Hot Off The Press

Latest statistics from Statistics New Zealand

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Food Price Index: October 2009

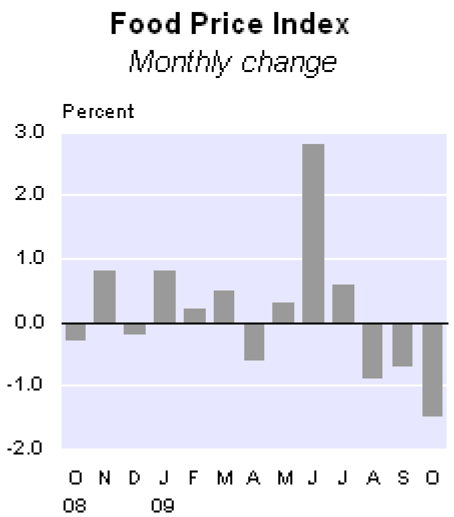
Highlights

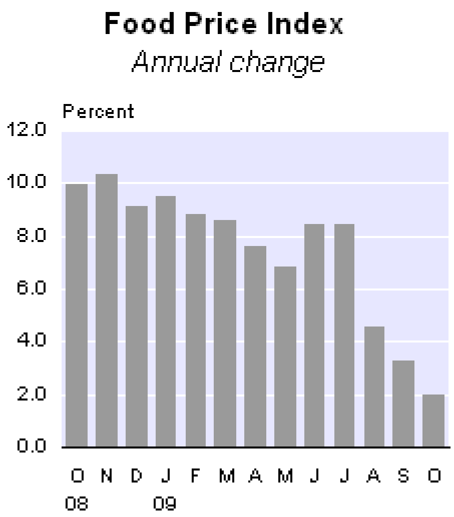
In October 2009 compared with September 2009:

- Food prices fell 1.5 percent.
- Fruit and vegetable prices fell 4.6 percent.
- Meat, poultry, and fish prices fell 3.2 percent.
- Grocery food prices fell 0.4 percent.
- Restaurant meals and ready-to-eat food prices fell 0.3 percent.
- Non-alcoholic beverage prices fell 0.4 percent

From October 2008 to October 2009:

- Food prices increased 2.0 percent, the lowest rise since May 2006.





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Commentary

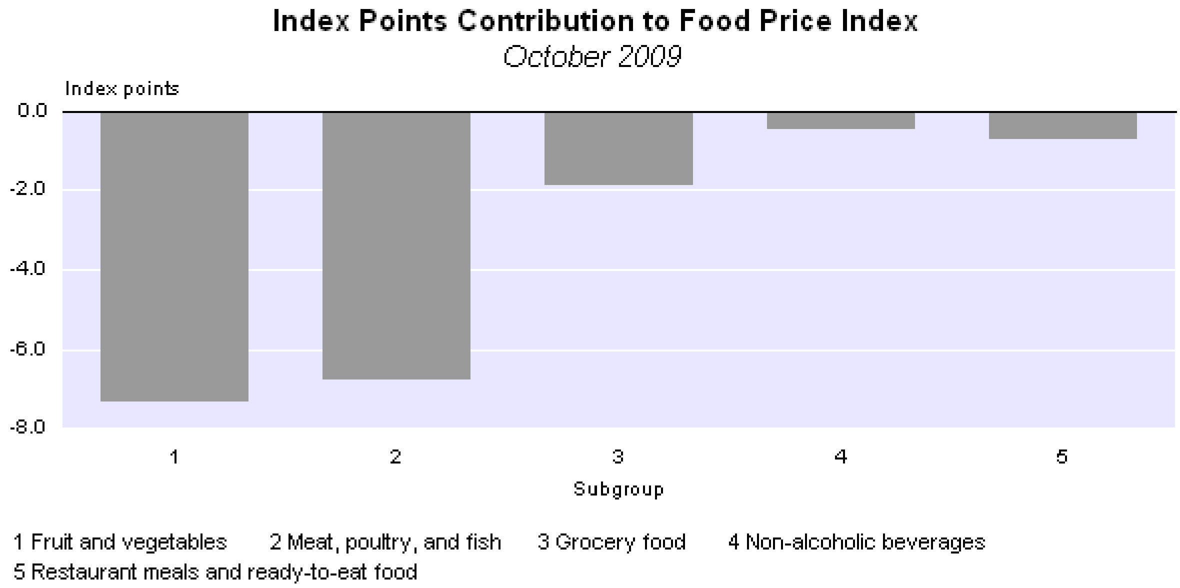
Food prices in October 2009

Food prices fell 1.5 percent in October 2009, following decreases of 0.7 percent and 0.9 percent in September and August 2009, respectively. This is the third consecutive fall in the food price index (FPI), and the largest fall in seasonally unadjusted food prices since they fell 1.5 percent in February 2006.

In October 2009, for the first time this decade, all five food subgroups recorded decreases. Lower prices were recorded for fruit and vegetables (down 4.6 percent), meat, poultry, and fish (down 3.2 percent), grocery food (down 0.4 percent), restaurant meals and ready-to-eat food (down 0.3 percent), and non-alcoholic beverages (down 0.4 percent).

The most significant individual downward contributions came mostly from lower prices for lettuce (down 47.0 percent), fresh chicken (down 8.7 percent), and lamb (down 11.8 percent).

The most significant upward contributions came from higher prices for broccoli (up 37.9 percent), carrots (up 19.2 percent), and cabbage (up 53.1 percent).



Monthly Index Points Contribution		
Subgroup	**Aug 2009 to Sep 2009**	**Sep 2009 to Oct 2009**
Fruit and vegetables	-14.69	-7.31
Meat, poultry, and fish	3.88	-6.79
Grocery food	-0.37	-1.90
Non-alcoholic beverages	2.37	-0.46
Restaurant meals and ready-to-eat food	0.66	-0.71
Food price index	**-8.15**	**-17.17**
Note: Index points contributions may not sum to total due to rounding.		

Distribution of item-level movements

The table below outlines the distribution of price movements in September 2009 and October 2009. The FPI has been partitioned into those national item-level indexes that increased, showed no change, or decreased.

Distribution of Item-level Index Movements		
National item-level index movements	**Aug 2009 to Sep 2009**	**Sep 2009 to Oct 2009**
Increase in price		
Number of items	80	78
Percentage of all items	51.0	49.7
Percentage of expenditure weight	50.8	47.9
Index points contribution	17.0	12.8
Weighted above price increase (percent)	2.8	2.2
No change in price		
Number of items	0	4
Percentage of all items	0.0	2.5
Percentage of expenditure weight	0.0	3.4
Decrease in price		
Number of items	77	75
Percentage of all items	49.0	47.8
Percentage of expenditure weight	49.2	48.7
Index points contribution	-25.2	-30.0
Weighted average price decrease (percent)	4.3	5.2

The distribution of item-level movements shows that:

- the percentage of expenditure weight of items that increased in price fell slightly, as did the percentage of expenditure weight of items that decreased in price.
- the weighted average price decrease rose while the weighted average price increase fell.
- the weighted average price decrease was more than double the weighted average price increase.

These movements resulted in a 1.5 percent decrease in the October 2009 FPI, following a 0.7 percent decrease in September 2009.

Annual movements

Food prices increased 2.0 percent in the year to October 2009, following increases of 3.3 percent and 4.6 percent in the years to September and August 2009, respectively. The October 2009 annual increase is the lowest annual increase since a 1.8 percent rise in the year to May 2006. This is the third month in a row where the annual increase has been lower than the month before.

Four of the food subgroups increased in the year to October 2009. The most significant upward contributions came from higher prices for grocery food (up 2.7 percent), followed by non-alcoholic beverages (up 9.8 percent), restaurant meals and ready-to-eat food (up 3.0 percent), and meat, poultry, and fish (up 1.2 percent).

The only subgroup to decrease was fruit and vegetables (down 6.0 percent).

The most significant upwards contribution came from higher prices for soft drinks (up 10.5 percent), ready-to-eat food (up 3.0 percent), and bread (up 7.2 percent).

The most significant downward contributions came from lower prices for potatoes (down 29.5 percent), cheddar cheese (down 23.1 percent), and lettuce (down 32.4 percent).

Although food prices are now 2.0 percent higher than a year ago, they are 12.1 percent higher than two years ago.

Annual Index Points Contribution	
Subgroup	**October 2008 to October 2009**
Grocery food	11.98
Non-alcoholic beverages	11.11
Restaurant meals and ready-to-eat food	7.19
Meat, poultry, and fish	2.53
Fruit and vegetables	-9.74
Food price index	**23.08**
Note: Index points contributions may not sum to total due to rounding.	

Fruit and vegetables

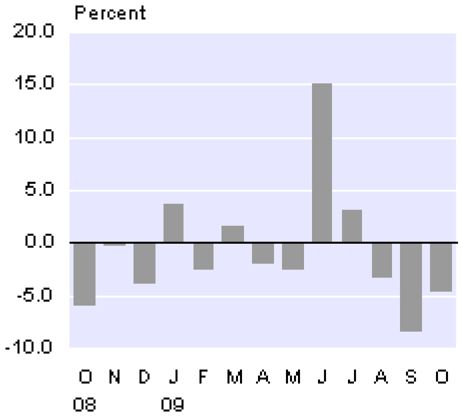
Prices for the fruit and vegetables subgroup decreased 4.6 percent in October 2009, following decreases of 8.4 percent and 3.3 percent in September and August 2009, respectively. Fruit and vegetable prices, which usually fall over the spring months, are now down 15.5 percent from their winter peak in July 2009.

The most significant downward contribution to the October 2009 fall came from lower prices for lettuce (down 47.0 percent). Lower lettuce prices accounted for over three-quarters of the 4.6 percent fall in the price of fruit and vegetables in October 2009. Prices for cucumber (down 34.6 percent) and tomatoes (down 7.2 percent) also fell. The most significant increases came from broccoli (up 37.9 percent), carrots (up 19.2 percent), and cabbage (up 53.1 percent).

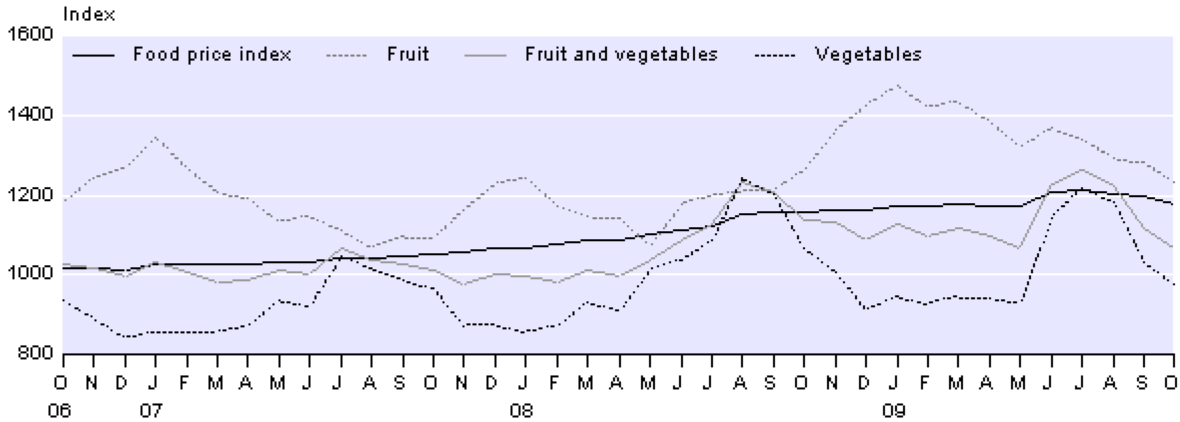
For the year to October 2009, fruit and vegetable prices decreased 6.0 percent. Vegetable prices were down 8.3 percent and fruit prices were down 2.4 percent for the year to October 2009. This was the first annual fall in fruit prices since the year to May 2008.

The most significant downward contributions came from lower prices for potatoes (down 29.5 percent), lettuce (down 32.4 percent), and apples (down 16.0 percent). The most significant upward contribution came from higher prices for bananas (up 8.4 percent).

Fruit and Vegetables Subgroup
Monthly change



Fruit and Vegetables Subgroup and Food Price Index
Monthly indexes
Base: June 2006 month (=1000)



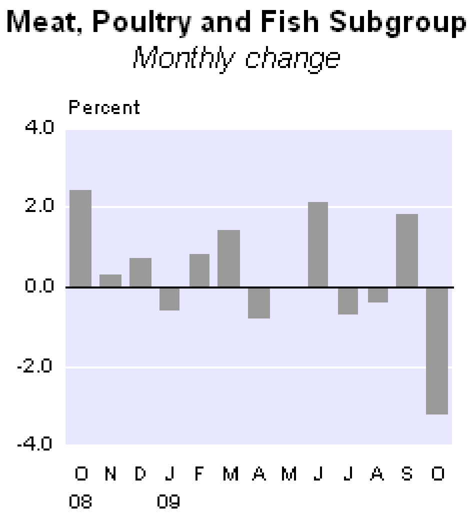
Meat, poultry, and fish

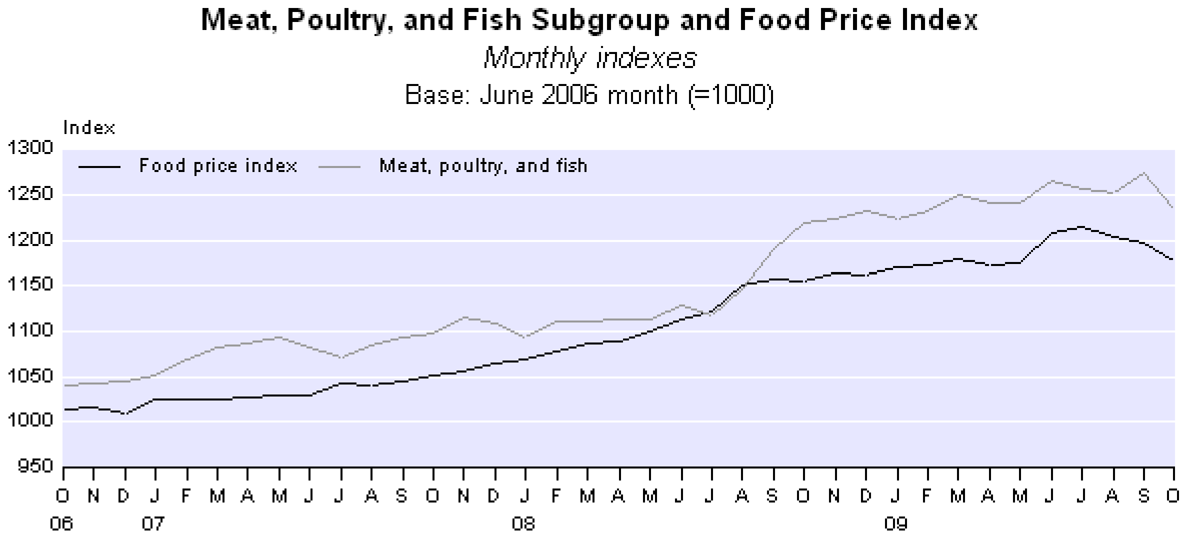
Prices for the meat, poultry, and fish subgroup decreased 3.2 percent in October 2009, following a rise of 1.8 percent in September 2009, and a fall of 0.4 percent in August 2009. This is the largest fall since a 3.6 percent decrease in May 1986.

The most significant downward contributions to the October 2009 fall came from lower prices for fresh chicken (down 8.7 percent), lamb (down 11.8 percent), and prepared meats and smallgoods (down 4.6 percent). The most significant increase came from frozen chicken (up 7.5 percent). Poultry was down 5.2 percent, and its prices have returned to levels last seen in August 2008.

Minced beef prices fell 5.9 percent in October 2009, with a significant amount of specialling, following its 6.8 percent increase in the previous month.

For the year to October 2009, meat, poultry, and fish prices rose 1.2 percent. The most significant upward contributions came from higher prices for sausages (up 9.7 percent) and canned tuna (up 20.9 percent). The most significant downward contributions came from lower prices for beef (down 4.6 percent) and poultry (down 2.9 percent).





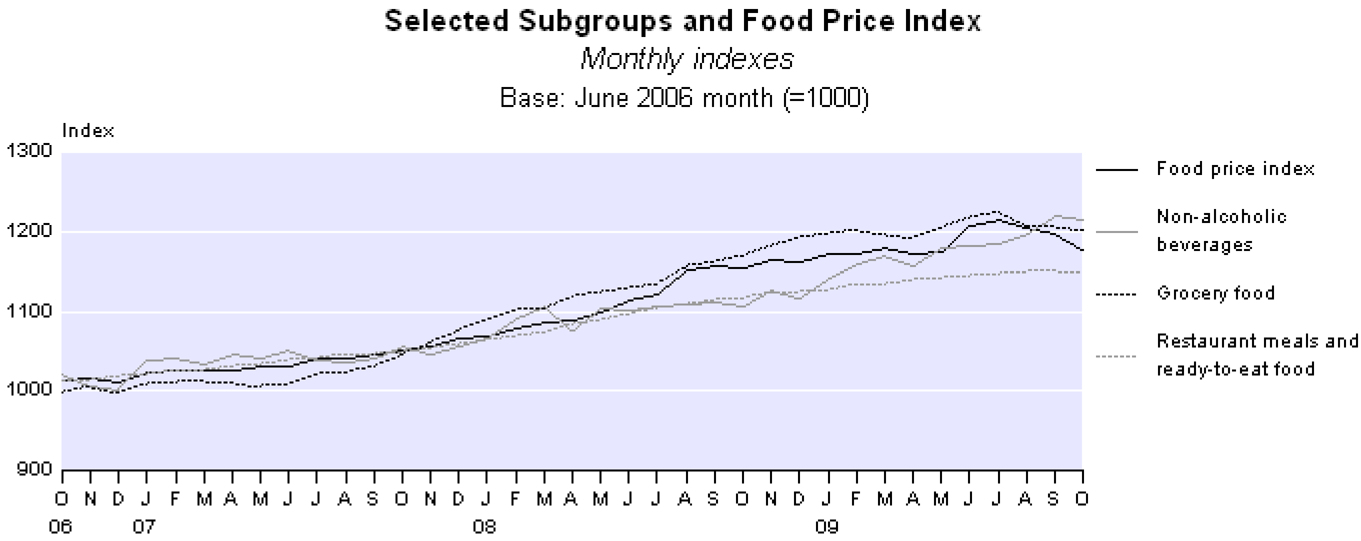
Other subgroups

Slightly lower prices were recorded for the grocery food (down 0.4 percent), restaurant meals and ready-to-eat food (down 0.3 percent), and non-alcoholic beverages (down 0.4 percent) subgroups.

For the first time this decade, the grocery food subgroup has decreased for three months in a row. Grocery food prices have returned to about the same level recorded in May 2009. The restaurant meals and ready-to-eat food subgroup has recorded its first monthly fall since April 2003.

Within these subgroups, the most significant downward contributions in October 2009 came from lower prices for ready-to-eat food (down 0.7 percent) – driven largely by takeaway salad (down 11.9 percent) where there was significant specialing – and soft drinks (down 1.3 percent). The most significant upward contribution came from higher prices for cakes and biscuits (up 1.8 percent).

For the year to October 2009, cheddar cheese (down 23.1 percent), fresh milk (down 4.5 percent), and butter (down 27.0 percent) have all decreased in price from their peaks of a year ago, returning to levels last seen at the end of 2007 or early 2008.



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Next release ...

Food Price Index: November 2009 will be released on 11 December 2009.

Technical notes

What the food price index measures

The food price index (FPI) measures the rate of price change of food and food services purchased by households. The food group is the only commodity group of the consumers price index (CPI) for which an index is prepared each month. The all groups CPI is prepared quarterly.

Index series available online from Infoshare

To access more data from the CPI series, go to Infoshare at
www.stats.govt.nz/infoshare, and choose:
Subject category: **Economic indicators**
Group: **Consumers Price Index**
The FPI series are listed immediately after the CPI series.

The time series can be downloaded in Excel or comma delimited format, where percentage movements can be calculated using the following formula:

((Index number for later period minus index number for earlier period) divided by index number for earlier period) multiplied by 100

More information about Infoshare.

Distribution of item-level index movements

The Distribution of Item-level Index Movements table in the commentary of this Hot Off the Press gives additional information on the distribution of price movements recorded for the current month's FPI. The analytical statistics in the table give an indication of how widespread price changes are, and their relative magnitude compared with previous months.

Grocery food specials

Items that are 'on special' or come 'off special' are included in the FPI at the price levels observed at the time prices are collected. An analysis of the price quotes for these items is often given for the grocery food and non-alcoholic beverages subgroups in the commentary of this Hot Off the Press. To be included in this analysis, the priced item will have been on special either last month or this month, or have been on special in both months.

Sample of outlets

Prices are collected from a sample of retail outlets. This sample was selected as part of the 2006 FPI review. The last selection of outlets took place with the 1999 FPI review. As a result of the 2006 FPI review, the price collection effort was redistributed to align more closely with the population shares of the regions. This redistribution means more prices are collected in the larger pricing centres, particularly Auckland. The objective of this re-allocation is to maximise the accuracy of the national FPI while taking into account a secondary requirement to produce regional indexes of good quality.

Food prices are collected from about 650 outlets in the 15 surveyed urban areas. Of these, about 75 are supermarkets, 30 greengrocers, 30 fish shops, 30 butchers, 50 convenience stores (with half being service stations and the other half being dairies, grocery stores and superettes), 120 restaurants (for evening meals), and more than 300 are other suitable outlets (for breakfast, lunch, and takeaway food).

Review of the food price index

The FPI was reviewed in 2008 as part of the regular review of the consumers price index (CPI). The review encompassed the reselection of the basket of representative food goods and services and the reweighting of the basket to reflect the relative importance of household spending on food.

The item pricing specifications were also updated and the sample of product sizes, brands and varieties has been reselected in some cases. Price collectors were also given more guidance about specific brand-share targets for selected goods by using summary information collated from supermarket scan data obtained from the Nielsen Company. The guidance ensures that the mix of brands in the FPI price samples reflect market shares.

The updated FPI sample of products was selected in April 2008. Price collection for the existing and new samples ran alongside each other until June 2008, when collection for the old index ceased.

Pricing coverage and timing

Prices are surveyed in 15 urban areas: Whangarei, Auckland, Hamilton, Tauranga, Rotorua, Napier-Hastings, New Plymouth, Wanganui, Palmerston North, Wellington, Nelson, Christchurch, Timaru, Dunedin, and Invercargill.

Fresh fruit and vegetable prices are surveyed weekly, and the remaining food prices are generally surveyed between the 8th and 16th of the month, although sometimes surveying starts and finishes earlier or later.

Expenditure weights

The main source of information used to weight the FPI basket is the 2006/07 Household Economic Survey (HES), which collected detailed information on the spending patterns of about 2,600 households. However, because the HES doesn't provide accurate information for some food items, such as confectionery and soft drinks, information was also sourced from food manufacturers and distributors, and from supermarket scan data (from the Nielsen Company).

The initial weights for the year to June 2007 (the weight reference period) were 'price updated' to the June 2008 month (the price reference period). This updating involved expressing the underlying quantities of the weight reference period in the prices of the price reference period. The initial weights indicated that households spent $13.263 billion on food during the year to June 2007 (2006/07). When the food consumed during 2006/07 is expressed in prices that were current at June 2008, that spending rises to $14.583 billion (10.0 percent higher, due to increased food prices since 2006/07).

Table 4 (in the tables section) gives the expenditure weights, as at the June 2008 month, for the reweighted FPI. It shows that about $21 of every $100 spent by households on food is spent on eating out or takeaways. About $17 of every $100 spent on food is on meat, poultry, and fish, and about $14 is on fruit and vegetables. Non-alcoholic beverages such as coffee, soft drinks, and fruit juice account for $10, and the remaining $38 is spent on grocery food.

Regional population weights

Regional population weights are used to allocate the national expenditure weights of goods and services derived from the Household Expenditure Survey (HES) and other sources to the FPI pricing centres. For example, the population weights ensure that a given price change in Auckland, with a population weight of 32.98 percent, would have nearly three times the effect on the national FPI than the same movement in Christchurch, which has a population weight of 11.55 percent.

The population weights, which appear in table 5, have been calculated by making use of local government boundaries. The 2008 weights were derived by assigning the census usually resident population as at June 2007 of each regional council area to the pricing centre(s) within the region.

For three regional council areas, Bay of Plenty, Manawatu-Wanganui, and Canterbury, there are two pricing centres in each region. The proportion of the regional council area population allocated to each pricing centre was based on the population of the pricing centre's territorial authority.

The four regions without a pricing centre had their populations allocated to the nearest pricing centres. The Gisborne region's population was allocated to the Napier-Hastings pricing centre, and the Marlborough, Tasman, and West Coast regions were allocated to the Nelson pricing centre.

The population weights used previously were based on the census usually resident population as at June 2005.

As well as allocating population weights to the 15 FPI pricing centres, Statistics New Zealand is also publishing the FPI and CPI for five broad regions based on regional council area boundaries. These regions are Auckland, Wellington, Rest of North Island, Canterbury, and Rest of South Island. The population weights of these broad regions are also given in table 5.

Elementary aggregate formulae

Regional elementary aggregates are calculated for each of the 15 pricing centres from all prices collected for an item within that region. Regional elementary aggregates are calculated using a 'geometric mean of price relatives', or Jevons formula.

The Jevons formula is used to calculate average prices for all food goods and services in the basket, except for fresh fruit and fresh vegetables. The Jevons formula assumes that households spend the same amount at each surveyed outlet in each period. This implies that increased quantities are purchased from outlets showing lower-than-average relative price change and decreased quantities from outlets showing higher-than-average price change.

The Jevons formula is:

$$P_{JE} = \prod_{n=1}^{N} \left(\frac{P_n^1}{P_n^0} \right)^{\frac{1}{N}}$$

Where:

P_n^1 = Price of item n (n=1….N) in period 1

P_n^0 = Price of item n (n=1….N) in the base period

In practice, Statistics NZ uses a weighted geometric mean formula, with the weights, where available, representing the relative importance of outlet types such as supermarkets relative to convenience stores and the relative importance of individual outlets (eg supermarket chains).

As four or five prices (depending on how many Fridays fall within a given month) are collected within each month for fresh fruit and vegetables, the 'arithmetic mean of price relatives' or Dutot formula is used as the first stage of aggregation is across both outlets within each region and across weeks within each month.

The Dutot formula is:

$$P_{DU} = \sum_{i=1}^{N} \left(\frac{1}{N} \right) P_i^1 / \sum_{i=1}^{M} \left(\frac{1}{M} \right) P_i^0$$

Where:

P_i^1 = Price of item i (i=1….N) in period 1

P_i^0 = Price of item i (i=1…M) in the base period

In practice, Statistics NZ uses a weighted arithmetic mean formula, with the weights, where available, representing the relative importance of outlet types such as supermarkets relative to convenience stores, and the relative importance of individual outlets (eg supermarket chains).

Average prices of selected food items (table 3)

Table 3 contains a selection of average retail prices for the current and previous month. The weighted average prices are calculated by applying index movements to weighted average prices calculated for the June 2006 month. The weighted average prices are not statistically accurate measures of average transaction price levels, but do provide a reliable indicator of percentage changes in prices.

As the weighted average prices are calculated from the prices as at the June 2006 month, these are not strictly comparable with weighted average prices published before the July 2006 month (when the new June 2006 weighted average price based on the June 2006 sample of prices was published). Further, other methodological changes that will cause the weighted average prices based on the June 2006 average prices to differ from the previously published ones include:

- the adoption of the geometric mean formula for all food goods and services, other than fresh fruit and vegetables
- an updated relative importance of sampled outlet types (eg supermarkets and convenience stores) and sample outlets (eg supermarket chains)
- an updated mix of surveyed brands, varieties and sizes
- the changes that have been made in the reference size in the 'unit' column of table 3 for some items.

For any given set of prices, the use of the geometric mean formula will result in prices being less than or equal to an arithmetic mean price. This means that the June 2006 month average prices in table 3 for items other than fresh fruit and vegetables are in many cases lower than those that appeared in the June 2006 Hot Off the Press.

Seasonal effects – fresh fruit and vegetables

Until the June 2006 month, fresh fruit and vegetable items that exhibited a seasonal pattern were adjusted to remove the effect of normal seasonal change. This treatment was used to reduce the influence of normal seasonal price fluctuations. However, the treatment did not completely eliminate the effects of seasonal fluctuations if shifts in seasonal patterns occurred.

From the July 2006 month onwards, the FPI incorporates seasonally unadjusted prices for fresh fruit and vegetables. This change is in line with a recommendation made by the 2004 CPI Revision Advisory Committee.

The ongoing, fully unadjusted FPI is linked at the June 2006 month to the previously published FPI, which is partly seasonally adjusted. As such, annual movements calculated over the annual period encompassing the June 2006 month were based on fully unadjusted index numbers for the latest month, compared with partly adjusted index numbers for the same month of the previous year.

During the year-long transition of the official FPI, two sets of index numbers were supplied in table 3 of the FPI release: the index numbers for the FPI which were seasonally adjusted until the June 2006 month (the official FPI series) and the fully seasonally unadjusted analytical series which go back to the June 1999 month.

More information

For more information, follow the link from the technical notes of this release on the Statistics NZ website.

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Timing

Timed statistical releases are delivered using postal and electronic services provided by third parties. Delivery of these releases may be delayed by circumstances outside the control of Statistics NZ. Statistics NZ accepts no responsibility for any such delays.

Tables

The following tables are printed with this Hot Off the Press and can also be downloaded from the Statistics New Zealand website in Excel format. If you do not have access to Excel, you may use the Excel file viewer to view, print and export the contents of the file.

1. Food price index, subgroups
2.01. Food price index, subgroups, classes, and selected sections – index numbers
2.02. Food price index, subgroups, classes, and selected sections, percentage change from previous month
2.03. Food price index, subgroups, classes, and selected sections, percentage change from same month of previous year
3. Food price index, weighted average retail prices of selected food items
4. Food price index, expenditure weights
5. Food price index, population weights