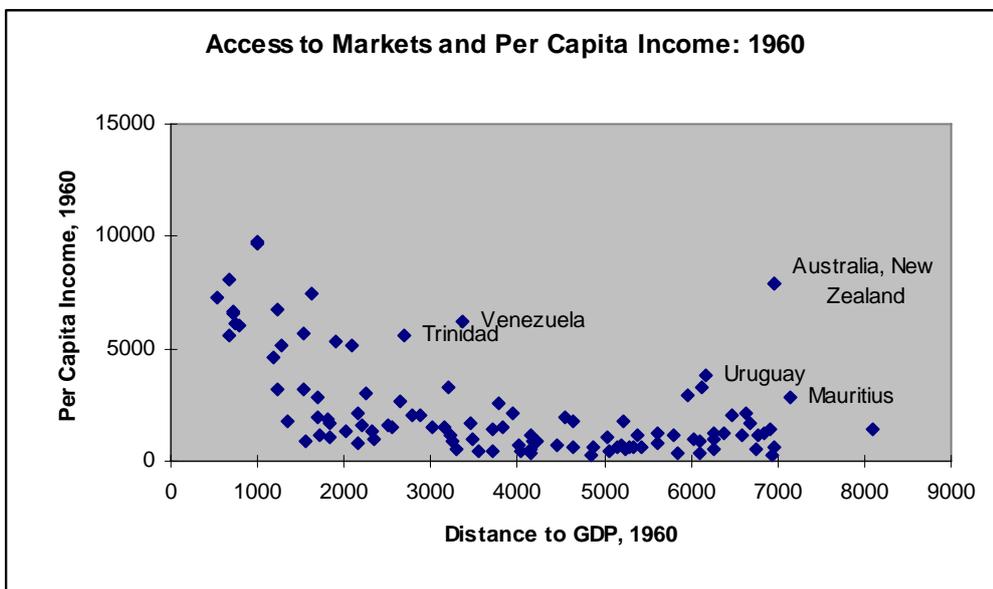
Figure 3. Trade Intensities, 2001



Source: Battersby and Ewing, (2005)

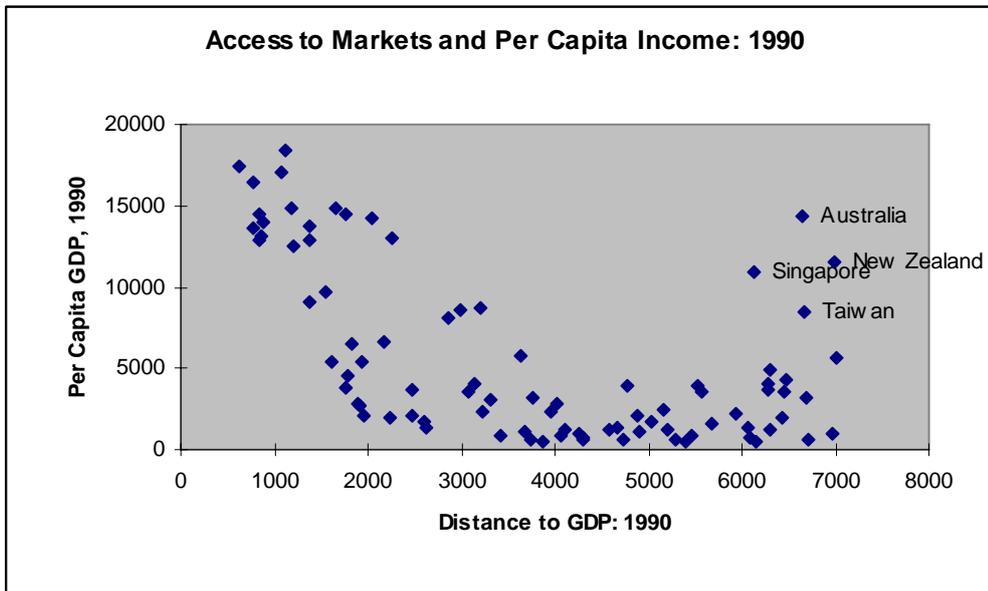
But at least historically for Australia a relatively efficient domestic construction and service sector was able to flourish, and economic achievement could also embrace urban utilities and construction - as these were largely non-traded- and both could benefit from a healthy, educated and enterprising 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, 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 thirty years ago and in 1990, Australia and New Zealand did punch above their weight, though they have now been joined by some newer success stories.

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)

Redding and Venables (2000) found that market and supplier access explain up to a third of variation in per capita income differences-as Figures 5 and 6 visually signals. Similarly Australian Treasury (Battersby and 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 eg more than the Canadian case. This does generate a range of urban scale economies at least, plus the more recently recognized 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 eg 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.

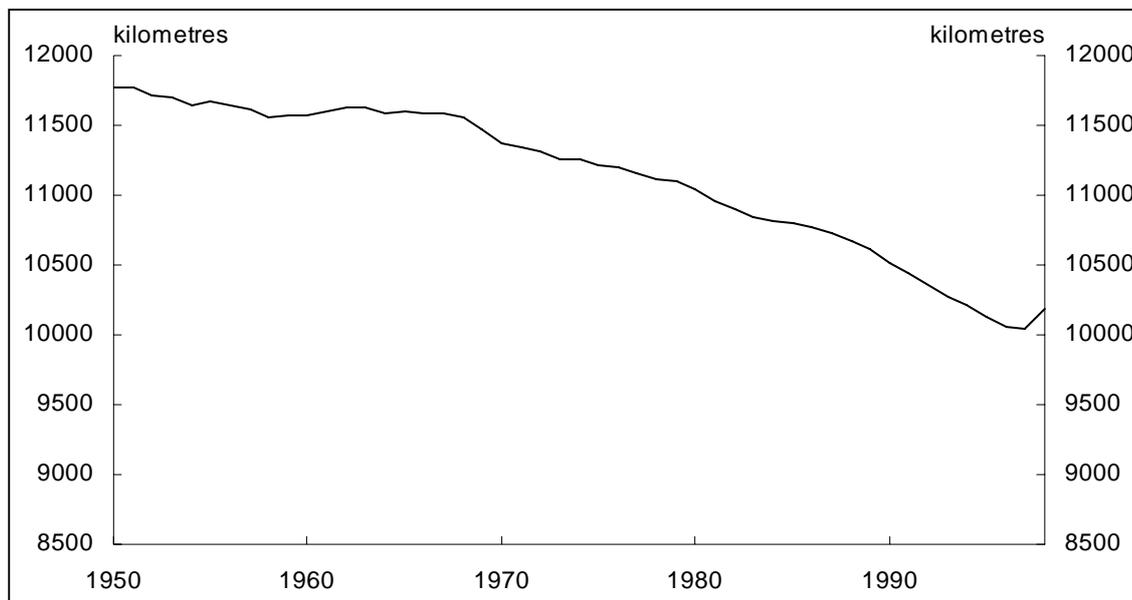
The evidence is that these benefits strongly outweigh congestion costs that also occur with urban concentration and scale. Indeed across US cities a doubling of density increases labour productivity overall by 6 percent on average (Quigley 1998). These notions have been popularized

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 800kms.

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 increases 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 12,000kms of Sydney increased from 26 percent to almost 38 percent (Battersby and Ewing, 2005)³, as shown in Figure 6.

Figure 6. Australia's remoteness: Distance to the rest of the world's GDP



Source: Battersby and Ewing (2005)

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

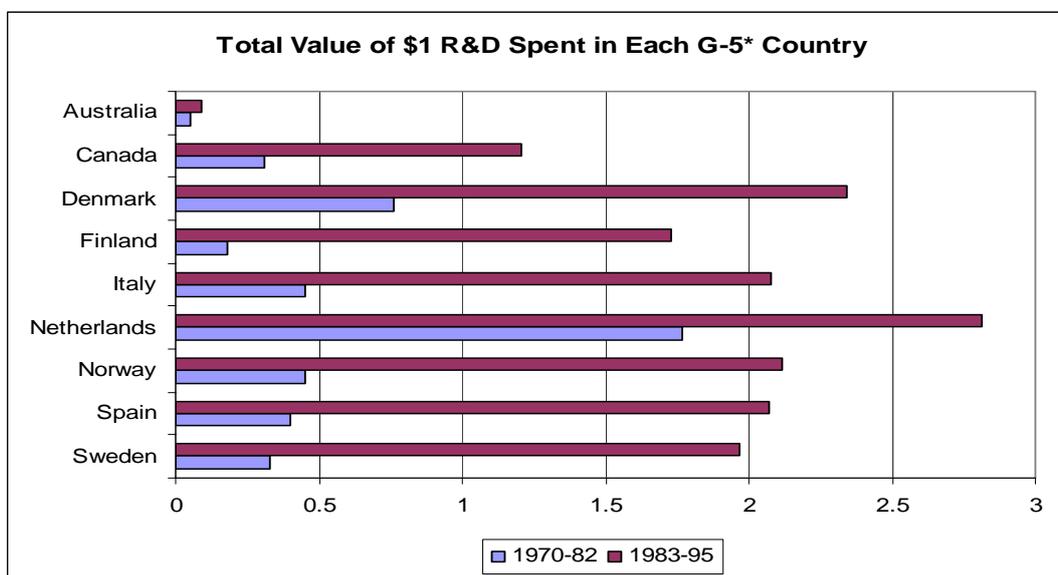
Indeed there is evidence that the impact of distance is rising and not declining with time. Redding and Schott (2003) have found that comparing 1990 with 1970, a one percent distance which previously reduced bilateral exports by 1.2% in 1970 did so by 1.5% twenty years later.

³ Also see updates in Battersby (2006) and Dolman, Parham and Zhang (2007).

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 1200 kilometres.

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 7. G-5 R&D spillover impact on other countries



Source: Keller (2002)

National Positioning

What does this add up to? Should Australia fear globalization and turn inwards? The historical record is that 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 which 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 sixty 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 World War Two era characterized 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 such as 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 in Europe.

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 liberalization 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 globalization totally debilitates national autonomy is shown to be false. If anything it turns a nation toward 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 and Rahman 2006). The reforms to date were necessary but not sufficient conditions for continued success. To them must be added the reforms that are 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, 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 and educated and urbanized 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 and 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.

Today in telecommunications the principal focus is broadband and modern reform requires that Australia's well-documented technological backlog on access and speed be overcome 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 and Boven, 2007)).

Greater progress is also needed on rationalisation of transport infrastructure arrangements, where 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.

As regards 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 have overall 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, but concerns do still remain over denial of family reunion for valid refugees on bridging visas, on the mandatory offshore detention policies adopted, and on the excessive recent expansion of guest-worker visas (such as section 457 visas) to help meet labour shortages. Refugee and guestworker policies, along with a history of administrative bungles, are the Achilles' heel of a broadly well-constructed program for international population movements.

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 bureaucracy⁴. If international competition is muted by distance for Australia, we should seek to get domestic competition right. Much has been done to do 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 which 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 \$4188 per head for pursuing best practice fiscal decentralisation. (Twomey and Withers 2007),

⁴ L. McIntosh, “Independent public policy research in partisan Times”, *Canberra Times*, 6 March 2007.

Conclusion

Currently Australia is being 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. It has therefore done well in terms of defeating distance. 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 from 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 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 centre-piece 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 indeed offset the tyranny of distance and the otherwise increasingly evident prospect of gradual long-term productivity decline and the fate of being only a Quarry Economy.

Appendix Tables:

A1. Distance to the Rest of the World (kms)

	1950	1998	% change		1950	1998	% change
Luxembourg	1427	1767	23.8	Greece	3252	3726	14.6
Belgium	1606	2016	25.6	South Korea	5661	4016	-29.1
Netherlands	1587	2017	27.1	Finland	3524	4210	19.5
Switzerland	1834	2197	19.8	Turkey	3979	4454	11.9
Austria	1946	2365	21.6	Iceland	3861	4596	19.0
Czech Republic	1853	2442	31.8	Russian Federation	6039	5389	-10.8
Germany	2089	2671	27.8	Saudi Arabia	5362	5402	0.7
Denmark	2168	2711	25.1	Canada	4734	5410	14.3
Slovakia	2025	2751	35.8	Mexico	5093	5494	7.9
Hungary	2297	2880	25.4	China	6466	5700	-11.9
France	2446	2984	22.0	Japan	7456	5977	-19.8
Ireland	2252	2992	32.9	India	6755	5983	-11.4
Poland	2449	3057	24.8	Indonesia	9407	7663	-18.5
United Kingdom	2727	3216	17.9	United States	7334	7886	7.5
Italy	2699	3260	20.8	Brazil	7983	8813	10.4
Norway	2799	3517	25.7	Argentina	9482	9907	4.5
Portugal	3226	3599	11.5	South Africa	9920	10080	1.6
Sweden	3040	3665	20.6	Australia	11777	10183	-13.5
Spain	3161	3720	17.7	New Zealand	13331	12312	-7.6

Source: Battersby and Ewing, 2005

A2. Real Per Capita GDP (\$US): Australia and Argentina, 1950-1990.

	1950	1960	1970	1980	1990
Australia	6771	7879	10917	12622	14304
Argentina	3035	3293	4165	4743	3153

Source: Leamer 2006

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