

Chapter Nineteen

Prices

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Prices are a key factor in the operation of an economy, and the indexes which provide summary measures of the movements in various categories of prices are used extensively to analyse and monitor price behaviour, and to adjust government payments such as pensions.

This chapter provides an outline of the major price indexes, their history, and their underlying concepts and methodology. More detailed information is contained in the source publications referred to throughout the chapter and in the bibliography.

CONSUMER PRICE INDEX

The Consumer Price Index (CPI) is a general indicator of the rate of change in prices paid by household consumers for the goods and services they buy.

The simplest way of thinking about the CPI is to imagine a basket of goods and services of the kind bought by Australian households. As prices vary, the total price of this basket will also vary. The CPI is simply a measure of the changes in the price of this basket as the prices of items in it change.

The price of the CPI basket in the base period is assigned a value of 100.0 and the prices in other periods are expressed as percentages of the price in the base period. For example, if the price of the basket had increased 35 per cent since the base year, then the index would read 135.0. Similarly, if the price had fallen by 5 per cent since the base year, the index would stand at 95.0.

For practical reasons, the CPI basket cannot include every item bought by households, but it does include all the important kinds of items. It is not necessary to include every item that people buy since many related items are subject to similar price changes. The idea is to select representative items so that the index reflects price changes for a much wider range of goods and services than is actually priced.

The total basket is divided into the following eight major commodity groups: food; clothing; housing; household equipment and operation; transportation; tobacco and alcohol; health and personal care; and recreation and education. These groups are divided in turn into 35 subgroups and the subgroups into 107 expenditure classes.

In addition to the aggregate All groups index, indexes are also compiled and published for each of the groups, subgroups and expenditure classes for each State capital city, Darwin and Canberra. 'National' indexes are constructed as the weighted average of the indexes compiled for each of the eight capital cities.

Index population

The CPI measures price changes relating to the spending pattern of a large proportion of metropolitan employee households. This group is termed 'the CPI population group'. For this purpose employee households have been defined as those households which obtain at least three-quarters of their total income from wages and salaries excluding the top 10 per cent (in terms of income) of such households. Metropolitan means the State capital cities, Darwin and Canberra.

However, the exclusion of particular subgroups of the Australian population from the CPI population group does not necessarily mean that the CPI does not provide a suitable measure of price change for all household types. For example, a study undertaken by the ABS in 1992 (and updated in 1993) showed that an experimental index constructed to reflect the expenditure patterns of age pensioner households displayed little variation from the CPI over a period of nearly eleven years, although there were some differences in index movements when shorter periods were examined.

Conceptual basis

The CPI is a quarterly measure of the change in average retail price levels. It provides a method of comparing the average price level for a quarter with the average price level of the reference base year or changes in the average price level from one quarter to any other quarter.

In measuring price changes, the CPI aims to measure only pure price changes (that is, it is concerned with isolating and measuring only that element of price change which is not brought about by any change to either the quantity or the quality of the goods or services concerned). In other words it aims to measure, each quarter, the change in the cost of purchasing an identical basket of goods and services. This involves evaluating changes in the quality of goods and services included in the

index and removing the effects of such changes from the prices used to construct the index.

The CPI is also a measure of changes in the prices actually paid by consumers for the goods and services they buy. It is not concerned with nominal, recommended or list prices (unless they are the prices consumers actually pay).

Although the CPI is often loosely called the 'cost-of-living index' this is not strictly correct. A true cost-of-living index would, among other things, need to be concerned with changes in standards of living and with the substitutions that consumers make in order to maintain their standard of living in the face of changing market conditions (for instance, buying chicken rather than beef when beef prices are high).

The CPI basket includes goods and services ranging from steak to motor cars and from dental fillings to restaurant meals. The items are chosen not only because they represent the spending habits of the CPI population group but also because the items are those whose prices can be associated with identifiable and specific commodities and services. While government taxes and charges which are associated with the use of specific goods and services (such as excise duty, sales taxes, local government rates, etc.) are included, income taxes and the income-related medicare levy are excluded because they cannot be clearly associated with the purchase or use of a specific quantity of any good or service.

Items are not excluded from the CPI basket on the basis of moral or social judgements. For example, some people may regard the use of tobacco and alcohol as socially undesirable, but these commodities are included in the CPI basket because they are significant items of household expenditure and their prices can be accurately measured. However, to assist in understanding the effect that major item groups have on the CPI, the ABS publishes

a range of supplementary indexes which exclude, in turn, each of the eight major commodity groups. These supplementary indexes can also be used in their own right for evaluating price changes or for indexation purposes.

Periodic reviews of the CPI

Like any other longstanding and important statistical series, the CPI is reviewed from time to time to ensure that it continues to be relevant to current conditions. Over time, household spending habits change and the range of available goods and services also changes. The CPI needs to be updated to take account of these changes.

Since its inception in its current form in 1960, CPI reviews have usually been carried out at approximately five-yearly intervals. Following each review, which involves revising the list of items and their weights, the new series are linked to the old to form continuous series. This linking is carried out in such a way that the resulting continuous series reflects only price changes and not differences in the prices of the old and new baskets.

The latest revision of the CPI was concluded in the September quarter 1992. In addition to revising weights to reflect new expenditure patterns (based on the 1988-89 ABS household expenditure survey) and re-referencing the index to the 1989-90 base period, the review also considered a number of conceptual and methodological issues, including the treatment of home ownership costs.

Weighting pattern

Between periodic reviews of the CPI, each of the 107 expenditure classes has a fixed weight (that is, the measure of its relative importance). Details of the weighting pattern for the current (12th series) CPI are shown in the following table.

19.1 CONSUMER PRICE INDEX, 12TH SERIES, WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES, WEIGHTING PATTERN AT JUNE QUARTER 1992

<i>Groups and subgroups</i>	<i>Percentage contribution to the All Groups CPI</i>
Food	18.324
Dairy products	1.463
Cereal products	2.097
Meat and seafoods	3.001
Fresh fruit and vegetables	1.417
Processed fruit and vegetables	0.829
Soft drinks, ice cream and confectionery	2.890
Meals out and take away foods	4.959
Other food	1.668
Clothing	6.264
Men's and boys' clothing	1.686
Women's and girls clothing	2.545
Fabrics and knitting wool	0.746
Footwear	1.063
Dry cleaning and shoe repairs	0.224
Housing	15.900
Rents	4.865
Home ownership	11.035
Household equipment and operation	18.370
Fuel and light	2.339
Furniture and floor coverings	4.344
Appliances	1.538
Household textiles	0.754
Household utensils and tools	1.212
Household supplies and services	3.970
Postal and telephone services	1.715
Consumer credit charges	2.498
Transportation	15.967
Private motoring	14.755
Urban transport fares	1.212
Tobacco and alcohol	7.475
Alcoholic drinks	5.061
Cigarettes and tobacco	2.414
Health and personal care	6.850
Health services	3.961
Personal care products	2.097
Hairdressing services	0.792
Recreation and education	10.850
Books, newspapers and magazines	1.146
Recreational goods	2.564
Holiday travel and accommodation	2.349
Recreational services	2.852
Education and child care	1.939
Total All Groups	100.000

Source: The Australian Consumer Price Index 12th Series Review (6450.0).

Price collection

Since the CPI is designed to measure the impact of changing prices on metropolitan employee households, information about prices is collected in the kinds of retail outlets or other places where these households normally purchase goods and services. Prices are collected from many sources, including supermarkets, department stores, footwear stores, restaurants, motor vehicle dealers and service stations, dental surgeries, hotels and clubs, schools, hairdressers, travel agents and airlines, bus operators, electricians and plumbers. Items like rail fares, electricity and gas charges, telephone charges and local government rates are collected from the authorities concerned. Information on rents is obtained from property management companies and from government housing commissions. In total, around 100,000 separate price quotations are collected each quarter.

The collection of prices in each capital city is carried out by trained ABS field staff.

The prices used in the CPI are those that any member of the public would have to pay to purchase the specified good or service. Any sales or excise taxes attached to goods are included in the CPI price. Sale prices, discount prices and 'specials' are reflected in the CPI so long as the items concerned are of normal quality (that is, not damaged or shopsoiled), and are offered for sale in reasonable quantities. To ensure that the price movements reflect the buying experience of the bulk of the metropolitan population, the brands and the varieties of the items which are priced are generally those which sell in greatest volume.

Price movements by city

The following table presents All groups index numbers for each of the eight capital cities and for the weighted average of the eight capital cities together with percentage changes.

19.2 CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS
(Reference base year 1989-90= 100.0)(a)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Canberra	Darwin	Weighted average of eight cap- ital cities
INDEX NUMBERS									
1988-89(b)	92.5	92.3	93.0	93.3	92.3	93.4	93.1	94.2	92.6
1989-90	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1990-91	104.9	105.8	104.9	106.2	105.1	104.9	105.1	105.7	105.3
1991-92	106.7	108.1	107.0	108.9	105.9	107.1	107.8	108.0	107.3
1992-93	107.7	108.9	108.5	111.2	106.2	108.5	109.5	109.5	108.4
1993-94	109.2	111.1	110.6	113.4	108.5	111.7	111.4	111.5	110.4
PERCENTAGE CHANGE FROM PREVIOUS YEAR									
1988-89(b)	8.2	6.8	7.0	7.2	7.5	6.1	6.6	4.9	7.3
1989-90	8.1	8.3	7.5	7.2	8.3	7.0	7.4	6.2	8.0
1990-91	4.9	5.8	4.9	6.2	5.1	4.9	5.1	5.7	5.3
1991-92	1.7	2.2	2.0	2.5	0.8	2.1	2.6	2.2	1.9
1992-93	0.9	0.7	1.4	2.1	0.3	1.3	1.6	1.4	1.0
1993-94	1.4	2.0	1.9	2.0	2.2	2.9	1.7	1.8	1.8

(a) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

(b) These series have been affected by a change in the treatment of mortgage interest charges from March quarter 1989.

Source: Consumer Price Index (6401.0).

The capital city indexes measure price movements over time in each city individually. They do not measure differences in retail price levels between cities. For example, the index for Adelaide in 1993-94 of 113.4 compared with the corresponding index for Sydney of

109.2 does not mean that prices in Adelaide are higher than those in Sydney. It simply means that, since the base period (1989-90), prices in Adelaide have increased by a greater percentage than those in Sydney (13.4% compared with 9.2%).

Price movements by broad commodity group

The following table presents, for the weighted average of the eight capital cities, index

numbers for each of the eight major commodity groups and for the All groups together with percentage changes.

19.3 CONSUMER PRICE INDEX: GROUP INDEX NUMBERS
WEIGHTED AVERAGE OF EIGHT CAPITAL CITIES
 (Reference base year 1989-90 = 100.0)

Year	Food	Clothing	Housing	Household equipment and operation	Transport- ation	Tobacco and alcohol	Health and personal care	Recreation and educ- ation(a)	All groups
INDEX NUMBERS									
1988-89(b)	93.4	95.1	86.9	94.8	92.5	92.4	93.3	94.2	92.6
1989-90	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1990-91	103.3	104.6	103.5	105.1	106.9	108.8	109.6	105.0	105.3
1991-92	105.8	106.4	98.9	107.5	108.8	115.0	121.3	106.9	107.3
1992-93	107.4	107.5	94.6	107.3	111.3	124.4	124.0	109.1	108.4
1993-94	109.4	106.7	94.2	107.8	113.8	133.7	129.0	111.9	110.4
PERCENTAGE CHANGE FROM PREVIOUS YEAR									
1988-89(b)	9.5	7.1	12.6	5.7	3.8	5.7	8.4	6.2	7.3
1989-90	7.1	5.2	15.1	5.5	8.1	8.2	7.2	6.2	8.0
1990-91	3.3	4.6	3.5	5.1	6.9	8.8	9.6	5.0	5.3
1991-92	2.4	1.7	-4.4	2.3	1.8	5.7	10.7	1.8	1.9
1992-93	1.5	1.0	-4.3	-0.2	2.3	8.2	2.2	2.1	1.0
1993-94	1.9	-0.7	-0.4	0.5	2.2	7.5	4.0	2.6	1.8

(a) Group first compiled for 1982-83. (b) Series for Housing and All groups have been affected by a change in the treatment of mortgage interest charges from March quarter 1989.

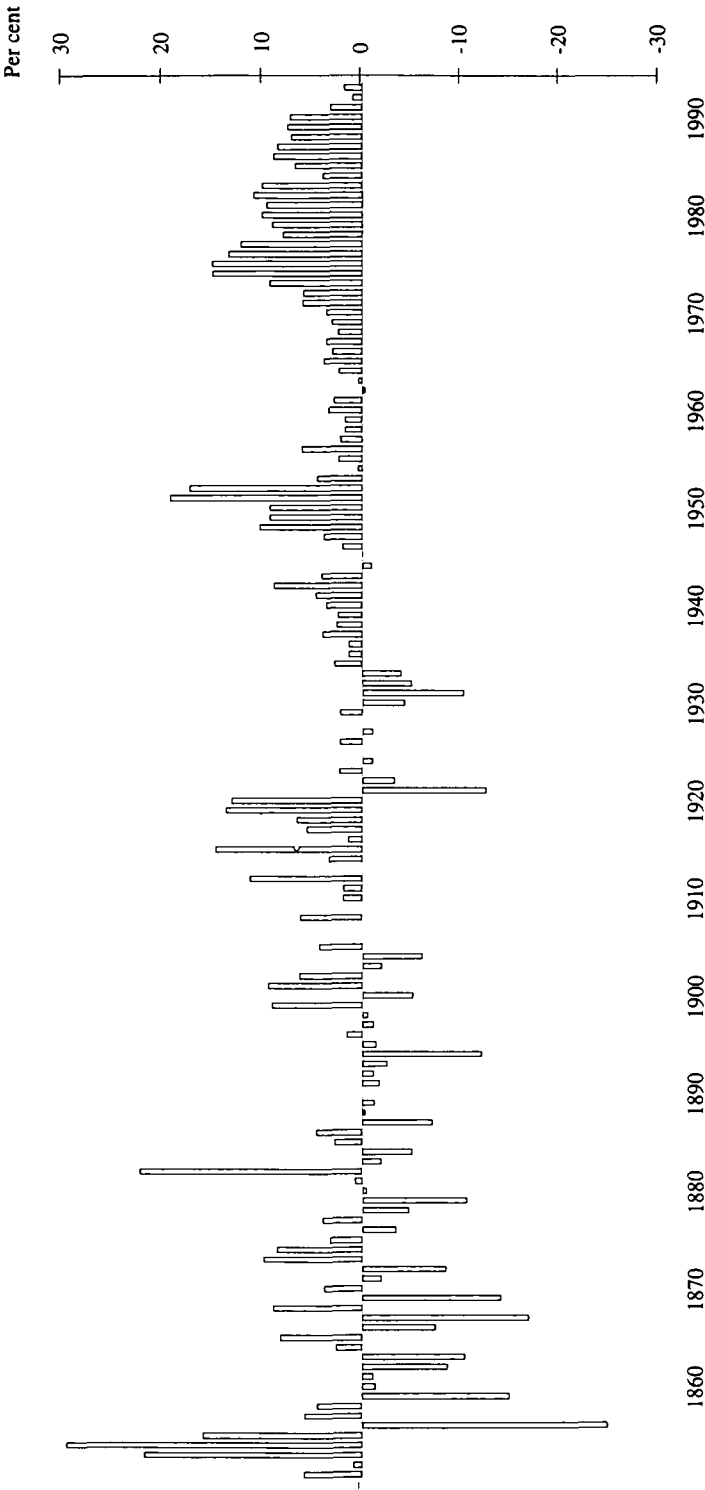
Source: *Consumer Price Index* (6401.0).

Long-term price series

Although the CPI has only been compiled from 1948, an approximate long-term measure of retail price change has been constructed by linking together other selected retail price index series. The index numbers are expressed on a reference base 1945 = 100, which was the end of a period of relative price stability during World War II. The successive series linked together to produce this long-term series of index numbers are:

- from 1850 to 1901, Sydney Retail Price Index;
- from 1901 to 1914, the A Series Index;
- from 1914 to 1946-47, the C Series Index;
- from 1946-47 to 1948-49, a combination of the C Series Index (excluding rent) and the housing group of the CPI; and
- from 1948-49 onwards, the CPI.

19.4 LONG-TERM SERIES: PERCENTAGE CHANGE FROM PREVIOUS YEAR



Source: Australian Bureau of Statistics.

19.5 RETAIL PRICE INDEX NUMBERS(a), LONG-TERM LINKED SERIES
(Reference base year 1945 = 100)

<i>Year</i>	<i>Index number</i>	<i>Year</i>	<i>Index number</i>	<i>Year</i>	<i>Index number</i>
1850	53	1898	41	1946	102
1851	56	1899	45	1947	106
1852	56	1900	43	1948	117
1853	69	1901	47	1949	128
1854	89	1902	50	1950	140
1855	103	1903	49	1951	167
1856	78	1904	46	1952	196
1857	82	1905	48	1953	205
1858	86	1906	48	1954	206
1859	73	1907	48	1955	211
1860	72	1908	51	1956	224
1861	71	1909	51	1957	229
1862	65	1910	52	1958	233
1863	58	1911	53	1959	237
1864	60	1912	59	1960	245
1865	64	1913	59	1961	252
1866	60	1914	61	1962	251
1867	50	1915	70	1963	252
1868	54	1916	71	1964	258
1869	46	1917	75	1965	268
1870	48	1918	80	1966	276
1871	47	1919	91	1967	286
1872	43	1920	103	1968	293
1873	47	1921	90	1969	302
1874	52	1922	87	1970	313
1875	53	1923	89	1971	332
1876	51	1924	88	1972	352
1877	53	1925	88	1973	385
1878	51	1926	90	1974	443
1879	45	1927	89	1975	510
1880	45	1928	89	1976	579
1881	46	1929	91	1977	650
1882	56	1930	87	1978	702
1883	55	1931	78	1979	766
1884	52	1932	74	1980	844
1885	53	1933	71	1981	926
1886	56	1934	73	1982	1,028
1887	52	1935	74	1983	1,132
1888	52	1936	75	1984	1,177
1889	51	1937	78	1985	1,257
1890	51	1938	80	1986	1,370
1891	50	1939	82	1987	1,487
1892	49	1940	85	1988	1,594
1893	48	1941	89	1989	1,714
1894	42	1942	97	1990	1,839
1895	42	1943	101	1991	1,898
1896	42	1944	100	1992	1,917
1897	42	1945	100	1993	1,952

(a) The index numbers relate to Sydney from 1850 to 1900; from 1901 to 1980 they relate to the weighted average of six State capital cities and from 1981 to the weighted average of eight capital cities.

Source: Australian Bureau of Statistics.

History of Retail Price Indexes

The Consumer Price Index (CPI) is the latest of a number of retail price indexes which have been constructed for various purposes by the Australian Bureau of Statistics.

Early retail price indexes

The first such index was compiled in 1912 and included a range of commodities gathered into four groups; groceries, dairy products, meat and rent. Separate indexes were calculated for each of five main towns (including the capital city) in each of the six States. By using price information obtained from newspapers and government reports index numbers were calculated retrospectively to 1901 for each of the 30 towns, to 1850 for Sydney and to 1870 for Hobart.

This index was compiled until 1938 and came to be known as the A Series Index. In the intervening years a number of other series were also developed. These included the B Series Index, the C Series Index and the D Series Index.

In August 1924, the Conference of Statisticians of Australia and New Zealand resolved that 'for the purposes of computing price-levels in respect of rent, it is desirable that houses of four and five rooms only be taken into account.' From the first quarter of 1925 onwards the B Series Index was compiled on this basis, being in other respects the same as the A Series Index.

Other developments in retail price indexes in the years preceding World War II were driven by the requirements of the Arbitration Court rather than by statistical considerations.

In 1907 Mr Justice Higgins had handed down the 'Harvester' ruling which set a basic wage of 42 shillings per week. In 1913, the A Series Index was adopted by the Commonwealth Arbitration Court for use in adjusting this basic wage in line with price changes. In 1920 the Royal Commission on the Basic Wage recommended the introduction of a new series which would cover a wider

range of goods. This recommendation led, in 1923, to the introduction of the C Series Index which covered items gathered into the groups food, groceries, rent of four and five roomed houses, clothing, household drapery and hardware, fuel, lighting and 'other miscellaneous items'. Index numbers were calculated retrospectively to 1914 and the C Series Index eventually became the most important and widely used of the early retail price indexes. It was not until 1934, however, that the Arbitration Court adopted the C Series Index for the purpose of adjusting wages.

In May 1933 the D Series Index was created by a ruling of the Court. The D Series was essentially a hybrid of the A Series Index and the C Series Index. It was used for general wage adjustment purposes for only a short period (May 1933 to April 1934) but continued to be compiled until 1936 due to the exemption of some industries from the Court's April 1934 decision to adopt the C Series Index.

World War II and its aftermath

World War II and its aftermath powerfully affected the construction of retail price indexes in Australia. The disruptions caused by war and the rapid economic and social changes which took place in the postwar years created the need to review the regimen and weighting pattern of the C Series Index.

A new series, the Interim Retail Price Index, was introduced in 1954 and compiled retrospectively to 1952.

The Interim Retail Price Index included a greater variety of foodstuffs (such as packaged breakfast foods, soft drinks, ice cream and confectionery) and, for the first time, a range of services (hairdressing, postage, telephone services, dry cleaning and shoe repairs). The Interim Retail Price Index was restricted to the six State capitals and the weighted average of six State capitals only.

Introduction of the Consumer Price Index

As its name implies, the Interim Retail Price Index was only ever intended as a temporary measure and it was replaced in the June quarter of 1960 by the Consumer Price Index (CPI).

The 1950s was a time of rapid social and economic change. Home ownership replaced house renting as the major way in which shelter was provided, private motor vehicles partly replaced the use of public transport and a widening range of electrical appliances attained widespread use. It was realised that no single regimen and accompanying set of weights could accurately represent patterns of consumer spending during this period. It was therefore decided that the Consumer Price Index would be a chain-linked series of

short-term indexes rather than a single long-term index with fixed weights like its predecessors.

The CPI was first compiled in the June quarter of 1960 and index numbers were calculated retrospectively to the September quarter of 1948. In keeping with the philosophy of using chain-linked short-term indexes, three sets of weights were used in the retrospective calculations of index numbers, one set to apply to each of the periods September 1948–June 1952, June 1952–June 1956 and June 1956–March 1960. A fresh set of weights was calculated for use from March 1960 onwards. The index was reviewed at regular intervals and new weights introduced in the December quarters of 1963, 1968 and 1973, September quarters of 1974 and 1976, March quarter of 1982, December quarter of 1986 and June quarter of 1992.

International comparisons

In analysing price movements in Australia, an important consideration is Australia's performance relative to other countries. However, due to the many differences in the structure of the housing sector in different countries and in the way that housing is treated in their CPIs, a simple comparison of All groups (or headline) CPIs is often inappropriate. To provide a better basis for

international comparisons, the Fourteenth International Conference of Labour Statisticians adopted a resolution which called for countries to 'provide for dissemination at the international level of an index which excludes shelter, in addition to the all-items index.'

The following table presents indexes for selected countries on a basis consistent with the above resolution and comparable with the Australian series 'All groups excluding housing'.

**19.6 CONSUMER PRICE INDEX: INTERNATIONAL COMPARISONS,
ALL GROUPS EXCLUDING HOUSING, INDEX NUMBERS(a)
(Reference base year 1989-90=100)**

<i>Period</i>	<i>United States of America</i>	<i>Japan</i>	<i>Germany (a)</i>	<i>Canada</i>	<i>United Kingdom</i>	<i>Hong Kong</i>	<i>Republic of Korea</i>	<i>Taiwan</i>	<i>Australia</i>	<i>New Zealand (b)</i>
INDEX NUMBERS										
1988-89	95.5	97.2	97.5	95.4	94.5	90.8	93.7	97.0	93.7	93.0
1989-90	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1990-91	105.5	103.4	102.7	105.6	107.7	110.8	109.1	104.0	105.6	104.0
1991-92	108.7	105.9	106.9	109.0	115.0	121.7	117.9	107.6	108.8	106.5
1992-93	112.1	106.8	110.5	110.9	118.6	130.8	123.5	111.4	111.0	108.7
1993-94	114.8	n.y.a.	113.9	112.1	n.y.a.	140.1	130.4	n.y.a.	113.5	109.4
PERCENTAGE CHANGE SINCE PREVIOUS YEAR										
1988-89	4.7	1.1	1.9	4.0	5.0	9.7	6.4	2.8	6.6	3.9
1989-90	4.7	2.9	2.6	4.8	5.8	10.1	6.7	3.1	6.7	7.5
1990-91	5.5	3.4	2.7	5.6	7.7	10.8	9.1	4.0	5.6	4.0
1991-92	3.0	2.4	4.1	3.2	6.8	9.8	8.1	3.5	3.0	2.4
1992-93	3.1	0.8	3.4	1.7	3.1	7.5	4.7	3.5	2.0	2.1
1993-94	2.4	n.y.a.	3.1	1.1	n.y.a.	7.1	5.6	n.y.a.	2.3	0.6

(a) The statistics for Germany refer to Western Germany (Federal Republic of Germany before the unification of Germany). (b) From March quarter 1994 the statistics for New Zealand refer to 'all groups excluding housing and credit services'.

Source: *Consumer Price Index* (6401.0).

PRODUCER PRICE INDEXES

The first price index of this kind compiled by the ABS was the Melbourne Wholesale Price Index which was introduced in 1912 with index numbers compiled back to 1861 from prices extracted from newspapers and trade publications. Index numbers were compiled up to 1961. The index related chiefly to basic materials and foods weighted in accordance with consumption in about the year 1910.

The next index published was the Wholesale Price (Basic Materials and Foodstuffs) Index which was introduced in 1939; index numbers are available for the period 1928 to 1970. The index related to commodities in their basic or primary form and prices were obtained as near as possible to the point where they made their first effective impact

on the local price structure. With few exceptions, prices were obtained from Melbourne sources.

The following table contains a linked series for these two wholesale price indexes from 1861 to 1967-68.

The present range of producer price indexes was developed and produced progressively from the 1960s. The current indexes relate to the building industry, manufacturing industry, and (not included in this chapter) the mining industry.

The following table contains the linked producer price index for manufacturing from 1968-69 onwards. Other current indexes are covered later in the chapter.

19.7 PRODUCER AND WHOLESALE PRICE INDEXES
(Reference base year 1968-69 = 100.0)

<i>Year</i>	<i>Producer Price Indexes</i>	<i>Year</i>	<i>Producer Price Indexes</i>
	(a)	1969-70	103.9
1861	24.2		
1871	19.3	1970-71	108.5
1881	17.6	1971-72	113.9
1891	14.9	1972-73	120.7
1901	15.3	1973-74	134.6
1911	15.7	1974-75	158.1
1921	30.0	1975-76	177.8
		1976-77	196.9
1925-26	29.7	1977-78	213.8
	(b)	1978-79	237.4
1930-31	25.4	1979-80	274.9
1935-36	23.9		
1940-41	29.3	1980-81	305.2
1945-46	36.5	1981-82	328.9
1950-51	62.7	1982-83	360.2
1955-56	85.9	1983-84	382.8
		1984-85	404.8
1960-61	92.5	1985-86	430.3
1961-62	86.4	1986-87	458.5
1962-63	87.4	1987-88	492.1
1963-64	90.0	1988-89	526.0
1964-65	91.3	1989-90	559.9
1965-66	95.4		
1966-67	98.4	1990-91	584.6
1967-68	99.7	1991-92	586.7
	(c)	1992-93	600.9
1968-69	100.0	1993-94	607.2

(a) Melbourne Wholesale Price Index (All Groups). (b) Wholesale Price (Basic Materials and Foodstuffs) Index (All Groups). (c) Price Index of Articles Produced by Manufacturing Industry.

Source: Labour Report; Price Indexes of Articles Produced by Manufacturing Industry, Australia (6412.0).

A description of the main producer price indexes is given below. In addition to the figures contained in the various ABS producer and foreign trade publications, a large volume of unpublished figures is available on request. These price indexes are used by both the government and private sectors for applications such as adjusting business contracts. They are also used extensively for economic analysis.

Price Index of Materials Used in House Building

The Price Index of Materials Used in House Building measures changes in prices of selected materials used in the construction of houses in each capital city Statistical Division.

It was first compiled on a reference base of 1966-67 = 100.0, using a weighting pattern derived from estimated material usage in 1968-69. Monthly index numbers on a 1966-67 = 100.0 reference base are available for the period July 1966 to September 1986.

The current indexes for the six State capital cities were introduced in October 1986 on a reference base of 1985-86 = 100.0 and were linked to the previous series. The items were selected and allocated weights on the basis of the estimated values of each material used in a sample of representative houses constructed in 1985-86. The index for Canberra was introduced in respect of February 1988 on a reference base of 1986-87 = 100.0.

19.8 PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING(a)
(Reference base year 1985-86 = 100.0)

<i>Year</i>	<i>Weighted average of six State capital cities</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Canberra (b)</i>
1988-89	126.1	128.4	125.8	123.8	120.9	128.1	120.0	121.0
1989-90	135.8	139.1	133.5	134.1	129.7	140.8	128.0	130.5
1990-91	142.1	145.7	138.1	141.9	136.2	148.7	134.2	136.4
1991-92	142.4	146.1	137.3	144.7	135.5	149.3	138.3	140.3
1992-93	145.2	148.5	141.1	147.8	137.8	150.5	140.7	143.2
1993-94	152.1	154.8	149.6	152.2	151.8	153.5	144.3	150.5

(a) The separate city indexes measure price movement within each city individually. They do not compare price levels between cities.

(b) Reference base 1986-87 = 100.0.

Source: *Price Index of Materials Used in House Building, Six State Capital Cities and Canberra (6408.0)*.

Price Index of Materials Used in Building Other than House Building

The Price Index of Materials Used in Building Other than House Building measures changes in prices of selected materials used in the construction of buildings other than houses in metropolitan areas. The types of building directly represented in the index are:

- flats and other dwellings;
- hotels, motels and hostels;
- shops;
- factories;
- offices;
- other business premises;
- education buildings;
- health buildings; and
- other non-residential buildings.

The index was first compiled on a reference base of 1966-67 = 100.0 using a weighting pattern derived from estimated materials usage in 1966-67. Since its introduction the index has been reviewed and its weighting pattern updated on two occasions.

Rebased indexes for the six State capital cities were introduced in February 1981 on a reference base of 1979-80 = 100.0. The composition of these indexes reflected the usage of materials in the three years ending June 1977. An index for Canberra was introduced in November 1987 on a reference base of 1986-87 = 100.0.

The current indexes were introduced in October 1993 on a reference base of 1989-90 = 100.0. The composition of these indexes reflects the usage of materials in the five years ending June 1992.

19.9 PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING(a)
(Reference base year 1989-90 = 100.0)

<i>Year</i>	<i>Weighted average of six State capital cities</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Canberra</i>
1988-89	92.7	92.8	92.9	91.4	93.1	92.4	94.4	92.5
1989-90	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1990-91	105.1	105.6	104.5	104.8	105.3	105.5	103.9	106.2
1991-92	105.7	107.1	103.4	107.4	105.4	105.2	107.1	108.8
1992-93	106.0	106.5	104.4	108.9	105.1	105.7	108.2	109.0
1993-94	107.5	107.0	106.7	110.1	107.9	107.1	110.1	110.2

(a) The separate city indexes measure price movements within each city individually. They do not compare price levels between cities.

Source: *Price Index of Materials Used in Building Other than House Building, Eight Capital Cities (6407.0)*.

19.10 PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING
INDEX NUMBERS FOR SELECTED BUILDING MATERIALS
WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES
 (Reference base year 1989-90 = 100.0)

<i>Year</i>	<i>Structural timber</i>	<i>Clay bricks</i>	<i>Ready mixed concrete</i>	<i>Galvanised steel decking cladding and sheet products</i>	<i>Structural steel</i>	<i>Reinforcing steel bar fabric and mesh</i>
1988-89	94.2	90.0	92.1	90.2	93.3	91.8
1989-90	100.0	100.0	100.0	100.0	100.0	100.0
1990-91	102.6	103.5	109.4	105.2	102.0	106.4
1991-92	100.3	105.0	106.0	106.6	100.7	105.8
1992-93	107.1	106.2	103.5	108.4	101.2	109.2
1993-94	127.1	107.8	106.7	107.5	104.3	112.7

<i>Aluminium windows</i>	<i>Conductors (mains cable and circuitry)</i>	<i>Lamps and light fittings</i>	<i>Non-ferrous pipes</i>	<i>Builders' hardware</i>	<i>Paint</i>
1988-89	93.8	82.6	97.6	97.3	93.4
1989-90	100.0	100.0	100.0	100.0	100.0
1990-91	101.8	114.3	99.9	102.0	104.9
1991-92	99.5	113.6	100.8	100.8	109.8
1992-93	99.1	109.2	101.1	104.6	112.6
1993-94	99.7	99.2	102.7	107.0	115.3

Source: Price Index of Materials Used in Building Other Than House Building, Six State Capital Cities and Canberra (6408.0).

Price Indexes of Materials Used in Manufacturing Industries

These indexes measure changes in prices of materials (including fuels) used by establishments classified to the Manufacturing Division of the Australian Standard Industrial Classification (ASIC), 1983 edition.

Separate price indexes are published for materials used in Manufacturing Industry as a whole, for 14 separate Manufacturing sectors (defined in terms of ASIC subdivisions or ASIC groups) and for selected groups of materials classified according to whether the material is home produced or imported.

The indexes are compiled and published on a *net sector* basis, that is, each index includes

only those materials which are used in the defined sector of Australian manufacturing industry and which have been produced by establishments outside that sector.

The indexes were first compiled on a reference base of 1968-69 = 100.0, using a weighting pattern derived from estimated manufacturing usage in 1971-72. Monthly index numbers for this first series are available for the period July 1968 to November 1985.

The current indexes were introduced in December 1985 on a reference base of 1984-85 = 100.0. With a few exceptions, the items included in the indexes were allocated weights in accordance with the estimated value of manufacturing usage in 1977-78.

19.11 PRICE INDEXES OF MATERIALS USED IN MANUFACTURING INDUSTRIES(a)
SELECTED CATEGORIES OF MATERIALS
 (Reference base year 1984-85 = 100.0)

Year	Imported materials				Home produced materials				
	Agricultural	Mining	Manufactured	Total imported materials	Agricultural, forestry and fishing	Mining	Electricity	Total home produced materials	All materials
1988-89	95.3	56.7	135.8	116.5	131.0	93.6	118.3	111.3	113.1
1989-90	85.5	66.1	139.5	121.1	134.0	103.5	123.6	117.9	119.0
1990-91	83.5	79.7	140.3	124.7	126.9	119.1	128.9	123.3	123.8
1991-92	85.0	70.2	141.3	123.3	128.7	108.7	133.0	119.3	120.7
1992-93	89.6	72.5	150.2	130.6	135.2	113.6	133.2	124.6	126.6
1993-94	92.7	63.1	154.4	131.7	141.9	100.4	132.8	120.9	124.6

(a) The index is on a net basis and relates in concept only to materials that enter Australian manufacturing industry from other sectors of the Australian economy or from overseas.

Source: *Price Indexes of Materials Used in Manufacturing Industries, Australia (6411.0)*.

Price Indexes of Articles Produced by Manufacturing Industry

These indexes measure movements in the prices of articles produced by manufacturing industry. For the purpose of the index, manufacturing industry is defined to be establishments classified to the Manufacturing Division of the ASIC, 1983 edition.

The indexes are constructed on a *net sector* basis. This approach means that:

- The All Manufacturing Industry Index represents price movements of goods which are produced by establishments in the Manufacturing Division, for sale or transfer to establishments outside the Manufacturing Division, for export, or for use as capital equipment. Articles which are sold or transferred to other establishments within manufacturing industry for further processing or for use as inputs are excluded.

- The net subdivision indexes for each of the manufacturing subdivisions represent movements in prices of goods produced by establishments in the respective subdivisions, for sale or transfer to other subdivisions within manufacturing or to establishments outside the Manufacturing Division, for export, or for use as capital equipment. Sales or transfers to establishments within the subdivision are excluded.

The indexes were first published in June 1976 on a reference base of 1968-69 = 100.0, with indexes compiled retrospectively to July 1968. The composition and weighting patterns of the indexes were based on the value of production in 1971-72.

The current indexes were introduced from May 1990. The composition and weighting pattern are based on the value of production in 1986-87 and the indexes are on a reference base of 1988-89 = 100.0.

19.12 PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY(a)
(Reference base year 1988-89 = 100.0)

	Net subdivision indexes							
Year	All Manu- facturing Industry Index	Food, beverages and tobacco (21)	Textiles (23)	Clothing and footwear (24)	Wood, wood products and furniture (25)	Paper, paper products and printing (26)	Chemicals and chemical products (275 & 276)	Petro- leum products (277 & 278)
1988-89	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1989-90	106.5	106.9	103.2	107.3	107.6	104.3	104.4	118.4
1990-91	111.2	109.5	103.4	112.0	112.7	111.0	109.3	150.1
1991-92	111.6	112.3	102.9	114.9	114.2	117.3	109.9	134.3
1992-93	114.3	116.2	101.8	116.1	116.5	119.9	111.1	143.9
1993-94	115.5	120.5	102.2	117.1	122.5	122.0	110.3	127.2

Net subdivision indexes

Year	Net subdivision indexes					Miscellan- eous
	Non- metallic mineral products (28)	Basic metal products (29)	Fabricated metal products (31)	Transport equipment (32)	Other machinery and equipment (33)	manu- facturing products (34)
1988-89	100.0	100.0	100.0	100.0	100.0	100.0
1989-90	108.7	105.6	107.9	105.6	104.2	103.7
1990-91	117.2	106.2	113.7	109.9	107.0	106.4
1991-92	119.3	99.9	114.3	112.7	107.0	107.8
1992-93	119.3	100.6	114.7	116.0	109.3	109.6
1993-94	120.8	99.8	114.8	119.1	109.9	112.4

(a) For a full description of Division C, 'Manufacturing' and the subdivisions within the Manufacturing Division, see *Australian Standard Industrial Classification (ASIC)* (1201.0), 1983 edition.

Source: *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0).

FOREIGN TRADE PRICE INDEXES

The first index of export prices was compiled annually from 1901 to 1916-17 as a current weighted unit value index.

The method of calculation was changed in 1918 to incorporate fixed weights, applied to the average unit values of each export in successive years. This index was published for the years 1897 to 1929-30.

Two new series of monthly export price indexes were published in 1937, compiled back to 1928. One index used fixed weights and the other used changing weights. The methodology was changed and actual export prices were used instead of unit values. The indexes were compiled until 1962.

In 1962, a fixed weights index on the reference base of 1959-60 = 100.0 was

introduced. A new interim series was linked to this index, still with a reference base of 1959-60 = 100.0, but from July 1969 with updated weights. The interim index was replaced in 1979 by an index on a reference base of 1974-75. In 1990, the current index was released.

The first import price index produced by the ABS covered the period from September quarter 1981 to September quarter 1991 on a reference base of 1981-82 = 100.0. This index replaced an index previously published by the Reserve Bank of Australia on a reference base of 1966-67 = 100.0. The Reserve Bank's import price index was published from 1928 until September 1982.

The latest Import Price Index series was introduced in December 1991 with monthly index numbers compiled from April 1991

onwards, on a reference base of 1989-90 = 100.0.

To give a broad indication of long-term changes, the following table draws on the available foreign trade indexes.

19.13 FOREIGN TRADE PRICE INDEXES
(Reference base year 1968-69 = 100)

<i>Year</i>	<i>Export Price Index (All Groups)</i>	<i>Import Price Index (All Groups)</i>	<i>Year</i>	<i>Export Price Index (All Groups)</i>	<i>Import Price Index (All Groups)</i>
1901	15	..	1972-73	131	113
1911	17	..	1973-74	157	131
1921-22	25	..	1974-75	177	189
1931-32	18	22	1975-76	193	214
1936-37	29	21	1976-77	216	246
1941-42	27	35	1977-78	227	278
1946-47	53	51	1978-79	256	307
1951-52	123	92	1979-80	309	403
1956-57	115	91	1980-81	328	450
1960-61	93	95	1981-82	332	458
1961-62	94	94	1982-83	360	506
1962-63	99	94	1983-84	369	524
1963-64	112	96	1984-85	396	580
1964-65	103	97	1985-86	417	659
1965-66	105	99	1986-87	431	731
1966-67	103	100	1987-88	469	742
1967-68	98	99	1988-89	501	694
1968-69	100	100	1989-90	529	729
1969-70	101	103	1990-91	503	752
1970-71	99	108	1991-92	474	749
1971-72	102	114	1992-93	495	818
			1993-94	486	844

Source: The sources used for the Import Price Index are the Reserve Bank of Australia Bulletin up to and including 1981-82, and the ABS Import Price Index, Australia (6414.0) thereafter. The source used for the Export Price Index is the ABS Export Price Index, Australia (6405.0).

Export Price Index

The index measures changes in the prices of all exports of merchandise from Australia, including re-exports (that is, goods which are imported into Australia and exported at a later date without physical alteration). The index numbers for each month relate to prices of exports actually shipped during that month.

The current Export Price Index is a fixed weights index compiled on a reference base of 1989-90 = 100.0, with the weights based predominantly on Australian exports for 1988-89.

In general, prices are obtained from major exporters of the selected commodities included in the index.

The commodities included in the current index have been combined into broad index groups in three ways. Index numbers are produced for groupings defined in terms of the Australian Harmonized Export Commodity Classification, on an industry of origin basis defined in terms of the Australian Standard Industrial Classification and for selected sections of the Standard International Trade Classification.

**19.14 EXPORT PRICE INDEX: INDEX NUMBERS BASED ON AUSTRALIAN HARMONIZED
EXPORT COMMODITY CLASSIFICATION(a)
(Reference base year 1989-90 = 100.0)**

Year	AHECC sections					
	All groups	Live animals, animal products	Vegetable products	Prepared foodstuffs	Mineral products	Products of chemical or allied industries
1990-91	95.0	96.1	77.9	91.8	108.3	100.2
1991-92	89.6	97.6	83.1	87.9	103.1	89.6
1992-93	93.5	105.1	94.3	94.9	108.2	90.1
1993-94	91.8	110.3	88.6	102.3	100.9	87.5

Year	AHECC sections				
	Wool and cotton fibres	Gold, diamonds and coin	Base metals and articles of base metals	Machinery and mechanical appliances	Motor vehicles, aircraft and vessels
1990-91	77.8	96.6	92.6	97.8	100.0
1991-92	66.6	91.8	79.7	94.8	100.4
1992-93	60.9	99.6	81.0	98.2	105.0
1993-94	59.0	110.4	76.3	97.5	109.3

(a) Data prior to 1989-90 are not available because AHECC is not strictly comparable with the AECC formerly used.
Source: *Export Price Index, Australia (6405.0)*.

**19.15 EXPORT PRICE INDEX: INDEX NUMBERS BASED ON AUSTRALIAN STANDARD
INDUSTRIAL CLASSIFICATION
(Reference base year 1989-90 = 100.0)**

Year	ASIC divisions		
	Agriculture	Mining	Manufacturing
1988-89	103	83	96
1989-90	100.0	100.0	100.0
1990-91	77.2	106.5	96.9
1991-92	72.9	103.5	89.8
1992-93	74.6	108.0	94.1
1993-94	72.2	101.0	95.2

Source: *Export Price Index, Australia (6405.0)*.

Import Price Index

The Import Price Index measures changes in prices of imports of merchandise into Australia on a free on board country of origin basis. The index numbers for each month relate to prices of imports landed in Australia during the month.

The Import Price Index was first published in May 1983 on a reference base of 1981-82 = 100.0. Quarterly index numbers

are available from the September quarter 1981 to the September quarter 1991.

A review of the index was completed in December 1991. The resulting index is on a reference base of 1989-90 = 100.0 and uses a weighting pattern based on the pattern of Australian imports during 1988-89 and 1989-90. Monthly index numbers are available from April 1991.

Prices of individual shipments are obtained from major importers of the selected items.

Index items have been grouped according to four different classifications:

- the Standard International Trade Classification;
- the Combined Customs Tariff and Statistical Nomenclature;
- on an industry of origin basis defined in terms of the ASIC; and
- the United Nations Classification by Broad Economic Categories.

19.16 IMPORT PRICE INDEX: INDEX NUMBERS BASED ON THE STANDARD INTERNATIONAL TRADE CLASSIFICATION
(Reference base year 1989-90 = 100.0)

<i>SITC section</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>
Food and live animals chiefly for food	98.1	104.7	106.8
Beverages and tobacco	115.7	121.8	111.5
Crude materials, inedible, except fuels	90.8	101.1	116.3
Mineral fuels, lubricants and other related materials	92.5	100.1	93.5
Animal and vegetable oils, fats and waxes	116.6	126.6	120.9
Chemicals and related products n.e.s.	100.5	106.2	103.3
Manufactured goods classified chiefly by material	103.3	109.3	112.1
Machinery and transport equipment	104.8	116.8	123.1
Miscellaneous manufactured articles	105.7	114.9	117.0
Commodities and transactions not elsewhere classified	91.4	98.7	110.4
All groups	102.7	112.1	115.6

Source: *Import Price Index, Australia* (6414.0).

19.17 IMPORT PRICE INDEX: INDUSTRY OF ORIGIN INDEX NUMBERS BASED ON THE AUSTRALIAN STANDARD INDUSTRIAL CLASSIFICATION
(Reference base year 1989-90 = 100.0)

<i>Division</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>
Agriculture, forestry, fishing and hunting	99.7	102.6	107.3
Mining	105.5	113.7	97.8
Manufacturing	102.6	111.7	115.5

Source: *Import Price Index, Australia* (6414.0).

19.18 IMPORT PRICE INDEX: INDEX NUMBERS FOR BROAD ECONOMIC CATEGORIES AND END USE CLASSES
(Reference base year 1989-90 = 100.0)

<i>Categories/classes</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>
<i>Broad economic categories</i>			
Food and beverages	102.1	108.0	107.8
Industrial supplies n.e.s.	98.8	104.1	105.0
Fuels and lubricants	94.7	103.2	95.4
Capital goods and parts and accessories thereof	102.3	110.9	114.0
Transport equipment and parts and accessories thereof	108.5	124.6	135.9
Consumer goods n.e.s.	106.0	114.6	117.7
<i>End use classes</i>			
Capital goods	105.1	117.0	122.8
Intermediate goods	98.6	105.1	106.6
Consumption goods	107.0	116.9	121.1

Source: *Import Price Index, Australia* (6414.0).

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Other Publications

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Reserve Bank of Australia Bulletin

FOR MORE INFORMATION

The ABS has a far wider range of information on Australia than that contained in the *Year Book*. Information is available in the form of regular publications, electronic data services, special tables and from investigations of published and unpublished data.

For further information contact ABS Information Services at one of the addresses listed on the page facing the Introduction to the *Year Book*.

