Cut to the chase

Explaining the prices of goods and services in New Zealand

Productivity research, May 2014

The New Zealand Productivity Commission commissioned Professor Norman Gemmell, the Victoria University of Wellington Chair in Public Finance, to compare consumer prices in New Zealand with those overseas and to explain any differences identified.

It is impossible to say whether relative consumer prices are "too high" without also understanding what is driving these prices, as they may, for example, reflect intrinsic costs of production in New Zealand. However, they may also reflect problems with our markets, such as a lack of competition in key areas or reduced access to international markets.

Using World Bank data, Professor Gemmell shows that prices are relatively high in New Zealand compared to other countries. This is true for goods and services which face no direct foreign competition (non-tradables, e.g. rail freight transport) and for those that are traded internationally or in competition with foreign goods (tradables, e.g. electronics).

The project highlights the impact of New Zealand's moderately low share of skilled workers and a small population on non-tradable prices. It also shows that access to international markets (including transport costs) and the domestic supply chain costs of getting tradables from the New Zealand border or factory gate to the final consumer also contribute to higher prices of tradables.

Indeed, New Zealand's price of tradables "at the border" – which exclude domestic supply chain costs – was the sixth highest in 2005 behind Iceland, Norway, Japan, Cyprus and Malta. Because these countries are also, to varying extents, isolated island economies, access to international markets is a likely key contributing factor to high tradable prices.

Why do prices differ across countries?

The research explains differences in non-tradables price across countries as due to differences in factor endowments (capital, labour, etc.), skills and population size – all of which potentially affect the supply of, and demand for, non-tradables in each country.

For products that are freely tradable on international markets, the key question is whether the law of one price holds. Namely, are prices for the same tradable product the same in different countries when converted to a common currency? If not, what trade impediments, exchange rate "misalignments" or other factors might explain the differences observed? These differences could reflect tariff and non-tariff barriers, transport and other market access costs, and so on.

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Tradables also require some non-tradables to "deliver" them from the border or factory gate to the consumer. This includes domestic transport costs, warehousing, wholesale and retail trade costs and indirect taxes. As a result, the prices that consumers pay for tradables are also affected by these non-tradable input costs. The research includes the effect of non-tradables prices on tradables prices.

The research uses ICP data on prices of around 150 "basic heading" items in 2005 to create aggregate tradable and non-tradable expenditure/price categories. The analysis works mainly with a sample of 44 OECD-Eurostat countries for which all necessary data is available.

How do prices in New Zealand compare?

Overall price levels in 2011 and 2005

World Bank data on the overall price levels in New Zealand and a number of other countries are shown in Table 1. The figures are based on the World Bank's International Comparison Programme (ICP) data for 2005 and 2011. These data are collected by the ICP with the aim of measuring prices and expenditures for a basket of comparable goods and service expenditures across countries. The latest year for which these World Bank data are available is 2011. The most recent detailed data available on specific prices are for 2005, which were primarily used in the analysis.

In 2011, the overall price level in New Zealand was below that of Australia but above that of the United Kingdom. Table 1 also compares these price levels to OECD data on expenditure per capita. This shows that, when judged against average expenditure, the price level in New Zealand appears relatively high. Prices may, for instance, be 9% higher in the United Kingdom than in New Zealand in 2005, but their expenditure per capita was 30% greater than ours. New Zealand appears to have relatively high prices given our income levels.

Table 1 Comparison of overall price levels (2011 and 2005) and expenditure per capita

(NZ=1)	2011 price level index and rank (of 44 countries)	2005 price level index and rank (of 44 countries)	2005 expenditure per capita and rank (of 44 countries)
New Zealand	1.00, 11th	1.00, 17th	1.00, 22nd
Australia	1.33, 3rd	0.98, 18th	1.33, 6th
Canada	1.07, 9th	0.93, 19th	1.34, 5th
Ireland	0.98, 16th	1.18, 5th	1.27, 10th
United Kingdom	0.95, 17th	1.09, 9th	1.30, 7th
United States	0.85, 21st	0.93, 20th	1.75, 2nd

What is cheap or expensive in New Zealand?

New Zealand's overall consumer price level can be broken down into specific prices using the 2005 World Bank data. These data show that, relative to other OECD countries, some broad features of consumer price levels in New Zealand stand out.

Goods and services associated with investment in general appear to be relatively expensive. This is especially true for property, construction and utilities (water, gas and electricity). Passenger transport (excluding private motor vehicles) and alcohol and tobacco prices are also relatively expensive compared to other countries.

In contrast, prices for key exportable products from New Zealand are relatively cheap – especially beef, veal, lamb, fish and dairy products. Services that are largely government provided – such as education, health and social protection – are also relatively inexpensive. This reflects New Zealand's relatively low wage levels, as wage costs are an important determinant of measured (non-market) prices in these sectors.

Prices for non-tradable and tradeable prices

It is possible to break down New Zealand's overall price level into the prices for non-tradable and tradable goods and services (Table 2). Relatively high-income OECD countries feature prominently among the countries with the highest prices for non-tradables. In 2005, New Zealand had the 19th highest price level for these goods and services among the 44 OECD-Eurostat countries included in the research.

Table 2 How non-tradable and tradable prices in New Zealand compare (2005)

(NZ=1)	Average price of non-tradeables and rank (of 44 countries)	Average price of tradeables and rank (of 44 countries)	Average adjusted price of tradeables and rank (of 44 countries)
New Zealand	1.00, 19th	1.00, 9th	1.00, 6th
Ireland	1.39, 3rd	1.04, 5th	0.78, 31st
United Kingdom	1.18, 9th	0.98, 10th	0.84, 21st
United States	1.08, 16th	0.74, 30th	0.49, 44th
Australia	1.04, 18th	0.91, 15th	0.82, 27th
Canada	0.97, 21st	0.87, 20th	0.80, 28th

The prices for tradables display a similar pattern, but there are some variations. Of the 44 OECD-Eurostat countries in the World Bank data, New Zealand had the 9th highest average tradables price. Table 2 also removes the effect of domestic supply chain prices from the price of tradables to give a rough estimate of prices for tradables at the border. On this measure, New Zealand had the 6th highest price of

(adjusted) tradables prices in the World Bank data set. Thus while New Zealand ranks relatively highly among international non-tradable prices it has an especially high relative international price of tradables products arriving at New Zealand's border.

Explaining New Zealand's prices

New Zealand's relative low capital intensity and trade deficits would lead us to expect lower non-tradable prices. However, our lower than average skilled labour and population would lead us to expect higher non-tradable prices. The fact that New Zealand has relatively high prices, therefore, indicates the dominant effect of New Zealand's lower than average values for skilled labour and population.

These non-tradables prices then have a feedback effect onto our tradables prices. The impact of non-tradable prices on the consumer price of tradables is an important reason why consumer prices differ across countries.

New Zealand's price of non-tradables accounts for around 35 to 40 per cent of the domestic price of tradables for consumers, compared to border or factor gate prices. This is quite similar to other OECD countries on average and is only a part of the explanation of New Zealand's relatively high tradables prices.

Although the drivers of tradable prices at the border are not explicitly modelled, relatively high prices in New Zealand's case could reflect greater trade impediments and/or higher indirect taxes. It is likely that the former dominates the latter, since general indirect taxes in New Zealand are not unusually high by OECD standards. Indeed, the price of tradables at the border was the sixth highest in New Zealand behind Iceland, Norway, Japan, Cyprus and Malta, all of which are, to varying extents, isolated island economies.

This work has contributed to the inquiry *Boosting productivity in the services sector.*

Explaining international differences in the prices of tradables and non-tradables (with a New Zealand perspective), NZPC Working Paper 2014/3

The prices of goods and services in New Zealand: An international comparison, NZPC Working Paper 2014/2

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