

What's for dinner? Relative and absolute differences in food prices

Dr. Mavis Duncanson(1), Grace Boston(2), Dr Winsome Parnell(3),
Dr. Jean Simpson(1)

(1) NZCYES, University of Otago (2) Dunedin School of Medicine, University of Otago
(3) Department of Human Nutrition, University of Otago

ABSTRACT

Background: Women with children, experiencing food insecurity, report difficulty affording healthy food and express concern that high fat processed food and sugar sweetened beverages are often less expensive than fresh foods and milk. The New Zealand food price index monitors changes in price of various food items relative to their price in 2006 and reports on average retail prices of food items.

Aim: This poster examines how prices of food items have changed over time and consider how this may impact on the diet of children and young people in New Zealand.

Method: Analysis of data from the 2016 Food Price Index to identify for which goods prices have remained most similar to 2006 and which goods have had the greatest relative increase in price. Weighted average retail prices in June 2016 were used to compare absolute differences in price of food items at that point in time.

Results: The price of pastry-cook products such as pies, sausage rolls and custard squares increased 5% from 2006 to 2016, the price of processed meat increased around 10% whereas the price of beef and veal increased by 50%. The largest single rise of 65% was seen for fruit. The least expensive single item in the June 2016 list of weighted average retail prices was a loaf of white bread and the most expensive items were fresh meats. At \$3.99 a hot meat pie was the least expensive 'ready-to-eat' food item.

Conclusion: Increasing disparities in the relative prices of foods may have contributed to material hardship and low food security in New Zealand. For households with children processed foods may be the most economic food choices, particularly for those living in income poverty.

BACKGROUND

Food security can be defined as the assured ability to acquire nutritionally adequate and safe food that meets cultural needs and has been acquired in a socially acceptable way. Low food security exists in households with limited resources.¹ In 2004/05 it was estimated that 15% of New Zealanders in two-parent households with children and 37% of those in sole parent households experienced low food security, which is a serious population health issue in New Zealand and other developed countries.^{1,2} Households reporting low food security spend on less food overall than households with moderate food security, and particularly spend less on fruit, vegetables and cereals and tend to spend less on milk.^{1,2} Averaged over the 2013, 2014 and 2016 Household Economic Survey years, 10% of New Zealand 0–17 year olds in low income households (lowest income quintile after housing costs) went without fresh food and vegetables a lot, and 18% received help from foodbanks more than once in the previous 12 months. These percentages were somewhat higher for households with low material wellbeing index (MWI) scores (bottom quintile of scores) of whom 18% who went without fresh food and vegetables a lot, and 20% who received help from foodbanks more than once in the past 12 months.³ Within the complex systems underlying food security the cost of food is one issue that must be addressed.⁴ A summer research project co-hosted by the New Zealand Child and Youth Epidemiology Service in 2015/16 involved six in-depth interviews with mothers in Dunedin and enabled a unique insight into perceived effects of low food security on their families. Common themes included the high cost of food, particularly healthy food, and the need to economise on items like fruit, vegetables, meat and milk.⁵

Cost is a key driver of food purchase choices particularly when resources are limited. Energy dense foods that are less nutritionally rich often provide more energy for the same cost than healthier food.^{2,6} The Statistics New Zealand Food Price Index measures the rate of price change between time periods for a fixed basket of food goods and services.⁷ The goal of this investigation was to examine the relative change in price for food items between 2006 and 2016, and consider how this might impact of the diet of children and young people in New Zealand.

METHODS

Data were extracted from New Zealand Food Price Index component of the Consumer Price Index June 2016 and analysed to identify for which foods prices have remained most similar to 2006 and which foods have had the greatest relative increase in price. Prices for the fruit and vegetable subgroup were seasonally adjusted.

Weighted average retail prices in June 2016 were used to compare absolute differences in price of food items at that point in time.

RESULTS

Food prices indexed to June 2006 had increased by 28% in June 2016. This increase was not uniform across food subgroups and classes. As shown in **Table 1** the highest relative price rise was rise was 33% for the meat, poultry and fish subgroup. The lowest relative price rise was for 23% for grocery items.

Table 1. Food price index numbers for seasonally adjusted subgroups New Zealand June 2016

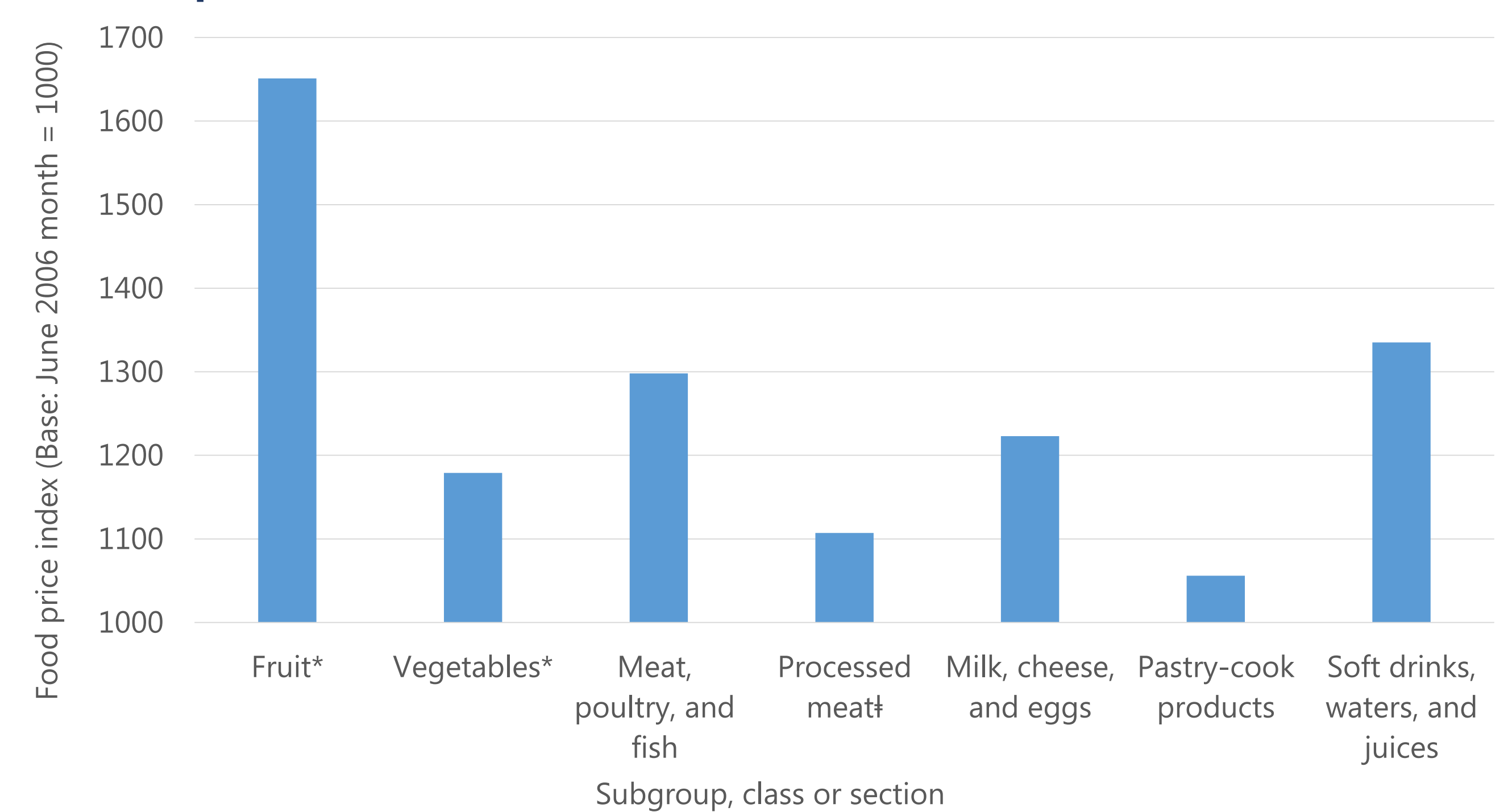
Food class	Index number	Relative price increase (%)
Fruit and vegetables subgroup*	1281	28
Meat, poultry, and fish subgroup	1325	33
Grocery food subgroup	1230	23
Non-alcoholic beverages subgroup	1314	31
Restaurant meals and ready-to-eat food subgroup	1309	31
Food group (total)	1281	28

Source: Statistics NZ Food Price Index; Base: June 2006 month (=1000); Fruit and vegetable subgroup* seasonally adjusted; Other series not seasonally adjusted because they do not have stable seasonality

RESULTS continued

When classes and sections within each food subgroup were examined, the greatest price increase was for fruit (65%), and the smallest increase was for pastry-cook products (6%) within the grocery foods subgroup. Pastry-cook products is a collective term for items such as pies, sausage rolls and custard squares generally found in the frozen foods section. The overall changes for selected classes and sections are shown in **Figure 1**. The June 2016 weighted average retail prices of selected individual items included in the Food Price Index basket are shown in **Table 2**.

Figure 1. Food price index for selected food classes and sections New Zealand June 2016



Source: Statistics NZ Food Price Index; Base: June 2006 month (=1000); Fruit and vegetable subgroup* seasonally adjusted; Other series not seasonally adjusted because they have no stable seasonality; Processed meat†=preserved, prepared, and processed meat

Table 2. Weighted average retail prices of selected food items New Zealand June 2016

Item	Unit	Price (NZ\$)
Fruit and vegetables*	Oranges	1kg 3.65
	Broccoli	1kg 5.10
	Potatoes	1kg 1.72
Meat, poultry, and fish†	Beef steak e.g.sirloin	1kg 26.91
	Beef – mince	1kg 14.47
	Sausages	1kg 9.51
Grocery food subgroup†	Bread – white sliced loaf	600g 1.08
	Milk – standard	2 litres 3.23
Non-alcoholic beverages	Soft drink	1.5 litres 2.59
Ready-to-eat food	Fish and chips	1 fish/chips 6.22
	Meat pie – hot	each 3.99

Source: Statistics NZ Food Price Index (FPI); Items included in the FPI fixed basket of food goods and services purchased by households; *Purchased from supermarket or greengrocer; †Purchased from supermarket or butcher; ‡Purchased from supermarket or convenience store

CONCLUSION

Between 2006 and 2016 the increase in price of processed meats and pastry-cook items was lower than the increase for fresh fruit and vegetables. These items are also among the most affordable within food subgroups, along with white bread. A current child nutrition survey and specific nutritional research is needed to understand the ways that disparity in food prices impacts the diet and health of children and young people in New Zealand.

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