AUSTRALIA'S TRADE OPENNESS[1]

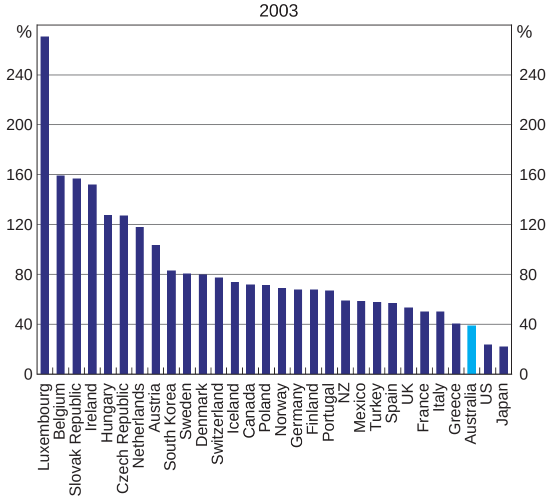
Introduction

Trade is considered an integral part of Australia's economic activity and, among Australians at least, it is widely perceived that Australia is a very open economy. Yet, as shown in Graph 1, Australian trade (exports plus imports) as a proportion of GDP (henceforth termed openness) is relatively small compared to other industrialised countries. With exports and imports of goods and services each equivalent to around 21–22 per cent of GDP, Australia's 2003 openness ratio of 39 per cent was substantially below the median for OECD countries of 70 per cent. In addition, of the 136 countries and territories for which the Penn World Tables have data for 2000, Australia was the 20th least open economy.

Graph 1

Trade as a Proportion of GDP – OECD Countries

2003



Source: authors' calculations based on IMF *Direction of Trade Statistics*

The fact that Australia trades less than other countries does not necessarily imply that Australia trades less than would be expected. There could be good reasons for its relatively low openness. For example, it might reflect Australia's geographic isolation, especially from the large economies of North America and Western Europe. Another plausible factor might be Australia's geographic size. Geographically larger countries will typically have more diversified endowments, allowing them to produce a wider range of agricultural and resource products, which means they may have less need to trade than smaller countries. Thus, although Australia trades much less than most other OECD countries, it might actually be the case that it trades more than would be expected given its geographic attributes.

Explaining Country Openness

A country's level of trade will clearly be influenced by a variety of factors, including its location in the world and other geographic attributes. It is possible to assess the relationship between such factors and openness through regressions using data for many countries and over

1 *This article was prepared by Simon Guttmann and Anthony Richards of Economic Analysis Department. It summarises the results of research undertaken that was published in RBA Research Discussion Paper No 2004-11, entitled 'Trade Openness: An Australian Perspective'. Staff research published by the Bank is intended to contribute to debate, and does not necessarily reflect the views of the Bank.*

several decades. Five explanatory factors seem to be particularly important for openness over 1971–2000: a country's population, its location in the world, the degree of its trade policy liberalisation, its stage of development and its geographic size.

Empirical estimation suggests that a country's population is the most significant determinant of openness, with a negative correlation between the two variables. In other words, countries with smaller populations have higher levels of external trade (relative to their GDP) and vice versa. This result is intuitively appealing: countries with smaller populations have fewer opportunities for trade within their own borders and are therefore likely to trade more externally.

The second most important determinant of openness is a country's location, with countries that are more remote tending to be less open. This is consistent with a key finding of the 'gravity' model of bilateral trade: the amount of trade between two economies is inversely related to the distance between them, due to transport and associated costs. One measure of economic location is 'remoteness', which is the weighted average of a country's distance to all potential trading partners (i.e. all other countries in the world) where weights are determined by the potential trading partners' GDP.[2] Table 1 shows the average 1996–2000 remoteness measure for OECD countries. Western European countries are clearly the most favourably located and Australia and New Zealand the least favourably located.

The third most significant determinant of openness is a country's trade policy, with more liberalised regimes being associated with greater openness.[3] It seems reasonable to expect that a liberal trade regime stimulates trade. However, it is also possible that countries with high degrees of openness may have more powerful constituencies pushing for low trade barriers. The relationship between the level of openness and the degree of trade liberalisation might be

Table 1: Remoteness Measure for OECD Countries
Average 1996–2000

Iceland	5 497	Hungary	5 901
Norway	5 542	France	5 907
Ireland	5 559	Canada	6 013
Denmark	5 576	Germany	6 024
Netherlands	5 604	Spain	6 199
Belgium	5 611	Portugal	6 227
Luxembourg	5 619	Italy	6 307
Sweden	5 642	Greece	6 539
Czech Republic	5 705	Turkey	6 648
Finland	5 721	Mexico	8 030
Poland	5 789	South Korea	8 161
Switzerland	5 789	United States	8 412
United Kingdom	5 807	Japan	9 520
Slovak Republic	5 827	Australia	13 669
Austria	5 846	New Zealand	14 008

Source: authors' calculations based on IMF *World Economic Outlook*

2 *For the purposes of the regression equation, we use a transformation of this remoteness variable, with a functional form suggested by the gravity model.*

3 *The variable is constructed from various indicators of trade policy compiled by the Institute for Economic Freedom, and is available at <http://www.freetheworld.com/2003/1EFW2003ch1.pdf>.*

capturing a broader relationship between the quality of a country's institutions and infrastructure and the extent of trade. Variables for the quality of legal and property rights and port and air transport infrastructure are also positively correlated with openness, but the relationship with trade policy is typically stronger.

A fourth factor explaining openness appears to be the level of economic development, which is proxied by the per capita GDP of each country. Interestingly, there is evidence that openness and stage of development are negatively correlated, after controlling for other effects. That is, richer countries tend to be relatively less open. This is contrary to the conventional wisdom that much trade is intra-industry or in differentiated products, that rich countries do more of such trade, and so rich countries should trade more. Further analysis, however, suggests that the relationship between openness and per capita GDP is relatively complex. For example, there is some evidence that the relationship between the variables may be non-linear (approximating an inverse U-shape) and the relationship may also be influenced by the impact of country price levels on the measure of openness.[4]

Finally, openness is also correlated with the geographic size of countries. In particular, countries with larger land mass tend to be less open. An explanation for this effect would be that geographically larger countries may have a wider range of resource endowments and climatic variation, and so are able to produce a more diversified range of products internally and thus have less need for external trade.

Explaining Australia's Openness

Despite having a substantially lower openness ratio than the OECD average, Australia's openness ratio has been about the level one would expect for a country with its characteristics, given the estimation results described above.

The results also allow one to examine which factors, such as a country's population and geographic size, have the largest impact on its openness ratio. The average 1996–2000 values for Australia and the median values for the full sample of 120 countries and for 30 OECD countries are in Table 2, as well as Australia's ranking in each sample. Australia differs substantially from the median for both the full sample and OECD in terms of having a much larger land mass and having a far less favourable (or more remote) economic location. In addition, Australia has a substantially higher per capita GDP and a more liberal trade regime than the sample median, though it is quite close to the OECD median on these scores. Australia's population is somewhat larger than the sample median, though approximately twice the OECD median.

The deviation of Australia's values from the sample mean, combined with the explanatory power of each variable in an equation for openness, provides a gauge of the relative impact of each factor on Australia's openness ratio. The results suggest that Australia's unfavourable economic location and substantial land mass have the largest effects in reducing its openness. These two factors account for around three-quarters of the deviation in Australia's openness from the (higher) sample average. One way to illustrate the impact of Australia's unfavourable location is to imagine the impact of moving Australia to the middle of the North Atlantic Ocean

4 *The lower price level of nontradable goods in developing countries will, all else held equal, tend to boost the ratio of exports and imports to GDP. A negative correlation between openness and per capita GDP is thus not unexpected.*

Table 2: How Australia Compares
Average 1996–2000 values

	Australia	Entire sample (120 countries)		OECD (30 countries)	
		Median	Australia's ranking	Median	Australia's ranking
Openness ratio (per cent)	41.8	69.9	102	70.4	28
Population (million)	18.7	9.5	41	10.4	13
Remoteness (km)	13 669	8 150	119	5 874	29
Trade policy liberalisation index[(a)]	8.6	6.7	27	8.8	19
GDP per capita (US$'000)	21.3	2.7	20	23.1	17
Geographic size ('000 km^2)	7 687	226	6	256	3

(a) This index is scored between 1 and 10, with higher scores indicating greater liberalisation.
Sources: authors' calculations based on Central Intelligence Agency *World Factbook*, Institute for Economic Freedom, IMF *World Economic Outlook* and Penn World Tables

(between North America and Western Europe), implying an improvement in our economic location to near the sample mean. This would result in Australia's predicted openness ratio jumping from around 0.42 to around 0.51, or exports and imports each rising from around 21 per cent of GDP to around 25 to 26 per cent of GDP.

Conclusions

The results suggest that while Australia's trade openness ratio is significantly below the average for developed countries, it is about the level that could be expected based on some important determinants of trade openness. The factors that best explain Australia's relatively low openness are its remoteness from large economies and its large land mass. The first of these can be viewed as a natural disadvantage, while the second can be viewed as an advantage – because of the natural diversity of our large land mass, Australia is able to produce many goods internally and does not need to trade for them externally.

The implications of our low openness for broader economic outcomes are unclear. Some researchers have argued that economic growth is positively correlated with openness, while others disagree. There are reasons to think there is no straightforward link and, indeed, that natural barriers to trade and policy barriers might have different effects on growth. Also, it is worth noting that remoteness and economic location are not necessarily static but dependent upon the economic growth rates of other countries. Looking ahead, the most obvious trend is likely to be the continuing growth of India and China, which in 2002 accounted for 38 per cent of the world's population but only 5 per cent of world GDP (measured at market exchange rates). Australia's relative proximity to these countries, and our strong trade links with them, suggests that Australia's geographic location is likely to be less of a barrier to trade.