

Time to revise the TWI to reflect modern New Zealand's export profile

Headline exchange rate measures don't capture burgeoning emerging market trade

People are worried about the damage the strengthening exchange rate might be doing to the export sector. It's only a matter of time before there are more ill-advised calls for exchange rate interventions.

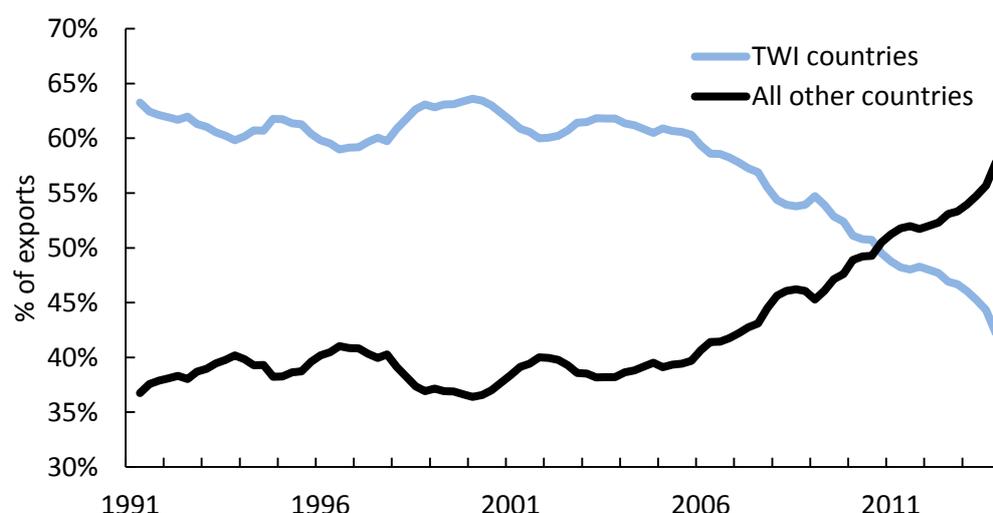
Most economists use the Reserve Bank of New Zealand's Trade-Weighted Index (TWI-5) exchange rate measure to understand the impact of the exchange rate on the economy since it is widely reported.¹ But this measure reflects old trading patterns, as it puts a lot of weight on the exchange rate with 5 markets – Australia, Japan, the Euro area, the UK and the US – selected because of their historical market size. Nor does the TWI-5 capture services trade.

However, it is now the emerging markets – particularly China – that drive our export growth. Goods exports to China are booming, clocking in at almost \$10 billion in 2013. Services exports are also growing in importance. China's blossoming middle classes are on the move, generating a \$732 million windfall for New Zealand tourism operators in 2013.

Figure 1 shows how rapidly exports to other markets have picked up while exports to the traditional markets in the TWI-5 have dipped to less than 50 percent of our goods exports by value.

In short, simply looking at the US or the Aussie dollar exchange rate as a gauge of our export competitiveness takes a very narrow view of what we sell and who we sell it to. Even the TWI-5 is becoming a less powerful indicator – it doesn't really reflect the modern export profile of many New Zealand firms.

Figure 1 The headline TWI-5 misses most of our good exports



Source: NZIER, Statistics New Zealand

¹ The TWI-5 measure is not entirely trade-weighted but uses a 50 percent weight on the size of bilateral trade flows and a 50 percent weight on the GDPs of Australia, Japan, the United States, the United Kingdom and the Euro area. Since bilateral services flows are difficult to measure, the TWI-5 only uses merchandise trade. While many transactions with China are conducted in US dollars ultimately it is the real currency of a country that drives long-run demand for exports.

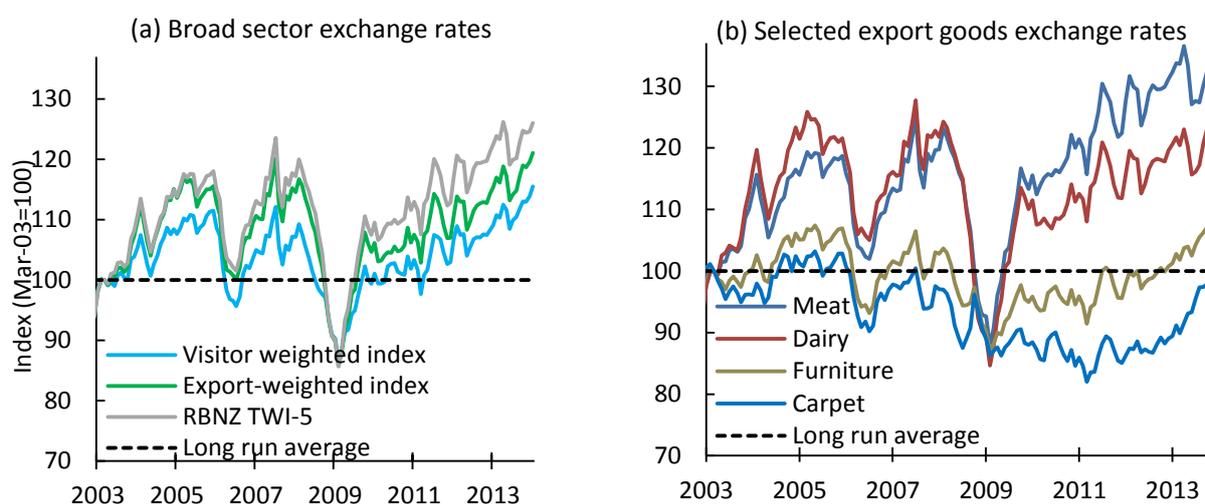
Sector-specific exchange rates give exporters and policy-makers a better sense of exchange rate impacts

Sector-specific exchange rates show materially different experiences for New Zealand exporters. So it makes sense to use sector-specific exchange rates to monitor the exposure of exporters and inform how resources might be expected to shift within the economy towards industries that are globally competitive.

For example, Figure 2a shows the RBNZ-TWI-5 measure is higher than exchange rate measures that take account of exports to emerging markets or visitor arrivals (as a proxy for exposure to tourism markets).² So firms that have emerging markets as key goods export destinations or that are reliant on foreign tourists to generate revenue are likely to have been slightly less affected by recent currency appreciation than those exporting goods to traditional markets (i.e. those in the TWI-5).

Figure 2b shows the exchange rates facing selected sub-industries. There can be many sector-specific insights from drilling down to this level of detail. For example, Figure 2b suggests declines in furniture and carpet exports cannot be solely attributed to a high exchange rate.

Figure 2 Refining exchange rate measures can show marked differences



Source: NZIER, Statistics New Zealand

Table 1 shows at a high level the exchange rate experience of some of our largest industries. It shows the extent of appreciation over the past ten years and the current position of our sector-specific indexes relative to the position of TWI-5 measure. For example, the table shows the ‘dairy TWI’ has appreciated in the currencies it is exposed to over the past ten years, but less than the standard TWI-5 would suggest. The ‘wool TWI’, on the other hand, has depreciated.

Summary exchange rate measures are useful. But they now need to be broadened to include emerging markets like China and services trade. When we talk about the impact of “the” exchange rate on particular industries, it is better that we use an exchange rate that reflects modern exporting patterns. Otherwise we risk misunderstanding the impact of the exchange rate on the economy and unwittingly initiating policies that may not be addressing real problems in the New Zealand economy.

² We use visitor arrivals across our key markets to construct a visitor-weighted index that might better reflect the tourism sector. Our export-weighted measure takes weights from the export destination of Statistics New Zealand’s detailed Harmonised System of exports in 2012.

Table 1 Sector-specific TWIs for key industries

Industry	Size of sector (exports, \$millions)	% appreciation, last 10 years	current position, relative to TWI-5
Dairy	11,562	1.0	-1.3
Tourism	6,673	7.3	-8.4
Meat	5,166	12.5	4.8
Wood	3,162	-0.4	-5.9
Minerals	2,191	2.8	-17.6
Machinery	1,716	7.0	-6.7
Fruit and nuts	1,564	9.6	0.1
Beverages and spirits	1,475	12.0	-2.3
Fish	1,379	2.8	-4.3
Albuminoidal substances	1,218	10.3	6.0
Electrical machinery	1,119	7.8	-4.8
Aluminium	1,042	14.2	1.9
Precious stones	822	2.8	-18.2
Cereals	813	0.4	-9.4
Wool	800	-3.4	-8.0
Miscellaneous food	746	7.3	-7.1
Optical instruments	721	10.4	1.0
Iron and steel	605	9.5	-2.3
Wood pulp	589	8.8	3.5
Raw hides	566	0.5	-5.8
Paper and paperboard	521	2.5	-12.5
Miscellaneous provisions	517	12.8	8.4
Plastics	471	5.8	-10.8
Animal products	438	-0.8	-1.5
Vegetables	403	10.3	-3.9
Prepared meat and fish	305	9.1	-1.4
Prepared vegetables	299	5.6	-11.3
Pharmaceuticals	295	9.3	-5.6
Vehicles and parts	271	5.2	-13.1
Food industries	270	18.0	11.3

Source: NZIER, Statistics New Zealand

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