

# Food price index review: 2017





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## Purpose and summary

### Purpose

*Food price index review: 2017* outlines the changes we made as a result of a review of the food price index (FPI), and implemented in [Food Price Index: October 2017](#).

### Summary of key points

- Three items were added to the FPI basket; seven were removed.
- The relative importance of restaurant meals and ready-to-eat food subgroup has increased, reflecting an increase in household spending.
- The relative importance of the grocery food subgroup has decreased.
- The relative importance of fruit and vegetables increased marginally.
- The relative importance of meat, poultry and fish decreased marginally.
- The relative importance of non-alcoholic beverages in 2017 is roughly the same as it was in 2014.

### About the FPI

The FPI measures the changes in prices that households pay for food. The food group is the only group of the CPI for which an index is prepared each month, with food accounting for around one-fifth of the overall CPI. Price change is measured by tracking the prices of individual food items that make up a representative food basket. Stats NZ prices 162 different foods each month to create the Food Price Index.

We review the FPI every three years as part of a wider consumers price index (CPI) review to ensure the index remains relevant.

The 2017 review has reselected the basket, and updated the relative importance of the items within it.

## Changes to the FPI Basket

The FPI basket is organised into five ‘subgroups’, which can be further broken down into 14 ‘classes’, which in turn can be broken down into 62 ‘sections’ (17 of which are publicly available). Each section (eg ‘beef and veal’) is made up of items that are representative of that section.

We include particular items in the FPI basket to ensure there is good representation across the subgroups, classes, and sections. We select more items for classes and sections where there is a relatively high variation in price change (ie where the prices of items in the class or section tend to move differently), than for classes and sections with little variation (ie where prices move similarly).

### Item changes

As part of the 2017 review, we added three items to the FPI basket:

- fresh herbs
- olives
- flavoured tea, herbal tea.

Also as part of the 2017 review, we dropped seven items from the FPI basket:

- vegetable shoots
- spring onions
- taro
- corn (canned and bottled)
- luncheon sausage, garlic sausage
- cheese (cottage, quark, ricotta)
- milkshakes.

We have dropped some of these items because household expenditure on them is relatively low and the sections they are in are already well represented by other items (eg cottage cheese has a **relatively low expenditure weight in the ‘cheese’ section and cheese is already well represented by cheddar cheese, camembert cheese, and cheese slices**). We have dropped some of the other difficult-to-collect items because they also have relatively low expenditure and are sufficiently represented by other items in the basket (eg our pricing officers find taro difficult to find in supermarkets, it **has relatively low expenditure weight in the ‘potatoes and other tuber vegetables’ section**, and potatoes and other tuber vegetables are already well represented by kumara and potatoes).

The FPI basket now contains 162 items (with three additions and seven discontinued items); previously it contained 166 items.

We did not add or discontinue any class or subgroup level series in either the FPI or the CPI as part of the 2017 review.

## Information sources on food spending

Our main source of information for the 2017 FPI review was the 2015/16 Household Economic Survey (HES). The survey ran from July 2015 to June 2016, and was completed by about 3,500 households. It collected information on what households spend on food, and other goods and services.

See [Household Expenditure Statistics: Year ended June 2016](#) for more information on the HES.

We also used information from food manufacturers and distributors, supermarket scanner data from the Nielsen Company, and data from other Stats NZ surveys (eg retail trade survey, census).

About 77 percent of estimated household expenditure was derived directly from the 2015/16 HES. Fifteen percent was derived entirely from other information sources, and the remaining 8 percent used a combination of HES and other information sources.

## Relative importance of different types of food

Figure 1 shows the relative importance of the FPI sub-groups. This is referred to as an expenditure weight. We calculate the weights of the sub-groups based on their share of total household spending on food. For example, for every \$100 households spend on food about \$15 is spent on fruit and vegetables. We estimate this spending using the Household Economic Survey (HES) and other data sources.

Figure 1

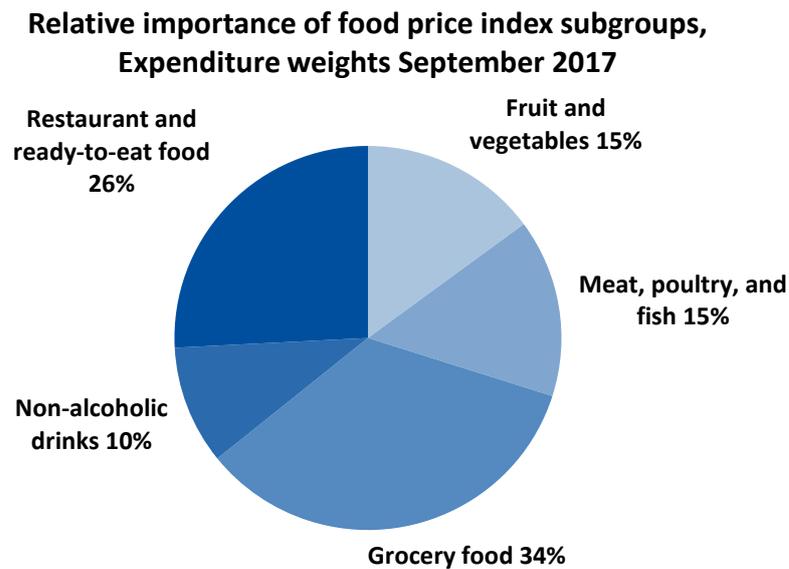
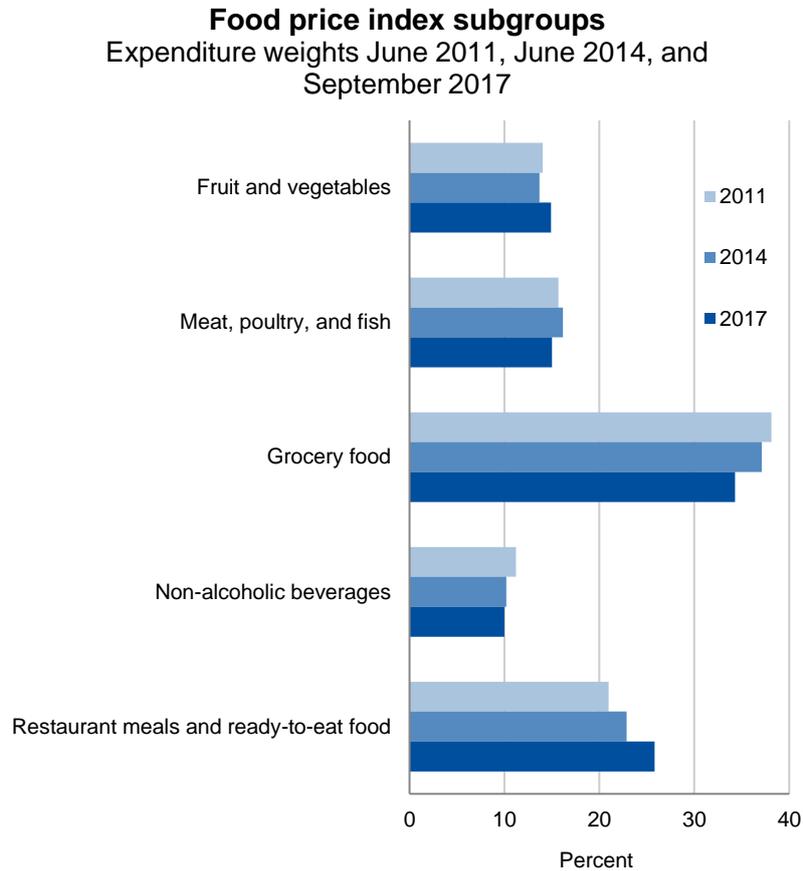


Figure 2 shows the relative importance of the Food subgroups at the 2011, 2014 and 2017 FPI reviews. Note that the 2011 and 2014 expenditure weights are set in the June quarters while the 2017 expenditure weights are set in the September quarter. We moved the 2017 implementation quarter back to account for delays experienced earlier in the review due to the Kaikoura earthquake.

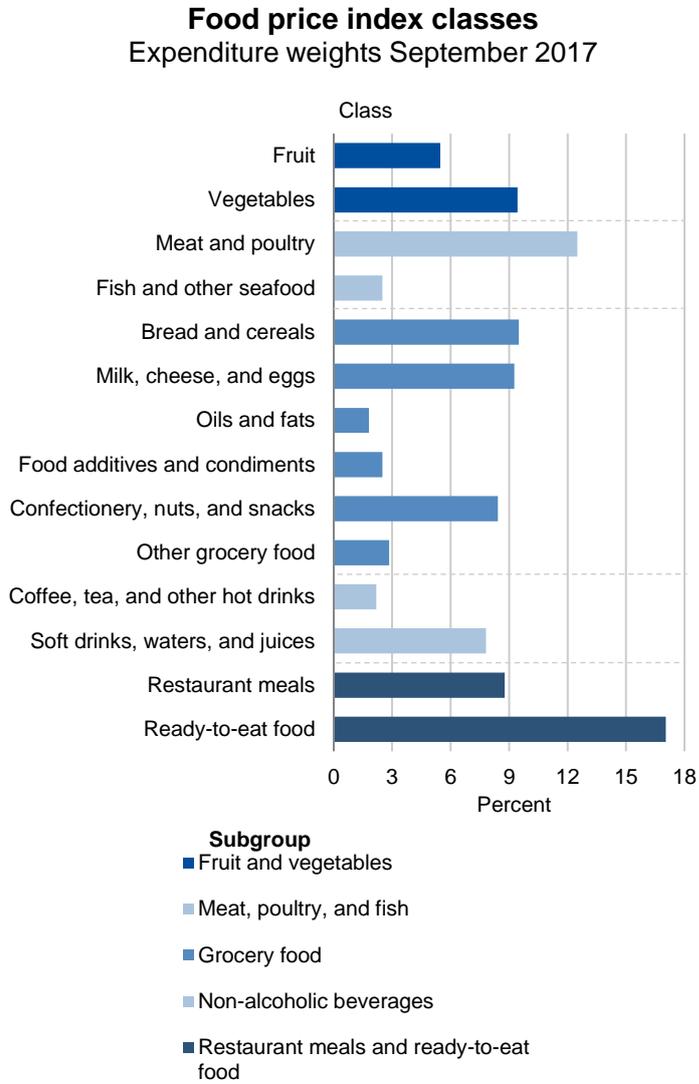
Figure 2



Source: Stats NZ

Figure 3 shows the relative importance of the FPI classes.

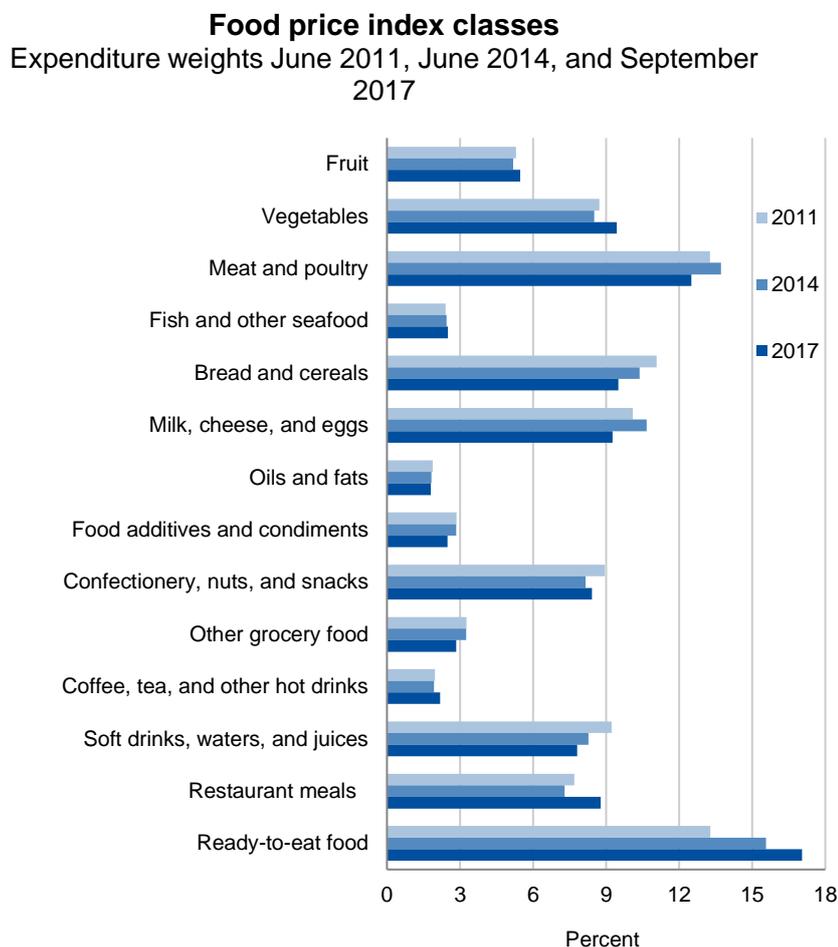
Figure 3



Source: Stats NZ

Figure 4 shows how the relative importance of the FPI classes has changed over the past three FPI reviews.

Figure 4



Source: Stats NZ

## Expenditure weight changes

All of the FPI sub-groups have grown in total expenditure levels. The relative expenditure weight changes came down to which ones showed relatively stronger growth compared with the others. The subgroups that showed the least expenditure growth lost some of their relative weight shares of the overall group, even though they still experienced expenditure growth.

### Restaurant meals and ready-to-eat food

The biggest growth area was the ‘restaurant meals and ready-to-eat food’ **subgroup**. Expenditure grew 28 percent from June 2014 to September 2017, which led to a relative weight increase of 3.0 percent. Restaurant meals and ready-to-eat food now make up 26 percent of total food expenditure, up from 23 percent in June 2014.

A price increase of 6.6 percent contributed to the growth in this subgroup, but a large part of the growth came from an increase in implied volume (up 20 percent). However, the HES shows that

the percentage of households reporting expenditure on this subgroup is flat (84 percent of households in both periods), so it would seem that rather than more households spending money on these types of goods and services, it was the same households spending more money on these types of goods more often (eg getting takeaways twice a month instead of once a month).

At the class level, restaurant meals had stronger expenditure growth (up 36 percent) than ready-to-eat (RTE) food (up 24 percent), although both were high. As RTE food previously had a much higher relative weight (15.6 percent of the total food group) than restaurant meals (7.3 percent of the total food group), their relative weights within the food group increased by roughly the same percentage points. Both were up approximately 1.5 percent – restaurant meals up to a relative weight of 8.8 percent and RTE food up to a relative weight of 17 percent.

The restaurant meals class-level growth (up 36 percent) was mainly volume driven (implied volume growth of 27 percent), although the FPI showed that prices also increased between June 2014 and September 2017 (up 6.7 percent). The HES showed that the percentage of households reporting expenditure on restaurant meals increased from 43.3 percent of households to 51.5 percent of households over the same period.

The RTE food class also had very strong expenditure growth (up 24 percent). Similar to restaurant meals, the growth was partly driven by price increases (up 7 percent) but also by strong implied volumes growth (up 16 percent). However, unlike the restaurant meals class, the percentage of households with expenditure on RTE food did not grow over the two review periods. Rather than more households spending money on RTE food, households who have always spent money on RTE food are now spending more and/or doing so more often (eg RTE food twice a month instead of once a month). The big item-level drivers behind RTE food growth were takeaway hot drinks; takeaway pizzas; and takeaway biscuits, buns, and cakes.

## Grocery food

The ‘grocery food’ subgroup also had relatively low expenditure growth of just below 4.8 percent. Due to grocery food being the largest of the subgroups in terms of relative weight, it showed the highest drop in relative weight, down from 37 percent to 34 percent of the ‘food’ group from June 2014 to September 2017. Prices fell 0.9 percent.

The ‘bread and cereals’ class-level expenditure growth was low at 3.7 percent. This was a combination of price change at class level being down 5.4 percent and implied volumes growth being up 10 percent. White bread showed a relatively big decline in expenditure between 2014 and 2017.

Expenditure for the ‘milk, cheese, and eggs’ class fell, down 1.6 percent between June 2014 and September 2017. This was price driven, with prices down 3.1 percent over that period. Within this section, expenditure on fresh milk fell, down 9.0 percent, driven by prices dropping by 2.3 percent with implied volumes down 6.8 percent. In the process of reviewing our methodology for fresh milk expenditure, we discovered an overstatement in the June 2014 expenditure calculation which also contributed towards the downward movement seen in September 2017.

The ‘oils and fats’ class showed an expenditure increase of 12 percent but had a relatively low starting weight (less than 2 percent of the ‘food’ group), so this expenditure growth had very little impact on the class relative weight (still just below 2.0 percent of the ‘food’ group).

The ‘food additives and condiments’ class-level expenditure movement was flat. As a result, this class lost relative weight within the ‘food’ group (down from 2.8 percent to 2.5 percent).

The ‘confectionery, nuts, and snacks’ class showed strong expenditure growth, up 17 percent, driven by price increases of 5.2 percent and implied volume growth of 11 percent. This class makes up 8.4 percent of the ‘food’ group relative weight. The largest item-level movers were chocolate (bars, blocks); nuts, nuts and raisins (mainly volumes driven); and potato crisps, potato sticks.

The ‘other grocery food’ class showed an expenditure drop of 1.0 percent. This was mainly driven by a decrease in implied volumes (down 3.0 percent) as prices went up by 2.1 percent.

## Fruit and vegetables

The ‘fruit and vegetables’ subgroup had expenditure growth of 23 percent from June 2014 to September 2017. A large part of this was due to price growth. Prices for fruit and vegetables increased by more than 10 percent over that time, and there was a strong implied volume growth of 12 percent. The relative weight change for fruit and vegetables was not as large as restaurant meals and RTE food, moving from 14 percent of the ‘food’ group to 15 percent.

Both classes within the ‘fruit and vegetables’ subgroup showed price and volume increases, but the vegetables class was the main driver. Vegetables expenditure increased by 25 percent and its relative weight within the ‘food’ group grew from 8.5 percent to 9.4 percent. Prices for vegetables were up 11.5 percent.

## Meat, poultry, and fish

The ‘meat, poultry, and fish’ subgroup had expenditure growth of 5.1 percent from June 2014 to September 2017. As growth for this subgroup was less than other subgroups, meat, poultry, and fish lost relative weight within the ‘food’ group, down from 16 percent to 15 percent. Prices decreased by 2.2 percent over this period.

Expenditure on the ‘fish and other seafood’ class grew significantly more than expenditure for ‘meat and poultry’ (16 percent compared with 3.3 percent, respectively). Within the ‘meat and poultry’ class, beef and veal showed a decline in expenditure between 2014 and 2017, while pork; mutton, lamb, and hogget; and poultry all showed expenditure growth.

## Non-alcoholic drinks

The ‘non-alcoholic drinks’ subgroup had expenditure growth of 11 percent from June 2014 to September 2017 but the relative weight remained the same, at 10 percent of the ‘food’ group. Growth for this subgroup was due to both prices (up 4.0 percent) and implied volume growth (6.7 percent).

Within the subgroup, expenditure growth for soft drinks was relatively low, while water (mineral, bottled, flavoured) showed large expenditure growth. Coffee (instant, bags, beans, essence) also had relatively high expenditure growth in this subgroup.

## Regional expenditure

We collect FPI prices from 12 regional pricing centres: Whangarei, Auckland, Hamilton, Tauranga, Napier-Hastings, New Plymouth, Palmerston North, Wellington, Nelson, Christchurch, Dunedin, and Invercargill.

The 2017 FPI review used regional expenditure weights for the five broad regions (Auckland, Wellington, rest of North Island, Canterbury, and rest of South Island). We used regional expenditure weights and population shares to determine the relative importance of each of the 12 centres (each centre is allocated a weight, referred to as a regional expenditure weight).

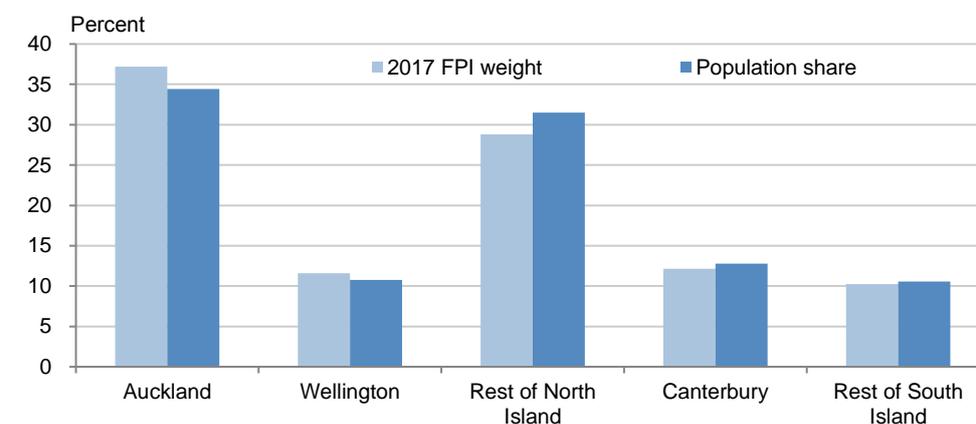
For broad regions with multiple pricing centres (rest of North Island and rest of South Island), we used population shares to allocate the regional expenditure weight to the pricing centres.

Regional expenditure weights ensure that price changes at a regional level are accurately reflected in the national FPI. For example, a price change in Auckland (which has 34 percent of the population and an FPI regional expenditure weight of 37 percent) would have about three times the effect on the national FPI as the same price change in Wellington (which has 11 percent of the population and an FPI regional expenditure weight of 12 percent).

Figure 5 compares the proportion of food expenditure in each region (2017 FPI weight) with the region's share of the New Zealand population according to population estimates from Stats NZ.

Figure 5

### Regional expenditure and population proportions



Source: Stats NZ

We calculated regional expenditure weights as proportions of national expenditure (eg 37 percent of food expenditure is in the Auckland region) for each FPI class or section (the lowest published level) using HES regional expenditure. We applied class/section level proportions to the individual items within that class or section (eg the regional proportions for fruit were applied to national expenditure on each fruit item) to derive regional expenditure on each individual item (eg spending on apples in Auckland).

Regional expenditure was then expressed in September 2017 prices for the respective region (eg apple expenditure in Auckland was expressed in September 2017 apple prices collected in Auckland). The group-level regional weights were then calculated by aggregating all food expenditure in each broad region.

Table 1 shows the proportion of food expenditure on restaurant meals and ready-to-eat food relative to other food in the five broad regions, compared with the entire country.

Table 5

Proportion of restaurant meals and ready-to-eat food, and other food expenditure, in the five broad regions		
Broad region	Restaurant meals and ready-to-eat food expenditure	Other food expenditure
	Percent <sup>(1)</sup>	
Auckland	28	72
Wellington	29	71
Rest of North Island	23	77
Canterbury	26	74
Rest of South Island	22	78
New Zealand	26	74

1. Percent of total food spending

In September 2017, average weekly spending on food per household was about 19 percent higher in the Auckland region compared with the average for all New Zealand households (up from 12 percent in June 2014), and about 5 percent higher in the Wellington region (up from 3 percent in June 2014). Average spending was about 12 percent lower than the New Zealand average for the rest of the North Island (8 percent in 2014), and 9 and 11 percent lower for Canterbury and the rest of the South Island respectively (3 percent and 10 percent respectively in 2014).

## Upcoming publications

Information on the 2017 CPI review will be published on 12 January 2018.

Information on the 2017 Household Living-cost Price Index (HLPI) review will be published on 1 February 2018.

The review will be implemented when *Consumers Price Index: December 2017 quarter* is released on 25 January 2018.

The next review of the FPI basket and weights will be in 2020.

This year we are also changing our CPI and FPI base reference periods to June 2017 = 1000 (currently June 2006 = 1000). This new base reference period will be first implemented in the December 2017 CPI. We will be releasing a back series of the CPI index with the updated base reference period on 30 November 2017.