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PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY, AUSTRALIA, MARCH 1990

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MAIN FEATURES

ALL MANUFACTURING INDUSTRY INDEX

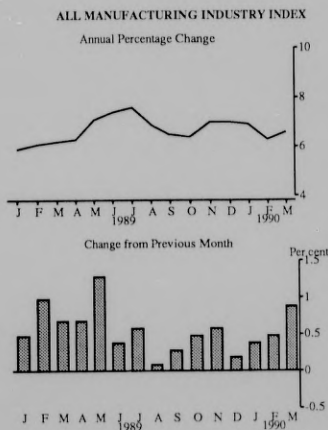
	Change between	
	Feb. 90 and Mar. 90	Mar. 89 and Mar. 90
All manufacturing industry	+0.9	+6.6
Selected subdivisions		
21-22 Food, beverages & tobacco	+0.9	+6.4
24 Clothing & footwear	+0.4	+7.6
27 Chemical, petroleum & coal products	+0.8	+11.6
29 Basic metal products	+2.7	+3.2
31 Fabricated metal products	+1.2	+8.8
32 Transport equipment	+0.6	+5.7
33 Other industrial machinery and equipment	+0.5	+3.7

The All Manufacturing Industry Index rose by 0.9% (or +5.3 index points) in March 1990.

Approximately one half of the items included in the index recorded price increases in March 1990. The main contribution to the increase came from higher prices for basic metal products, in particular refined lead and zinc (+0.64 index points), alumina (+0.37 index points), and copper (+0.27 index points). Higher meat prices (+0.66 index points) and petroleum prices (+0.35 index points) also contributed significantly to the movement.

These increases were partly offset by a small number of decreases, none of which were significant.

The All Manufacturing Industry Index rose by 6.6% between March 1989 and March 1990.



NOTE: Explanatory Notes are published on page 5 of this publication.

TABLE 1. PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY(a)
PERCENTAGE CHANGES

Period	Net subdivision indexes(b)												Other industrial machinery and equipment and household appliances(d) (33)	Miscellaneous manufacturing products (34)
	All Manufacturing Industry Index(c)	Food, beverages and tobacco (21-22)	Textiles (23)	Clothing and footwear (24)	Wood, wood products and furniture (25)	Paper, paper products and printing (26)	Chemical, petroleum and coal products (27)	Glass, clay and other non-metallic mineral products (28)	Basic metal products (29)	Fabricated metal products (31)	Transport equipment (32)			
Change from previous year—														
1986-87	+6.6	+7.5	+10.1	+8.1	+7.4	+8.7	-6.4	+5.3	+6.6	+6.1	+14.9	+7.7	+9.3	
1987-88	+7.3	+6.0	+13.8	+6.7	+7.0	+7.0	+6.1	+6.5	+11.7	+5.5	+10.0	+7.8	+9.9	
1988-89	+6.9	+7.0	+5.7	+7.7	+9.5	+4.3	-0.1	+8.6	+10.4	+8.1	+6.5	+6.8	+6.7	
Change from corresponding month of previous year—														
1988-89—														
January	+5.9	+6.1	+6.4	+7.4	+10.2	+4.0	-3.2	+9.3	+6.6	+7.7	+7.0	+6.2	+6.4	
February	+6.1	+6.2	+3.2	+7.4	+10.7	+4.0	-3.2	+9.6	+9.6	+7.2	+5.9	+5.9	+6.0	
March	+6.2	+6.5	+1.6	+7.0	+9.0	+3.1	-0.8	+9.7	+11.8	+7.2	+5.2	+5.6	+5.1	
April	+6.3	+7.1	+2.1	+7.2	+9.2	+3.1	+0.8	+9.0	+10.7	+7.0	+5.0	+4.7	+3.1	
May	+7.1	+7.8	+0.5	+7.3	+9.1	+2.7	+4.2	+9.3	+11.4	+7.5	+5.5	+5.5	+2.9	
June	+7.4	+7.9	+1.3	+7.9	+8.6	+3.5	+5.2	+9.9	+10.4	+8.2	+5.4	+5.2	+2.8	
1989-90—														
July	+7.6	+8.4	+1.6	+8.2	+8.7	+2.7	+7.2	+10.0	+10.0	+9.0	+4.8	+5.3	+2.3	
August	+6.9	+6.8	+1.8	+7.0	+8.2	+2.9	+7.2	+9.4	+9.5	+7.8	+5.6	+5.2	+2.4	
September	+6.5	+6.6	+1.8	+7.3	+7.9	+3.1	+6.0	+8.8	+9.3	+7.0	+5.7	+5.8	+3.0	
October	+6.4	+7.8	+1.7	+7.5	+7.6	+2.9	+6.5	+8.9	+7.7	+6.5	+5.3	+4.5	+2.5	
November	+7.0	+8.1	+2.2	+7.3	+8.0	+3.0	+9.1	+8.9	+5.8	+8.4	+5.9	+4.6	+3.1	
December	+7.0	+8.9	+3.2	+7.4	+7.8	+3.8	+10.4	+8.6	+4.6	+7.2	+5.2	+3.9	+3.8	
January	+6.9	+7.8	+3.7	+8.5	+7.4	+4.7	+11.7	+8.8	+3.6	+7.8	+5.4	+3.9	+4.1	
February p	+6.3	+5.8	+4.5	+7.7	+7.1	+5.0	+13.1	+8.8	+3.0	+8.1	+5.5	+3.4	+4.6	
March p	+6.6	+6.4	+5.1	+7.6	+7.3	+5.2	+11.6	+7.9	+3.2	+8.8	+5.7	+3.7	+4.6	
Change from previous month—														
1988-89—														
January	+0.5	+1.0	-0.3	+0.2	+0.6	-0.1	-0.1	+0.6	+0.5	+0.4	+0.6	+0.1	-0.3	
February	+1.0	+1.6	—	+2.5	+1.1	+1.0	+0.2	+0.7	+1.4	+0.2	-0.1	+0.3	+0.2	
March	+0.7	+0.3	-0.3	+0.5	+0.5	+0.2	+2.2	+1.4	+2.5	+0.6	+0.4	+0.2	+0.2	
April	+0.7	+0.9	+1.1	+0.5	+1.1	+0.1	+1.3	+0.5	-0.1	+0.7	+0.1	+0.3	+0.1	
May	+1.3	+1.4	-0.3	+0.2	+0.9	+0.2	+3.3	+0.8	+1.5	+1.0	+0.8	+1.1	+0.2	
June	+0.4	+0.6	+0.3	+0.6	+0.2	+0.7	—	+0.7	+0.2	+0.6	+0.3	-0.2	+0.5	
1989-90—														
July	+0.6	+0.8	+0.1	+0.8	+0.4	-0.2	+1.0	+0.8	-0.2	+1.2	+0.9	+0.5	+0.4	
August	+0.1	+0.1	+0.5	+0.8	+0.5	+0.3	-0.5	+0.4	-0.3	-0.1	+0.9	+0.2	+0.5	
September	+0.3	+0.2	+0.4	+0.4	+0.7	+0.4	-1.1	+1.2	+0.7	+1.1	+0.6	+1.0	+0.8	
October	+0.5	+1.0	+0.6	+0.1	+0.2	+0.5	+0.6	+0.5	-0.3	+0.3	-0.1	+0.1	—	
November	+0.6	+0.3	+0.9	+0.1	+1.0	+0.2	+2.1	+0.3	-1.0	+1.3	+0.7	+0.8	+0.7	
December	+0.2	+0.3	+0.2	+0.4	+0.4	+0.5	+1.0	+0.4	-0.3	-0.3	+0.1	-0.4	+0.5	
January	+0.4	-0.1	+0.1	+1.2	+0.2	+0.7	+1.1	+0.8	-0.5	+1.0	+0.7	—	—	
February p	+0.5	-0.3	+0.8	+1.8	+0.8	+1.3	+1.5	+0.6	+0.8	+0.5	-0.1	-0.1	+0.6	
March p	+0.9	+0.9	+0.3	+0.4	+0.6	+0.3	+0.8	+0.6	+2.7	+1.2	+0.6	+0.5	+0.2	

For footnotes see Table 2.

TABLE 2. PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY(a)
(Base of each index : Year 1968-69 = 100.0)

Period	Net subdivision indexes(b)												
	All Manufacturing Industry Index(c)	Food, beverages and tobacco (21-22)	Textiles (23)	Clothing and footwear (24)	Wood, wood products and furniture (25)	Paper, paper products and printing (26)	Chemical, petroleum and coal products (27)	Glass, clay and other non- metallic mineral products (28)	Basic metal products (29)	Fabricated metal products (31)	Transport equipment (32)	Other industrial machinery and equipment and house- hold appli- ances(d) (33)	Miscellan- eous manu- facturing products (34)
1986-87	458.5	428.9	383.5	407.2	569.7	513.4	467.9	473.7	422.5	566.9	479.9	449.6	424.2
1987-88	492.1	454.5	436.6	434.3	609.6	549.3	496.5	504.5	471.9	597.8	528.0	484.5	466.2
1988-89	526.0	486.5	461.5	467.6	667.8	573.1	495.9	548.1	521.2	646.2	562.3	517.3	497.6
1988-89—													
January	523.7	482.7	460.3	462.9	668.1	570.5	486.3	548.4	519.1	648.1	565.3	519.2	496.4
February	529.0	490.2	460.3	474.6	675.2	576.0	487.5	552.0	526.6	649.2	564.8	520.7	497.3
March	532.6	491.9	459.1	477.2	678.3	576.9	498.2	559.7	539.7	653.4	566.8	521.8	498.5
April	536.1	496.4	464.1	479.8	685.5	577.5	504.6	562.5	539.0	657.9	567.5	523.3	498.8
May	543.1	503.4	462.9	480.7	691.9	578.6	521.3	566.9	547.1	664.3	571.8	529.1	499.9
June	545.4	506.6	464.3	483.7	693.4	582.8	521.3	570.9	548.3	668.4	573.5	527.9	502.3
1989-90—													
July	548.5	510.4	464.6	487.6	696.4	581.5	526.3	575.7	547.0	676.1	578.5	530.4	504.2
August	549.0	510.9	467.0	491.4	699.6	583.2	523.6	578.1	545.1	675.3	583.7	531.4	506.5
September	550.7	511.9	468.7	493.3	704.7	585.3	517.9	584.9	549.0	682.6	587.2	536.5	510.7
October	553.2	517.0	471.5	493.8	705.9	588.4	521.1	588.1	547.4	684.6	586.9	536.8	510.9
November	556.6	518.8	475.8	494.3	713.1	589.5	532.0	589.9	542.1	693.7	590.9	541.2	514.3
December	557.7	520.5	476.8	496.3	715.7	592.5	537.4	592.3	540.5	691.9	591.7	539.1	516.9
January	559.8	520.2	477.3	502.3	717.3	597.1	543.3	596.9	537.8	698.8	596.1	539.2	516.9
February p	562.5	518.6	481.0	511.1	722.9	604.8	551.4	600.5	542.3	702.1	595.8	538.6	520.1
March p	567.8	523.5	482.6	513.3	727.5	606.8	556.0	604.1	557.1	710.8	599.1	541.1	521.2

(a) For a full description of Division C, 'Manufacturing' and the subdivisions within the Manufacturing Division see Australian Standard Industrial Classification (ASIC), Preliminary edition, 1969. (b) These indexes are on a 'net subdivision' basis, see paragraphs 1, 4 and 5. (c) This index is on a net division basis and relates in concept only to articles which are produced in the Manufacturing Division of ASIC for sale or transfer outside the Division; see paragraphs 1 and 3. (d) For a dissection of this index, see Table 3.

TABLE 3. PRICE INDEXES OF ARTICLES PRODUCED BY MANUFACTURING INDUSTRY — SPECIAL GROUPINGS(a)

Period	Food, beverages and tobacco, excluding meat and abattoir by-products, and raw sugar	Other industrial machinery and equipment and household appliances (33)	
		Appliances and electrical equipment (332)	Industrial machinery and equipment, etc. (b) (331 and 333)
	INDEX NUMBERS (Base of each index : Year 1968-69 = 100.0)		
1986-87	439.8	378.0	540.4
1987-88	465.9	411.3	577.6
1988-89	501.9	444.0	610.4
1988-89—			
January	503.1	446.7	611.2
February	508.4	448.3	612.8
March	511.4	449.8	615.3
April	512.8	450.9	615.2
May	515.0	454.3	623.9
June	517.8	457.6	617.3
1989-90—			
July	518.6	458.1	621.1
August	522.4	459.2	623.0
September	525.9	463.7	629.0
October	529.8	461.7	632.3
November	533.2	462.8	640.8
December	534.3	464.1	634.4
January	535.0	465.2	633.1
February p	537.8	463.4	634.1
March p	540.7	464.9	638.0
PERCENTAGE CHANGES			
Change from previous year —			
1986-87	+6.2	+9.5	+6.1
1987-88	+5.9	+8.8	+6.9
1988-89	+7.7	+8.0	+5.7
Change from corresponding month of previous year —			
1988-89—			
January	+8.2	+7.2	+5.2
February	+8.3	+7.4	+4.5
March	+8.0	+7.2	+4.1
April	+7.7	+6.6	+3.0
May	+7.4	+6.4	+4.6
June	+7.7	+7.0	+3.5
1989-90—			
July	+7.3	+6.8	+3.8
August	+7.0	+7.1	+3.5
September	+7.1	+7.4	+4.4
October	+7.1	+5.1	+4.0
November	+7.0	+4.0	+5.1
December	+7.1	+3.9	+4.0
January	+6.3	+4.1	+3.6
February p	+5.8	+3.4	+3.5
March p	+5.7	+3.4	+4.0
Change from previous month—			
1988-89—			
January	+0.8	—	+0.2
February	+1.1	+0.4	+0.3
March	+0.6	+0.3	+0.1
April	+0.3	+0.2	+0.3
May	+0.4	+0.8	+1.4
June	+0.5	+0.7	-1.1
1989-90—			
July	+0.2	+0.1	+0.6
August	+0.7	+0.2	+0.3
September	+0.7	+1.0	+1.0
October	+0.7	-0.4	+0.5
November	+0.6	+0.2	+1.3
December	+0.2	+0.3	-1.0
January	+0.1	+0.2	-0.2
February p	+0.5	-0.4	+0.2
March p	+0.5	+0.3	+0.6

(a) ASIC two digit subdivision and three digit group codes are shown in brackets. (b) Includes photographic, professional and scientific equipment.

EXPLANATORY NOTES

Scope and composition

The indexes in this publication measure changes in prices of articles produced by establishments classified to the Manufacturing Division of the *Australian Standard Industrial Classification* (ASIC). The data shown in Tables 1 and 2 relate to indexes on a *net sector basis*; that is, they relate in concept only to those articles which are produced in defined 'sectors' of Australian manufacturing industry for sale or transfer to other sectors or for export or for use as capital equipment. Articles which are sold or transferred to other establishments within the sector for further processing (as materials, components, fuels, etc.) are excluded. Capital equipment produced is within the scope of the index even if sold or transferred to other manufacturing establishments in the sector.

2. This publication contains the following sector price indexes:

- (a) a *net index* for the Manufacturing Division of ASIC;
- (b) a *net index* for each of the twelve subdivisions within the Manufacturing Division.

In addition, indexes are published for three special groupings which are components of particular *net* subdivision indexes (see paragraphs 6 and 7).

3. 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 or for use as capital equipment. Articles sold or transferred by establishments in the Manufacturing Division to other establishments in that division for further processing are outside the scope of this index. In other words, the pricing and weights for the *All Manufacturing Industry Index* reflect sales and transfers of articles *at the point of exit from the Manufacturing Division*.

4. The *net subdivision indexes* for each of the twelve 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 or for use as capital equipment. The pricing and weights for the *net subdivision indexes* reflect, in general, sales and transfers of articles *at the point of exit from the respective subdivisions*.

5. For ASIC subdivisions 21-22, 24, 25, 28, 31, 32 and 33, only a minor proportion of sales and transfers is to other manufacturing subdivisions. Therefore the relevant components of the *All Manufacturing Industry Index* are regarded as providing valid indicators of price movement for these subdivisions. For ASIC subdivisions 23, 26, 27, 29 and 34, there is a significant proportion of sales to other subdivisions of manufacturing. To compile *net* indexes for these subdivisions, it has therefore been necessary to price additional items to represent

transactions between these and other subdivisions, and also to establish weights appropriate to each subdivision (i.e. weights based on all articles produced by the subdivision for sale or transfer outside the subdivision).

Special groupings

6. Indexes for three special groupings are shown in Table 3. One grouping relates to 'Food, beverages and tobacco, excluding meat and abattoir by-products, and raw sugar'. This series is published to provide a series unaffected by the considerable short term price fluctuations that commonly occur in respect of meat and raw sugar prices.

7. The other two special groupings, 'Appliances and electrical equipment' and 'Industrial machinery and equipment etc.' were published following requests for a dissection of the 'Other industrial machinery and equipment and household appliances' Subdivision index.

Items and weights

8. The items included in these indexes were selected on the basis of values of articles produced in 1971-72, by establishments classified to the Manufacturing Division of ASIC in the Census of Manufacturing Establishments.

9. The indexes are *fixed weights indexes*. The selected items were allocated weights in accordance with estimated *net* sector production (see paragraph 3) in the year 1971-72 valued at the relevant prices applying in the *reference base year 1968-69*. Many of the selected items carry not only the weight of directly priced articles but also the weight of unpriced articles whose prices are considered to move similarly to those of directly priced articles.

10. The selected items were combined for weighting and classification purposes using the structure of the ASIC. The items have been combined according to the ASIC classes and groups in which they are primarily produced. Percentage contributions of articles to the *All Manufacturing Industry Index* aggregate were shown in the Appendix to the June 1976 (initial) issue of this publication. Percentage contributions of articles to each of the *subdivision index aggregates* may be obtained on request.

Prices

11. Most of the prices used in these indexes relate to the mid-point of the month. Prices are generally obtained from principal manufacturers of the goods concerned, but in some cases prices collected in connection with other indexes are used (adjusted to the correct pricing basis as far as possible). Prices are manufacturers' selling prices, exclusive of excise and sales tax, and reflect the effects of subsidies and bounties paid to manufacturers.

12. The prices reflect industry selling practices. For example, if costs such as handling and distribution are included in the manufacturers' selling price this is the price used in the index. Where handling and distribution

charges are paid separately by the purchaser the prices used exclude such charges.

13. As far as possible, *actual transactions prices* are used in this index — that is the prices actually paid by buyers of manufacturers' products. The actual price paid for anything can, of course, be described in various ways. Instead of being described as a single price (as usually happens in retail shops) a price for a manufacturer's product may be described in terms of the components that make up the price — for instance 'list price less (particular types of) discount'. It is these *net* prices that buyers pay to sellers for materials that the ABS aims to use in compiling this price index.

14. The ABS asks respondent businesses to report details of the discounts they offer so that actual transactions prices can be calculated. However as manufacturers offer many different types of discounts to buyers (e.g. trade discounts, settlement discounts, quantity discounts, competitive discounts) the identification of the discounts and the way in which they are applied by manufacturers pose considerable problems for the ABS. To the extent that discounts are identified and measured their effects are taken into account in calculating the index. However, because of the difficulties involved in obtaining full details of discounts the effect of the discounts may sometimes be on a partly estimated basis. Sometimes new discounts, or changes in the way discounts are applied by manufacturers, are identified only after index numbers for a particular period have been published. In such cases, or in any other case where it is discovered that incorrect prices have been used in compiling the indexes, revisions to index numbers will occur in subsequent issues of this publication.

15. Price series relate to *goods of fixed specifications* with the aim of incorporating in the index price changes for representative articles of *constant quality*. Consistent with this approach, prices in general relate to a standard representative set of transactions (in terms of quantity, delivery arrangements, destination, etc.) in order to avoid variations in price that are attributable solely to a changing mix of transactions over time.

16. The May 1977 and earlier issues of this publication contain detailed explanations of:

- (a) model pricing (a technique for measuring price change for unique or complex products);
- (b) methods used for introducing significantly changed specifications into the index.

Index numbers

17. Index numbers for financial years are simple averages of the relevant monthly index numbers.

18. Index numbers for the current month and the previous month are preliminary. However, from time to time, index numbers for earlier months may be revised (See paragraph 14 above).

Percentage changes

19. The following example illustrates the method of calculating percentage changes:

All Manufacturing Industry Index

January 1990	559.8 (See Table 2)
less December 1989	557.7 (See Table 2)
Change in index points	+2.1

$$\text{Percentage change} = \frac{+2.1}{557.7} \times 100 = +0.4\%$$

Interpretation

20. Care should be exercised when interpreting month-to-month movements in the indexes as short term movements do not necessarily indicate changes in trends.

Related publications

21. Users may also wish to refer to the following price index publications which are available on request:

Price Indexes of Materials Used in Manufacturing Industries, Australia (6411.0)—issued monthly

Price Index of Materials Used in Building Other Than House Building, Eight Capital Cities (6407.0)—issued monthly

Price Index of Materials Used in House Building Six State Capital Cities and Canberra (6408.0)—issued monthly

Price Indexes of Copper Materials, Australia (6410.0)—issued monthly.

22. Other ABS publications which may be of interest include:

Award Rates of Pay Indexes, Australia (6312.0)—issued monthly.

Average Weekly Earnings, States and Australia (6302.0)—issued quarterly.

23. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The *Catalogue* and *Publications Advice* are available from any ABS office.

Unpublished statistics

24. As well as the statistics included in this and related publications, the ABS may have other relevant unpublished data available. Inquiries should be made to the contact in the Phone Inquiries box at the front of this publication.

Symbols and other usages

- p preliminary, series subject to revision
- r figure revised since previous issue
- nil or rounded to zero.

W. McLENNAN
Acting Australian Statistician

