

PRICES

INDEXES

Retail prices

A retail price index is designed to measure the change over a specific period in the level of retail prices in a selected field. The basic principle of an index is to select a list of commodities and services which are representative of the field to be covered, and to combine the prices of these commodities and services at regular intervals by the use of "weights" which represent the relative importance of the items in that field.

Five series of retail price indexes have been compiled for Australia by the Commonwealth Statistician at various times before the current Consumer Price Index was introduced in 1960.

Information about retail price indexes in general and retail price indexes compiled by the Commonwealth Statistician before 1960 is set out on pages 510-3 of the *Victorian Year Book* 1964.

Consumer Price Index

The Consumer Price Index is a quarterly measure of variations in retail prices of goods and services representing a high proportion of the expenditure of wage earners' households.

The Consumer Price Index covers a wide range of commodities and services arranged in the following five major groups: food, clothing and drapery, housing, household supplies and equipment, and miscellaneous. These groups do not include every item of household spending; it is both impracticable and unnecessary for them to do so. However, substantial changes in the pattern of expenditure of wage earner households have occurred since the Index was first introduced and this has made it necessary to construct indexes with additional items and changes in the weighting patterns at intervals. These indexes are "linked" to form a "chain" of fixed weight aggregative indexes which is called the Consumer Price Index. Under this method average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter.

Linking ensures that the series reflects only price variations and not differences in cost of old and new combinations and lists of items. The introduction of new items and weights by linking does not of itself affect the level of the Index.

Significant changes in composition and weighting have been effected at the links of June quarter 1952, June quarter 1956, March quarter 1960, December quarter 1963, December quarter 1968, and December quarter

1973. Details of the principal changes made at these points of time (apart from December quarter 1973) are shown in the *Victorian Year Books* 1964, 1968, and 1970.

Principal changes in the latest link are : the Food Group is reweighted from 31.248 to 28.326, the Clothing and Drapery Group from 14.126 to 12.092, the Housing Group from 14.209 to 14.368, the Household Supplies and Equipment Group from 12.490 to 11.306, and the Miscellaneous Group from 27.927 to 33.908. New items included in the index for the first time are "Snacks, Take Away Food", "Wines and Spirits", and "Recreational Goods and Services".

The sets of weights used for the different periods covered by the Index have been derived from the analysis of statistics of production and consumption, censuses of population and retail establishments, the continuing Survey of Retail Establishments, from information supplied by manufacturing, commercial, and other relevant sources, and from special surveys.

Until the December quarter 1968 the Index had been compiled for each quarter from the September quarter 1948 and each financial year from 1948-49, the reference base year being 1952-53 = 100.0. As from the March quarter 1969 the reference base year has been changed to that of 1966-67 = 100.0, index numbers for past periods having been re-calculated on the new base year. Apart from slight rounding differences, index numbers for past periods have exactly the same percentage movement on either reference base.

MELBOURNE—CONSUMER PRICE INDEX

(Base of each index: year 1966-67 = 100.0)

Year	Food	Clothing and drapery	Housing	Household supplies and equipment	Miscellaneous	All groups
1964-65	95.1	96.9	92.0	95.8	90.6	94.0
1965-66	99.0	98.0	96.3	98.7	95.1	97.5
1966-67	100.0	100.0	100.0	100.0	100.0	100.0
1967-68	106.3	102.1	103.8	101.4	102.5	103.7
1968-69	107.3	104.2	107.9	102.9	107.3	106.2
1969-70	109.1	107.4	112.2	103.5	110.2	108.7
1970-71	112.7	111.5	117.8	105.8	115.8	113.1
1971-72	116.8	117.9	124.9	108.9	127.1	119.7
1972-73	125.9	125.4	133.1	112.1	134.5	127.2
1973-74	148.8	142.3	148.3	122.0	149.1	144.0

"All groups" index numbers, and group index numbers for each of the five major groups are compiled and published regularly for the six State capital cities separately and combined and for Canberra. The separate city indexes measure price movements within each city individually. They enable comparisons to be drawn between cities about differences in degree of price movement, but not about differences in price level. Similarly, the separate group indexes measure price movement of each group individually. They enable comparisons to be drawn about differences in the degree of price change in the different groups, but do not show the comparative cost of the different groups.

Retail prices of food items

The average retail prices of various food and grocery items in Melbourne are shown in the following table for each of the five years 1969 to 1973. The year 1972 saw the first changes of units to metric weights.

MELBOURNE—AVERAGE RETAIL PRICES OF SELECTED COMMODITIES (a)
(cents)

Item	Unit	1969	1970	1971	1972	1973
Groceries, etc.—						
Bread (delivered)	2 lb	20.0	21.0	21.5	25.0	25.8
Flour—Self raising	2 lb pkt	19.7	21.6	22.1	23.1	23.5
Tea	$\frac{1}{2}$ lb	30.7	29.9	31.6	32.8	31.6
Sugar	4 lb (b)	42.2	42.3	40.9	41.8	..
"	2 kg (c)	..	..	..	45.9	45.6
Peaches, canned	29 oz	29.9	31.5	32.0	32.4	34.1
Pears, canned	29 oz	30.3	31.7	32.0	32.3	34.0
Potatoes	7 lb	35.4	45.4	47.8	45.2	80.5
Onions	lb	10.2	11.3	13.4	11.7	19.4
Dairy produce, etc.—						
Butter	lb	52.5	53.1	54.2	55.8	55.7
Eggs	doz (d)	68.9	61.8	58.1	56.0	..
"	60 g doz (e)	..	..	..	61.1	74.2
"	55 g doz (f)	..	..	..	..	71.2
"	50 g doz (g)	..	..	..	..	67.7
Bacon rashers	$\frac{1}{2}$ lb	51.3	52.7	54.0	55.6	58.7
Milk, fresh, bottled (h)	quart	19.0	19.0	20.3	21.0	23.5
Meat—						
Beef, rib (without bone)	lb	63.0	65.3	67.8	70.0	79.5
" , steak, rump	lb	112.8	116.6	120.0	122.1	145.5
" , " chuck	lb	52.4	52.7	53.7	56.0	69.0
" , sausages	lb	30.8	30.9	31.1	32.9	41.7
" , corned silverside	lb	64.0	65.0	69.6	72.8	82.8
" , " brisket	lb	44.0	45.1	44.8	46.4	56.8
Mutton, leg	lb	28.3	27.8	27.6	29.7	45.1
" , chops, loin	lb	29.1	29.3	31.1	30.0	44.4
" , " leg	lb	31.6	31.4	30.4	30.5	46.1
Pork, leg	lb	62.5	62.3	64.1	67.7	75.4
" , loin	lb	65.7	64.2	66.6	69.6	77.2
" , chops	lb	65.9	64.0	66.4	69.2	75.4

(a) In some cases the averages are price relatives.

(b) 4 lb packet to August 1972.

(c) 2 kg packet from September 1972.

(d) Dozen of 24 oz to June 1972.

(e) Dozen of 60 g eggs from July 1972.

(f) Dozen of 55 g eggs from January 1973.

(g) Dozen of 50 g eggs from January 1973.

(h) Delivered.

Wholesale prices

Since 1928 the Commonwealth Statistician has compiled a wholesale price index known as the Wholesale Price (Basic Materials and Foodstuffs) Index. Through the years the validity of the weighting and the representativeness of the Index have become increasingly affected by changes in usage and in industrial structures. For this reason, and because of work on new indexes of wholesale price movements, this Index was last published for December 1970 although it is still available, in an abbreviated form, upon request to the Commonwealth Statistician. Two indexes have been published to cover the building sector. These are :

1. Materials Used in Building other than House Building ; and
2. Materials Used in House Building (see below).

Two further indexes designed as a modern replacement for the metals components of the old Wholesale Price (Basic Materials and Foodstuffs) Index were published by the Commonwealth Statistician in December 1972. These are :

1. Metallic Materials Used in the Manufacture of Fabricated Metal Products ; and
2. Copper Materials Used in the Manufacture of Electrical Equipment.

Work is proceeding on the provision of broad measures of price change of both materials used and articles produced by manufacturing industry.

Price indexes of materials used in building

The first of the two indexes in this series, "Materials Used in Building other than House Building", was introduced in April 1969, and the second, "Materials Used in House Building", in September 1970. Together they provide an up-to-date replacement for the Building Materials Group of the Wholesale Price (Basic Materials and Foodstuffs) Index. They are issued monthly.

Prices for use in both these indexes are collected as at the mid-point of the month to which the Index refers, or as near to it as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from the representative suppliers of materials used in building. There are some exceptions to the use of local prices in the indexes for each capital city.

Price Index of Materials Used in Building other than House Building

This Index measures changes in prices of selected materials used in the construction of buildings other than houses and low-rise flats (in general those up to three storeys). It includes seventy-two items, combined in eleven groups, in addition to an "all groups" index. Although the selected materials (or many of them) are also used in house and low-rise flat building, in building repair, maintenance and alteration work, and in engineering construction work (e.g., projects such as roads, dams, bridges, and the like), the weighting pattern of the Index, being designed for the specific purpose mentioned above, is not applicable to these other activities of the construction industry. In addition, since the weights are based on an average materials usage over a range of types of building within the defined area, the Index is not necessarily applicable to any specific building or type of building included in that area.

The Index is a fixed weights index and is calculated by the method known as "the weighted arithmetic mean of price relatives". The items and weights were derived from reported values of materials used in selected representative buildings constructed in or about 1966-67. The single weighting pattern relates to the whole of Australia, and is applied (with minor exceptions) in calculating indexes for each State capital city.

Index numbers for each of the eleven groups and for "all groups" have been compiled for the six State capital cities, separately and combined, for each month from July 1966 and for the financial years from 1966-67. The reference base year for each index is 1966-67 = 100.0.

MELBOURNE—WHOLESALE PRICE INDEX OF MATERIALS
USED IN BUILDING OTHER THAN HOUSE BUILDING
(Base of each index : year 1966-67 = 100.0)

Group	1969-70	1970-71	1971-72	1972-73	1973-74
Concrete mix, cement, sand, etc.	104.4	111.9	124.9	129.6	135.6
Cement products	108.5	115.1	122.6	133.4	145.0
Bricks, stone, etc.	110.5	115.8	123.0	130.8	146.0
Timber, board, and joinery	107.8	113.4	118.7	127.7	156.8
Steel and iron products	110.4	116.0	128.4	136.4	155.5
Aluminium products	108.7	117.1	125.0	134.5	149.7
Other metal products	124.1	120.8	118.6	123.1	153.1
Plumbing fixtures	111.8	121.6	136.4	149.8	167.7
Miscellaneous materials	106.4	110.2	115.5	123.6	133.7
Electrical installation materials	112.2	110.9	114.7	120.5	138.3
Mechanical services components	112.1	119.4	128.0	132.8	144.3
All groups	109.8	115.1	123.9	131.2	148.0

Price Index of Materials Used in House Building

This Index measures changes in prices of selected materials used in the construction of houses. Its composition is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The Index does not purport to represent buildings of any kind other than houses. The house building construction types included are those which have brick, brick veneer, timber, or asbestos cement sheeting as the principal material for the outer walls.

In the interests of uniformity and ease of use, the reference base of the Index is the year 1966-67 = 100.0, the same as that used for the Wholesale Price Index of Materials Used in Building other than House Building. However, because of the later time at which the weighting source data were collected, the weighting base approximates more closely to the year 1968-69.

The Index is a fixed weights index and is calculated by the method known as the weighted arithmetic mean of price relatives.

The items and weights used in the Index were derived from reported values of each material used in selected representative houses constructed in or about 1968-69 in each State capital city. The selection took account, within the four major construction types, of a range of characteristics of these houses—e.g., internal partitions, windows, roofing, etc., as well as whether such things as paths and fences were included in the job. As opposed to the Wholesale Price Index of Materials Used in Building other than House Building, each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items as between cities.

Items are combined in eleven groups in addition to the "all groups" index. Some items carry the weight of similar items not directly priced. They are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

Index numbers for each of the eleven groups and for "all groups" have been compiled for the six State capital cities separately and combined for each month from July 1966 and for financial years from 1966-67. The reference base year for each index is 1966-67=100.0.

MELBOURNE—WHOLESALE PRICE INDEX OF MATERIALS
USED IN HOUSE BUILDING

(Base of each index: year 1966-67 = 100.0)

Group	1969-70	1970-71	1971-72	1972-73	1973-74
Concrete mix, cement, and sand	103.3	110.4	122.0	127.2	132.8
Cement products	118.8	129.9	138.2	141.5	160.6
Clay bricks, tiles, etc.	110.9	115.7	123.5	132.0	148.7
Timber, board, and joinery	103.8	109.2	114.5	125.3	158.8
Steel products	110.3	113.9	126.4	135.3	154.5
Other metal products	112.0	114.0	119.4	124.8	147.1
Plumbing fixtures, etc.	103.1	110.9	120.5	131.2	146.3
Electrical installation materials	116.6	114.7	119.6	125.3	145.3
Installed appliances	101.8	102.7	104.3	106.8	115.1
Plaster and plaster products	106.0	111.6	119.2	120.4	124.2
Miscellaneous materials	107.5	111.4	116.5	124.7	135.8
All groups	107.2	112.3	118.9	126.5	147.8

Price indexes of metallic materials

Each of the two indexes in this monthly series is a fixed weights index compiled on the reference base 1968-69 = 100.0 using the method of the weighted arithmetic mean of price relatives. Separate indexes have not been calculated for each capital city.

Prices for each of the items relate to representative goods of fixed specifications and are sufficiently detailed to ensure that price changes incorporated in the index are measured, as far as possible, on the basis of constant quality.

The price series used are obtained monthly, by mail, from major Australian manufacturers of the relevant materials. In the main, prices are collected at the mid-point of each month. Prices collected are, as far as possible, those normally charged to representative manufacturers for goods delivered into their stores.

Price Index of Metallic Materials Used in Manufacture of Fabricated Metal Products

This Index is comprised of important metallic materials selected and combined in accordance with a weighting pattern reflecting value of usage as reported at the 1968-69 Census of Manufacturing Establishments for establishments classified to the Fabricated Metal Products sub-division of Manufacturing Industry (Australian Standard Industrial Classification, sub-division 31). Index numbers are compiled on an Australia-wide basis for four groupings and an "all groups" combination as set out below:

AUSTRALIA—WHOLESALE PRICE INDEX OF METALLIC MATERIALS USED
IN THE MANUFACTURE OF FABRICATED METAL PRODUCTS

(Base of each index: year 1968-69 = 100.0)

Group	Value weight	1969-70	1970-71	1971-72	1972-73	1973-74
	per cent					
Iron and steel	83.2	104.2	106.7	116.2	122.6	131.7
Aluminium	8.9	102.2	104.5	106.8	109.2	118.2
Copper and brass	5.7	122.5	106.5	106.2	106.6	138.1
Other metallic materials	2.2	93.8	90.9	83.6	98.7	151.3
All groups	100.0	104.8	106.2	114.1	120.0	131.3

Price Indexes of Copper Materials Used in the Manufacture of Electrical Equipment

The construction of these indexes is based on information supplied by the Electricity Supply Association of Australia and the Australian Electrical Manufacturers Association whose members use measures of this type for price adjustment of contracts.

Four copper materials—busbar, paper covered strip, polyvinyl chloride cable, and enamelled winding wire—have been combined into five separate indexes in accordance with weighting patterns reflecting value of usage in each of five selected activities of the Electrical Machinery Equipment and Supplies Class of Manufacturing Industry (Australian Standard Industrial Classification, Class 3326). The indexes, each of which has separate weighting patterns for the four copper materials, have been compiled on an Australia-wide basis for the five selected manufacturing activities and are set out in the following table :

AUSTRALIA—WHOLESALE PRICE INDEXES OF COPPER MATERIALS USED
IN THE MANUFACTURE OF ELECTRICAL EQUIPMENT :
INDEX NUMBERS FOR SELECTED ACTIVITIES
(Base of each index : year 1968-69 = 100.0)

Copper materials used in manufacture of—	1970-71	1971-72	1972-73	1973-74
Electric motors and motor control equipment	104.0	104.8	110.4	136.0
High voltage and low voltage switch gear	105.7	104.9	111.2	148.0
Distribution transformers	101.3	101.3	105.7	130.1
Power transformers	100.3	95.2	98.3	128.0
General transformers	103.0	104.0	109.4	137.0

Export prices

For the period from July 1959 to June 1969 changes in the level of export prices of selected major groups of items were indicated by a fixed weights index which made no allowance for variations in quantities exported (see pages 223-4 of the *Victorian Year Book* 1970). Since June 1969 the Index has been compiled on an interim basis which incorporates a re-weighting of the items contained in the previous series and the inclusion of some additional items. This interim basis will apply until completion of the review of content and weighting pattern referred to in the *Victorian Year Book* 1970.

In the interim series weights have been derived from values of exports for the year 1969-70 and the group weights have been adjusted to reflect the proportion that the value of wool bore to the value of all exports in that year. In addition to the 29 items of the previous index the interim index includes a further four items, namely, iron ore, bauxite, alumina, and mineral sands. Pending re-grouping in the final index these items are not attached to any of the previous single groups whose item content is therefore unchanged. The four new items are incorporated in the "all groups" index number but only from the link date June 1969. The 33 items contained in the interim series constituted 74 per cent of the total value of Australian exports (merchandise and non-merchandise) in 1969-70.

The price series used in these indexes relate generally to specified standards for each commodity and in most cases are combinations of prices for a number of representative grades, types, etc. For some commo-

dities price movements in the predominant market, or markets, are used, while for other commodities average realisations in all export markets are used. As nearly as possible, prices used are on the basis f.o.b. at the main Australian ports of export.

Index numbers for each of the groups of the previous index and for "all groups" are shown in the table below (linked as at June 1969). The Index is published monthly and the index figures in the table are simple averages of the twelve monthly index numbers in each respective year.

EXPORT PRICE INDEX NUMBERS
(Base of each index : year 1959-60 = 100)

Period	Wool	Meats	Dairy produce	Cereals	Dried and canned fruits	Sugar	Hides and tallow	Metals and coal	Gold	All groups
1964-65	102	110	94	107	100	100	91	123	101	105
1965-66	107	120	86	107	102	84	107	122	101	107
1966-67	103	124	84	114	101	67	89	117	101	105
1967-68	95	125	79	109	95	67	67	120	104	100
1968-69	99	131	72	104	97	72	73	123	117	102
1969-70 (a)	87	148	73	96	99	93	94	143	109	103
1970-71 (a)	67	152	88	100	102	113	94	139	109	101
1971-72 (a)	72	147	135	99	103	127	96	138	126	104
1972-73 (a)	179	178	119	102	106	136	139	142	180	134
1973-74 (a)	172	201	109	184	152	176	161	196	288	160

(a) Interim series, subject to revision.

Further reference. AUSTRALIAN BUREAU OF STATISTICS, *Labour reports*.