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New Zealand's merchandise trade, 1981-2006: a graphical review

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Abstract

This paper presents a series of graphs showing trends in New Zealand merchandise trade over the period 1981-2006. These graphs confirm the well-known fact that New Zealand's merchandise exports have grown slowly compared to other OECD countries. But they also illustrate how the standard comparison is skewed by the unusual trajectories followed by a group of small European countries. The paper examines changes in the countries that New Zealand trades with, and demonstrates that New Zealand has one of the most geographically-diverse set of trade partners in the OECD. Finally, the paper documents the substantial changes that have occurred in the industrial composition of New Zealand's exports and imports.

1. Introduction

Recent commentary on New Zealand's international trade performance typically consists of noting (1) that New Zealand's exports have grown more slowly than those of other OECD countries, and (2) that the country has recently been running large trade deficits. However, a more detailed look at data on other aspects of New Zealand's merchandise trade reveals some interesting trends, including some good news. It even suggests that the standard conclusions about New Zealand's slow export growth and large trade deficits need qualification.

This paper presents some basic data on New Zealand's merchandise (ie goods) exports and imports over the period 1981-2006. Following a brief description of the data sources, the paper begins by looking at volumes of trade, including comparisons with the 29 other OECD countries. It then examines trade partners, with a second OECD-wide comparison. Finally, the paper turns to the industrial composition of New Zealand's imports and exports.

The paper is descriptive and data-intensive. However, the data are presented in a readily-digestible form: graphs.

2. The data

The data on imports and exports come from the United Nations Statistics Division's Comtrade Database. Trade values in Comtrade are reported in nominal US dollars. We convert these into 2006 NZ dollars by multiplying by the NZ-US exchange rate, and then dividing by aggregate merchandise import and export price deflators. We obtained GDP data from the UN Statistics Division and International Monetary Fund online databases. GDP data are also converted to 2006 NZ dollars, using the appropriate GDP deflators.

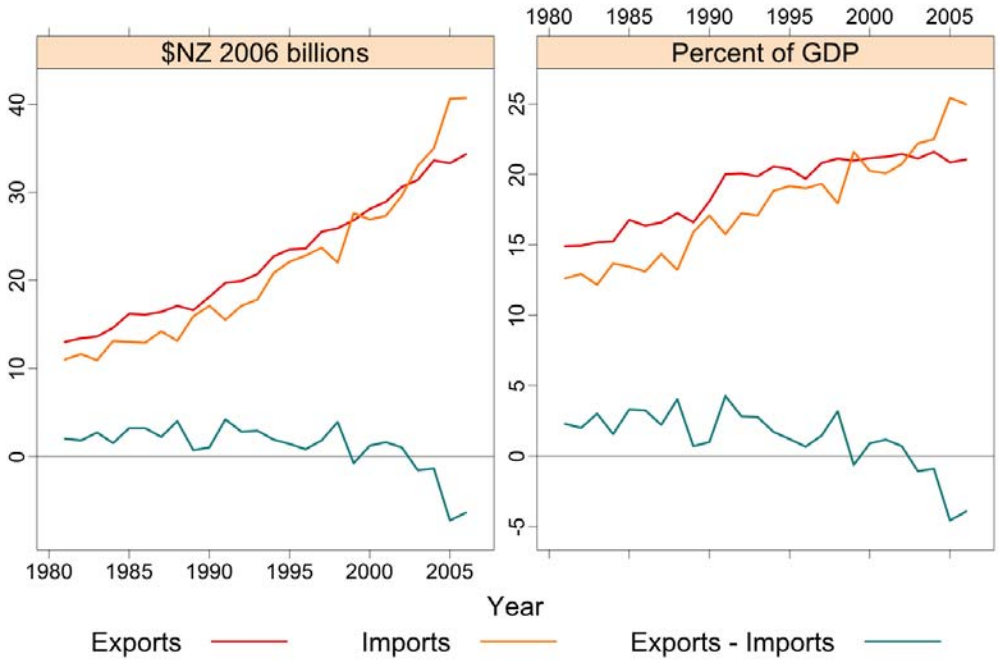
3. How much trade?

We start with the fundamentals: how much has New Zealand exported and imported, and how does this compare with other OECD countries?

New Zealand

The dollar value of New Zealand's exports, plotted in the left panel of figure 1, grew steadily between 1981 and 2006. Imports grew at roughly the same pace as exports until the late 1990s, when growth accelerated, leading to large trade deficits. Given recent commentary about the New Zealand economy, however, the main surprise in figure 1 is not the recent deficits, but the consistent small surpluses of the 1980s and 1990s. Failure to match exports to imports is a recent development, not a long-standing feature of the New Zealand economy. (As the Reserve Bank (www.rbnz.govt.nz/keygraphs/fig6.html) notes, New Zealand has not had a current account surplus since 1973, but this reflects deficits in investment income, not trade.)

Figure 1 - New Zealand merchandise trade volumes, 1981-2006

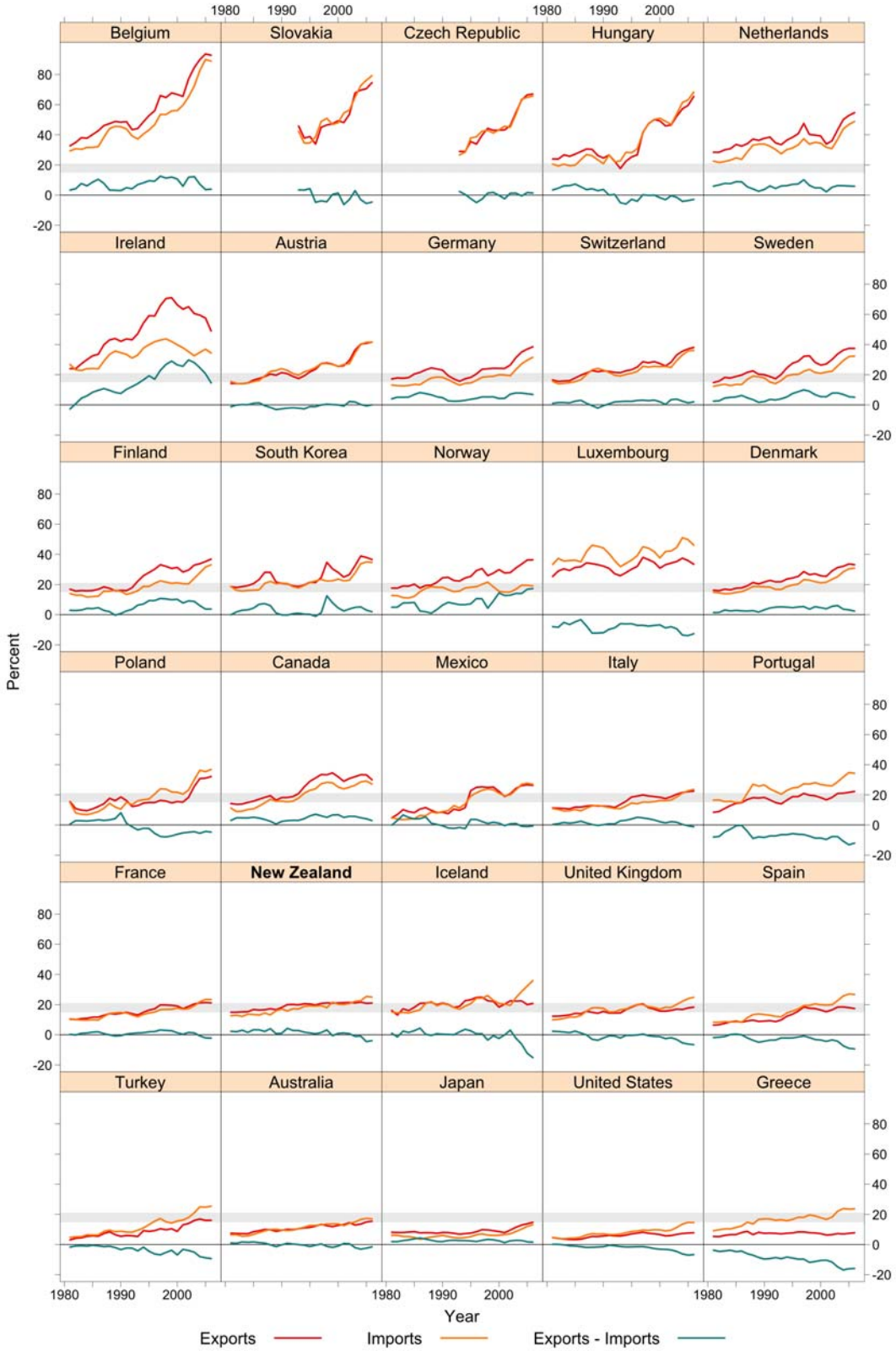


Growth in exports as a percent of GDP, shown in the right panel of figure 1 slowed after the early 1990s. This was because New Zealand's GDP grew faster after the early 1990s, while exports continued to grow at the previous rate.

Comparisons with the OECD

How has New Zealand's trade performance compared with that of its economic peers? Figure 2 shows exports and imports as a percent of GDP for all 30 OECD countries. The grey bands have been added to facilitate comparisons. The bottoms of the bands show New Zealand exports as a percentage of GDP in 1981 (14.9 percent) and the tops show the equivalent figure for 2006 (21.0 percent.) Countries are ordered from left to right and from top to bottom according to exports as a percent of GDP in 2006: Belgium had the highest exports-to-GDP ratio in that year and Greece the lowest.

Figure 2 - Trade as a percent of GDP, OECD countries, 1981-2006



In 2006, New Zealand's exports as a percent of GDP put the country in 22nd place out of 30 OECD countries. New Zealand's exports-to-GDP ratio was much lower than that of many small European countries. It was, however, several percentage points higher than Australia, the United Kingdom, and the United States.

New Zealand is further down the rankings when considering growth in exports. Only two countries—Luxembourg and Iceland—experienced slower growth in export-to-GDP ratios over the period 1981-2006. As seen earlier, in figure 1, most of the growth that did occur happened during the first half of the period.

Many other OECD countries besides New Zealand experienced trade deficits in the 2000s, and even among those who maintained surpluses, the size of the surpluses frequently declined. Compared with countries such as Portugal, Iceland, and Greece, New Zealand's trade deficit looks distinctly modest.

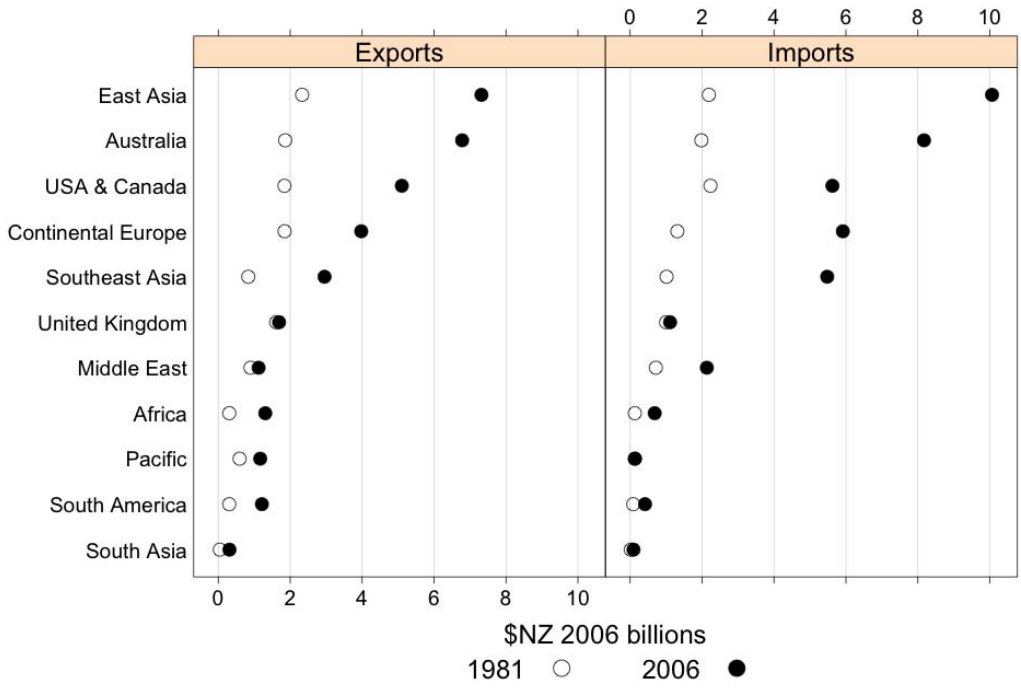
4. Trade with whom?

Next we look at trade partners: what regions and countries does New Zealand trade with?

Trade by regions

Figure 3 shows exports and imports by region. The hollow dots show values for 1981 and the solid dots show values for 2006. For instance, the solid dot at the top right of the right-hand panel indicates that imports from East Asia amounted to $10 billion in 2006.

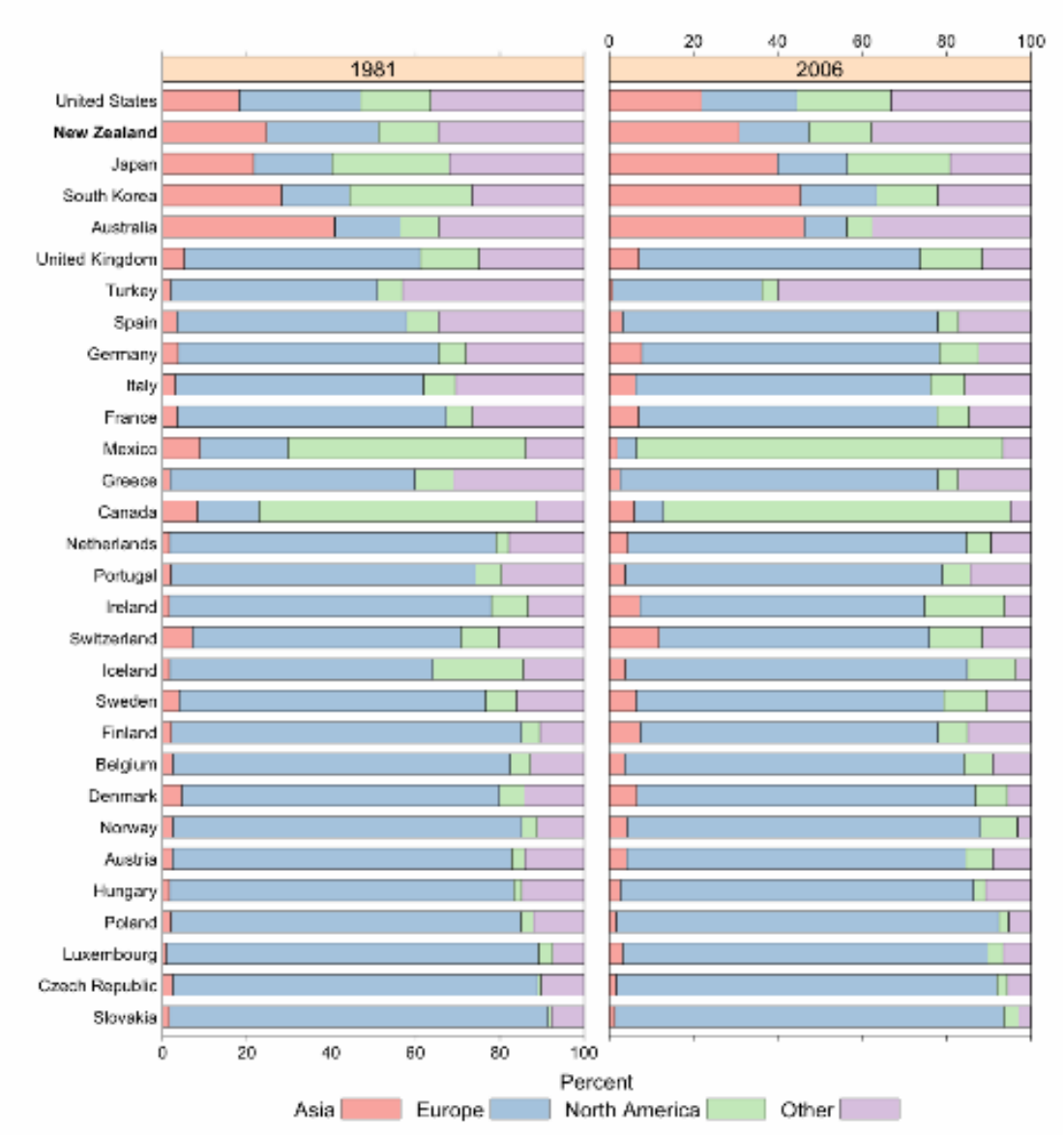
Figure 3 - New Zealand trade by region



As is clear from Figure 3, New Zealand has increased trade with most regions. Increases for East Asia and with Australia have been particularly large. Trade with Africa and South America have risen quickly, from a low base. Exceptions to the general trend include the United Kingdom, where change has been minimal, and South Asia, where volumes remain surprisingly low.

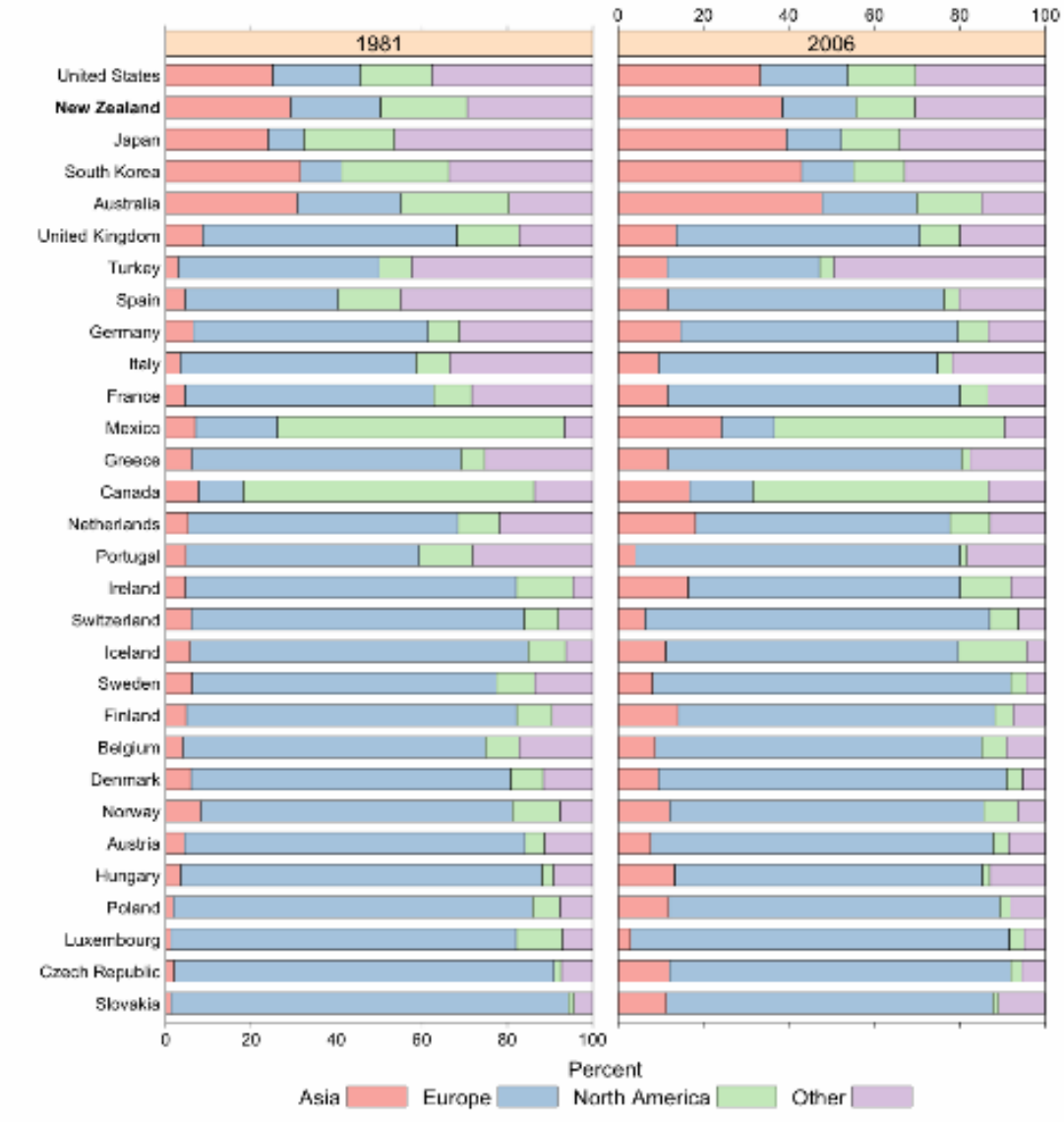
Aside from the increases, a second message from Figure 3 is that New Zealand's trade is geographically diverse: New Zealand does significant trade with most parts of the world. Figure 4 and 5 respectively show the geographical diversity of exports and imports for all 30 OECD countries, for both 1981 and 2006. To keep things manageable, the figures use four highly aggregate regions. A country's trade is defined as being more geographically diverse if it is spread more evenly across the four regions. Countries are ordered from most diverse at the top to the least diverse at the bottom. New Zealand's trade partners are the second-most diverse on this measure, behind only the United States. Almost all the small European countries that had unusually high trade volumes in Figure 2 have exceptionally low values in both Figure 4 and 5. Most of these countries' trade is confined to other European countries.

Figure 4 Distribution of exports by region, OECD countries



Interestingly, New Zealand's trade became geographically more concentrated (by this measure) over the period 1981 to 2006. However, Figure 3 makes it clear that this is an artefact primarily of trade with the United Kingdom being 'artificially high' in 1981, and hence, neither New Zealand's exports to nor imports from, the UK grew over the period. Our trade with the rest of Europe by contrast grew markedly over the period. It is also clear from Figures 4 and 5 that New Zealand was not unique in experiencing large proportional increases in trade with Asia.

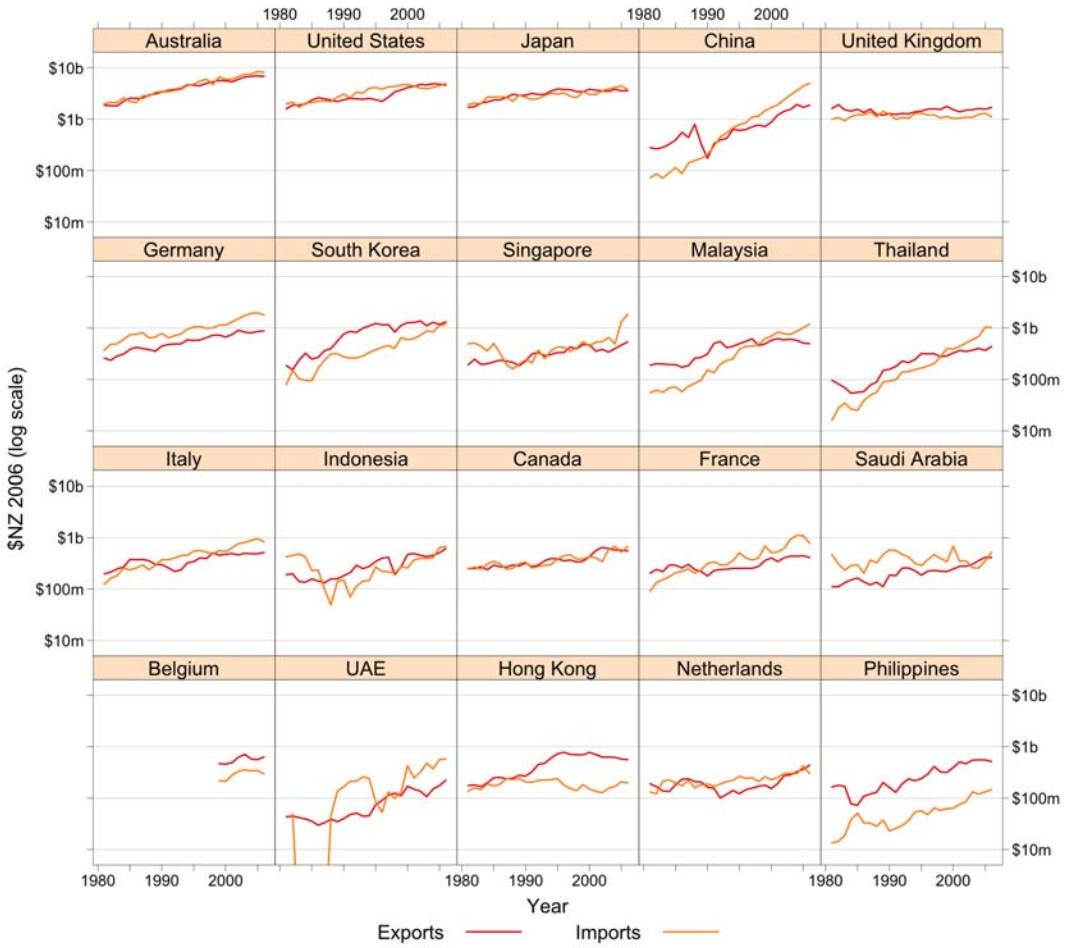
Figure 5 Distribution of imports by region, OECD countries



Trade by country

Figure 6 also concerns trade partners, but focuses on countries rather than regions. It shows exports and imports for New Zealand's top 20 trading partners, measured by exports plus imports in 2006. Countries are ordered by trade volumes, starting at the top right. To fit all the countries on to the same graph, the panels are drawn using a log scale. An increase from $10 million to $100 million is therefore represented by the same vertical distance on the graph as an increase from $1 billion to $10 billion.

Figure 6 Trade between New Zealand and its top 20 trading partners



The country-level graphs bear out the points made by previous figures, including the importance of Australia, the slow growth in trade with the UK, and the diversity of New Zealand's trade partners. It also shows the substantial volatility of trade with some important trade partners.

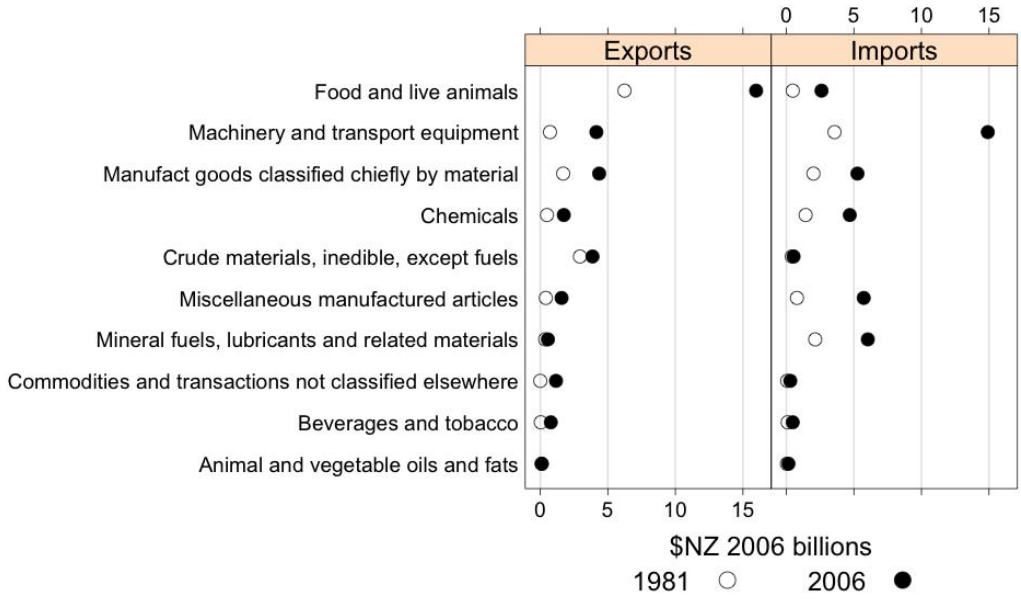
5. Trade of what?

Finally, we examine the type of goods that New Zealand exchanges with the rest of the world, and make some comparisons with Australia.

Trade by one-digit industry

Figure 7 shows trade by the one-digit (ie broadest) category in the Standard International Classification of Trade. Once again, the hollow dots represent values in 1981 and the solid dots represent values in 2006.

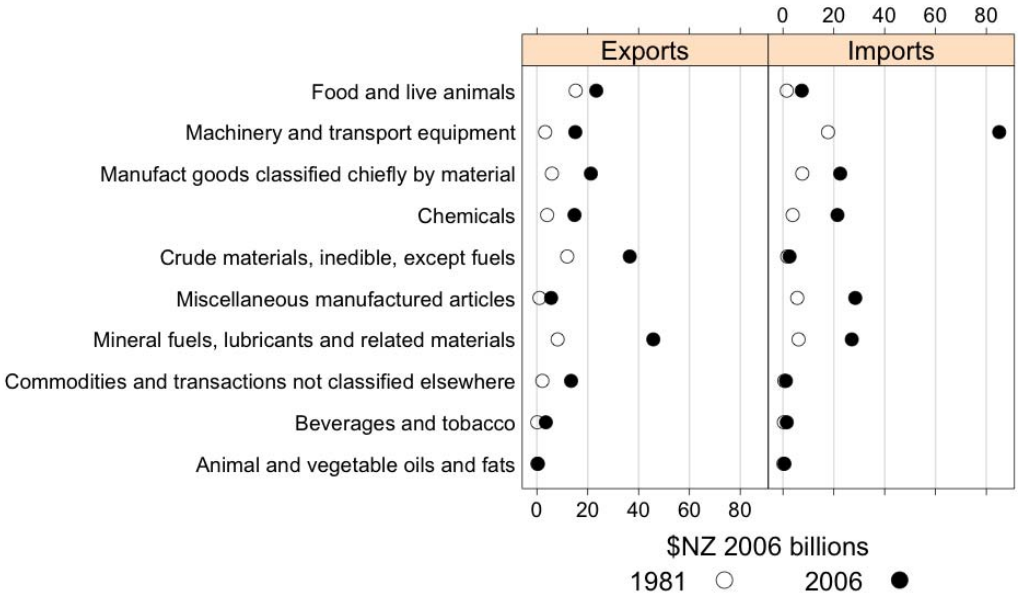
Figure 7 New Zealand trade by broad (1-digit) industry, 1981 and 2006



Most export growth has come from food and live animals, though manufactured goods also registered notable increases. Most import growth has come from manufactured goods—particularly machinery and transport equipment—and fuel.

Australia's exports, shown in Figure 8, differ markedly from those of New Zealand. Most growth has come from the sale of minerals, with only a minor contribution from food. Australia's imports, however, are strikingly similar to those of New Zealand.

Figure 8 Australian trade by broad (1-digit) industry, 1981 and 2006



5.1 Trade by two-digit industry

The more detailed two-digit data give further insights into the composition of New Zealand trade. As is apparent in Figure 9, there have been dramatic changes in the composition of 'food and live animal' exports, with dairy products replacing meat as the top export earner, and significant increases for fruit, vegetables, and seafood. Further down the figure, beverages, including wine and beer, have expanded from virtually zero to almost one billion dollars. New Zealand's manufacturing exports include some metals, but are mainly machinery and equipment.

Figure 10 demonstrates the dominant role of products related to transport in New Zealand's imports (and hence deficits.) Transport equipment is the biggest 2-digit category, followed by petroleum and petroleum products.

Figure 9 New Zealand exports by detailed (2-digit) industry

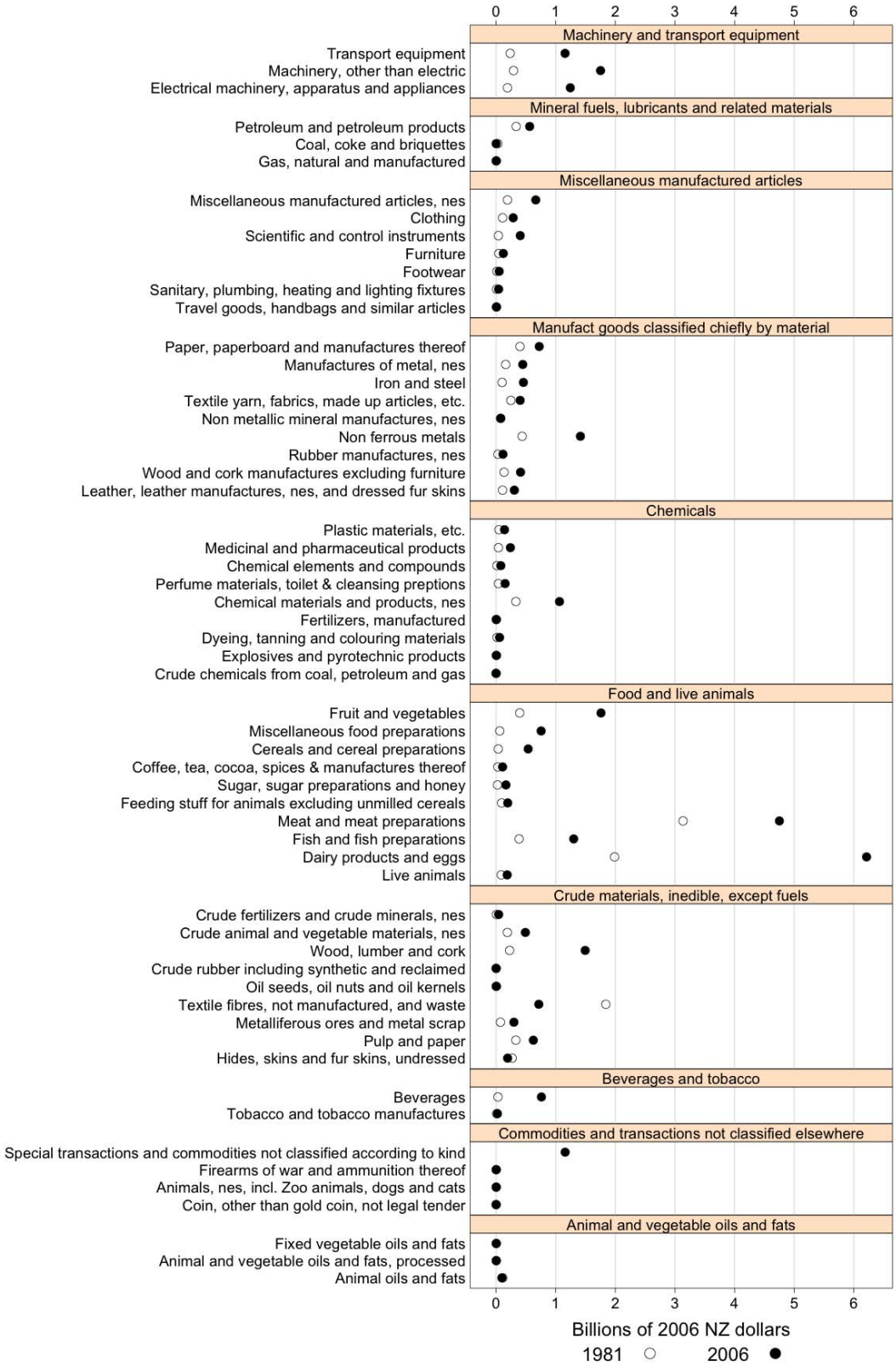
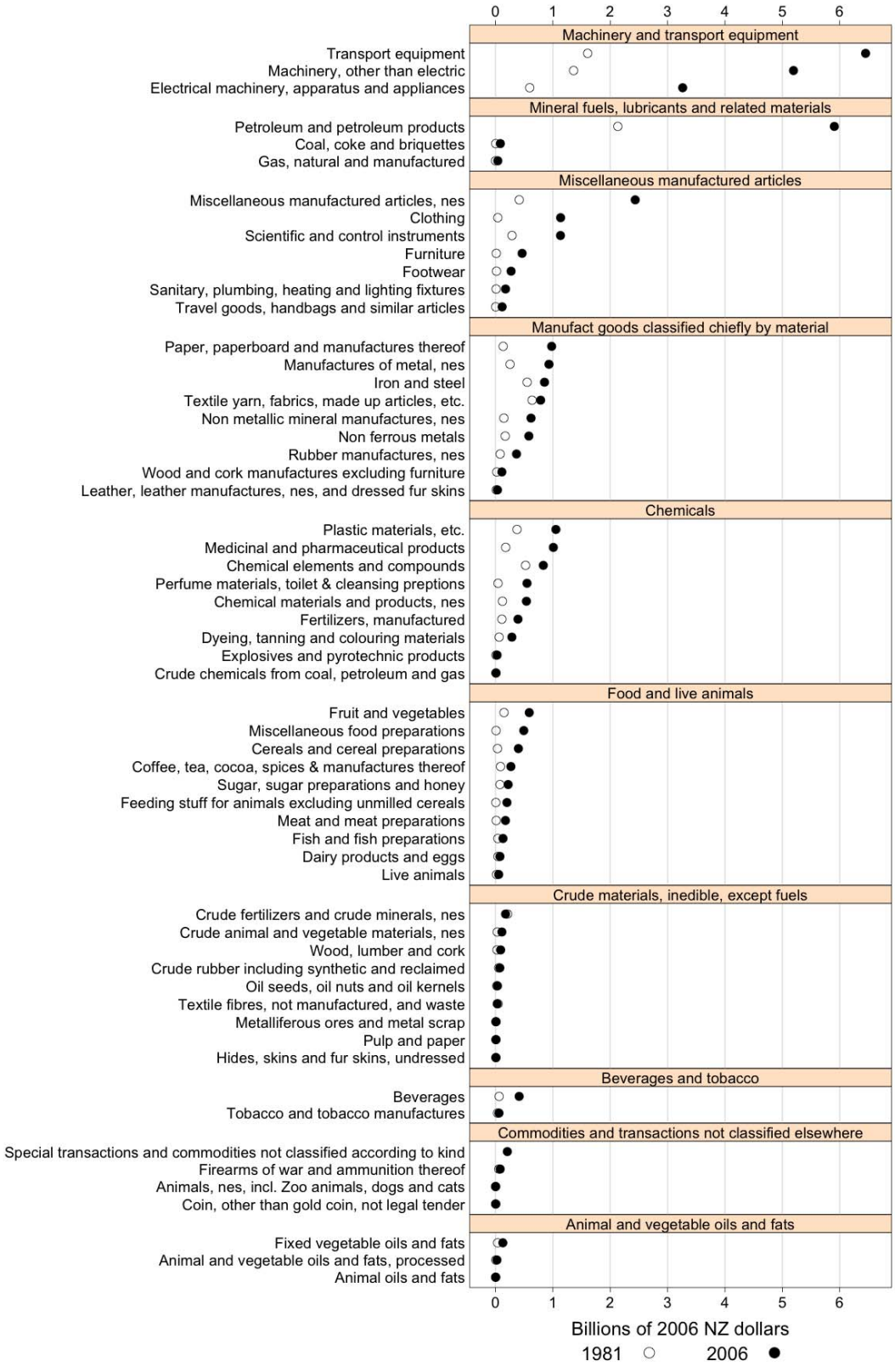


Figure 10 New Zealand imports by detailed (2-digit) industry



6. Discussion

Between 1981 and 2006, only two OECD countries (both tiny) experienced slower growth in the ratio of merchandise exports to GDP than New Zealand. However, New Zealand's export performance is not quite as hopeless as these figures suggest. Even in 2006, New Zealand's exports-to-GDP ratio was 5.5 percentage points higher than Australia, and comparable to that of many other successful OECD countries. Moreover, the OECD countries with spectacular trade volumes are almost all small European countries. The high trade volumes achieved by these countries may well reflect successful entrepreneurship or clever policy. But they certainly reflect the growth of vertical supply chains, whereby components are moved repeatedly across open borders within a small geographical area. Criticising New Zealand businesses for having relatively low participation in such supply chains, and hence relatively low trade volumes, would be like criticising New Zealand tourist operators for attracting few international weekend visitors.

Data on trade partners certainly do not suggest that New Zealand businesses have been slow to engage with foreign markets. New Zealand has expanded trade with virtually every part of the world, to the point where it now has the second-most diverse set of trade partners in the OECD. Similarly, the rapid changes in the structure of New Zealand exports and imports suggest that New Zealand exporters and importers respond readily to changing opportunities.

Those opportunities in part are likely to have come about as a result of New Zealand's ever increasing connections with the rest of the world through, amongst other things, our diverse and large numbers of migrants and diaspora.[1] Indeed, a strong and positive link between migration and trade in the case of New Zealand has been shown through empirical testing.[2]

It can be argued that, international connections are particularly important for New Zealand, with relatively few large markets in close proximity, and that these connections help facilitate specialisation in areas of comparative advantage.[3] As New Zealand's connections with the rest of the world have increased over the past 25 years, the observation that New Zealand's exports have become increasingly concentrated in agriculture is hardly surprising then. It seems likely that, because of the scope specialisation provides to take advantage of economies of scale, our changing pattern of trade may well have played a part in New Zealand's strong productivity performance of the 1990s.

[1] Bryant, John and David Law (2004) "New Zealand's diaspora and overseas-born population." Wellington, New Zealand Treasury, Working Paper.

[2] Law, David, Murat Genç, and John Bryant (2009) "Trade, Diaspora and Migration to New Zealand." Wellington, New Zealand Institute of Economic Research, Working Paper.

[3] New Zealand Treasury (2009) "International Connections and Productivity: Making Globalisation Work for New Zealand." New Zealand Treasury Productivity Paper 09/01. Wellington.