

PRICE INDEXES OF MATERIALS USED IN MANUFACTURING INDUSTRIES

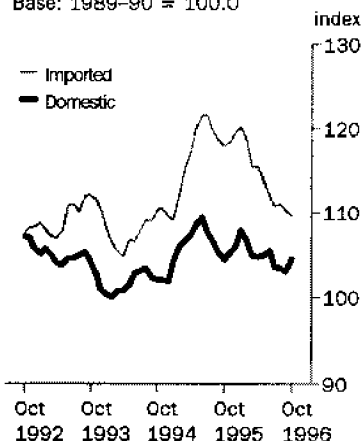
AUSTRALIA

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OCTOBER KEY FIGURES

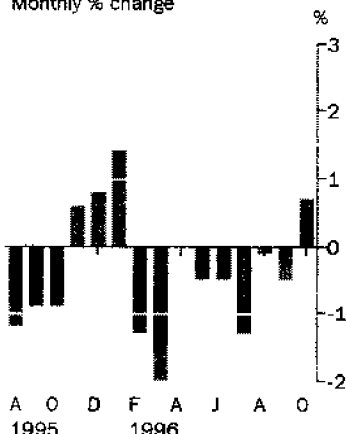
Manufacturing Division

Base: 1989-90 = 100.0



Manufacturing Division

Monthly % change



% change
Sep 96 to
Oct 96

% change
Oct 95 to
Oct 96

Manufacturing Division

0.7

-2.6

Imported materials

-0.5

-7.0

Domestic materials

1.4

0.2

OCTOBER KEY POINTS

MANUFACTURING DIVISION INDEX

- Price increases for locally produced and imported crude oil were the main contributors to the increase in the index.
- The overall increase was partly offset by price falls for sheep and wheat and for imported chemicals.

MAJOR MOVEMENTS

- Crude oil prices increased due to higher world prices.
- Price falls continued for sheep due to market over-supply.
- The fall in wheat prices continued in line with world market prices.
- Lower world prices resulted in price falls for imported chemical products.

INQUIRIES

- For further information about these and related statistics, contact Margaret Hayes on 06 252 5541, or any ABS Office.

NOTES

FORTHCOMING ISSUES

ISSUE

RELEASE DATE

November 1996

23 January 1997

December 1996

17 February 1997

January 1997

17 March 1997

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CHANGES IN THIS ISSUE

There are no changes in this issue.

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W. McLennan
Australian Statistician

MANUFACTURING DIVISION INDEX (a)

<i>Period</i>	<i>Manufacturing Division</i>	<i>Imported Materials</i>	<i>Domestic Materials</i>
1993-94	104.7	108.8	102.5
1994-95	107.6	112.7	104.9
1995-96	110.0	117.6	105.9
1995			
August	111.2	119.5	106.6
September	110.2	118.8	105.4
October	109.2	117.9	104.4
November	109.9	118.4	105.3
December	110.8	119.6	106.2
1996			
January	112.4	120.2	108.1
February	110.9	118.6	106.8
March	108.7	115.5	105.1
April	108.7	115.6	104.9
May	108.2	114.0	105.1
June	107.7	112.0	105.5
July	106.3	110.9	103.7
August	106.2	111.1	103.5
September	105.7	110.3	103.2
October	106.4	109.7	104.6

(a) Base of each index 1989-90 = 100.0

MANUFACTURING DIVISION INDEX, Percentage Changes

Period	Manufacturing Division	Imported Materials	Domestic Materials
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PERCENTAGE CHANGE (from previous year)

1993-94	-1.6	0.9	-3.0
1994-95	2.8	3.6	2.3
1995-96	2.2	4.3	1.0

PERCENTAGE CHANGE (from corresponding month of previous year)

1995			
August	5.4	9.4	2.9
September	5.3	8.9	2.9
October	3.9	6.9	2.1
November	4.4	7.0	2.9
December	5.9	9.2	4.1
1996			
January	6.0	10.2	3.7
February	2.4	5.6	0.7
March	-0.9	0.3	-1.5
April	-1.9	-1.4	-2.3
May	-3.9	-5.1	-3.2
June	-5.4	-7.8	-3.7
July	-5.6	-8.7	-3.8
August	-4.5	-7.0	-2.9
September	-4.1	-7.2	2.1
October	-2.6	-7.0	0.2

PERCENTAGE CHANGE (from previous month)

1995			
August	-1.2	-1.6	-1.1
September	-0.9	-0.6	-1.1
October	-0.9	-0.8	-0.9
November	0.6	0.4	0.9
December	0.8	1.0	0.9
1996			
January	1.4	0.5	1.8
February	-1.3	-1.3	-1.2
March	-2.0	-2.6	-1.6
April	0.0	0.1	-0.2
May	-0.5	-1.4	0.2
June	-0.5	-1.8	0.4
July	-1.3	-1.0	-1.7
August	-0.1	0.2	-0.2
September	-0.5	-0.7	-0.3
October	0.7	-0.5	1.4



MANUFACTURING DIVISION INDEX, Contribution of Materials by ANZSIC Industry of Origin (a)

Industry of Origin	September 1996	October 1996	Change
Manufacturing Division	105.7	106.4	0.7
Agriculture	27.99	27.48	-0.51
Horticulture and fruit growing	2.38	2.37	-0.01
Grain, sheep and beef cattle farming	14.33	13.79	-0.54
Dairy cattle farming	5.06	5.04	-0.02
Poultry farming	1.68	1.68	0.00
Other livestock farming	1.81	1.84	0.03
Other crop growing	2.70	2.72	0.02
Forestry and logging	1.47	1.47	0.00
Coal mining	0.89	0.89	0.00
Oil and gas extraction	13.22	14.81	1.59
Metal ore mining	8.54	8.45	-0.09
Other mining	4.35	4.34	-0.01
Construction material mining	2.57	2.57	0.00
Other mining	1.77	1.77	0.00
Textile, clothing, footwear and leather manufacturing	5.63	5.61	-0.02
Textile, fibre, yarn and woven fabric manufacturing	4.99	4.96	-0.03
Knitting mills	0.27	0.27	0.00
Leather and leather product manufacturing	0.36	0.36	0.00
Wood and paper product manufacturing	4.64	4.59	-0.05
Log sawmilling and timber dressing	1.05	1.06	0.01
Other wood product manufacturing	0.36	0.36	0.00
Paper and paper product manufacturing	3.23	3.17	-0.06
Petroleum, coal, chemical and associated product manufacturing	10.99	10.80	-0.19
Basic chemical manufacturing	6.15	6.06	-0.09
Other chemical product manufacturing	1.73	1.64	-0.09
Rubber product manufacturing	1.09	1.09	0.00
Plastic product manufacturing	2.02	2.02	0.00
Non-metallic mineral product manufacturing	0.74	0.74	0.00
Glass and glass product manufacturing	0.74	0.74	0.00
Metal product manufacturing	5.39	5.37	-0.02
Iron and steel manufacturing	3.39	3.39	0.00
Non-ferrous basic metal product manufacturing	0.59	0.57	-0.02
Fabricated metal product manufacturing	1.40	1.41	0.01
Machinery and equipment manufacturing	10.67	10.58	-0.09
Motor vehicle and part manufacturing	4.89	4.80	-0.09
Other transport equipment	0.24	0.24	0.00
Photographic and scientific equipment manufacturing	0.95	0.96	0.01
Electronic equipment manufacturing	1.72	1.71	-0.01
Electrical equipment and appliance manufacturing	1.33	1.33	0.00
Industrial machinery and equipment manufacturing	1.54	1.55	0.01
Electricity and gas supply	11.23	11.23	0.00
Electricity supply	4.64	4.61	-0.03
Gas supply	6.60	6.63	0.03

(a) For an explanation of this table see paragraph 19 of the Explanatory Notes.

MANUFACTURING ANZSIC SUBDIVISION AND GROUP INDEXES (a)

Period	Food, beverages and tobacco (21)	Textiles and textile products (221,222)	Knitting mills and clothing (223,224)	Footwear (225)	Leather and leather products (226)	Sawmilling and timber products (231,232)	Paper and paper products (233)	Printing and publishing (24)	Petroleum and coal products (251,252)
1993-94	107.7	89.9	107.7	102.4	99.6	115.3	89.7	102.7	101.9
1994-95	111.0	103.0	109.2	109.5	101.9	111.3	95.8	101.1	100.2
1995-96	111.7	100.9	111.4	111.7	95.1	114.0	108.3	114.1	103.5
1995									
August	114.4	104.7	112.6	112.4	93.7	114.9	110.6	112.5	97.7
September	113.4	105.0	112.0	111.0	94.9	114.6	110.7	114.1	96.1
October	112.1	102.0	111.6	111.3	95.4	113.8	111.3	115.4	94.9
November	112.7	100.6	111.4	111.3	96.5	114.1	111.3	115.7	97.4
December	111.6	101.4	112.1	111.2	98.2	114.5	113.8	115.4	103.0
1996									
January	111.6	100.5	111.9	111.8	96.6	114.7	112.5	114.9	112.7
February	110.6	100.3	111.1	111.3	95.6	114.2	112.1	115.3	109.1
March	107.8	98.9	110.9	111.7	92.8	114.0	105.5	114.9	110.3
April	108.9	97.2	110.2	112.4	93.5	113.4	105.0	114.0	108.7
May	110.4	95.9	109.9	112.4	93.9	112.4	102.4	112.5	106.1
June	111.8	96.3	109.8	111.6	91.3	112.6	98.1	113.1	105.4
July	108.5	95.0	108.3	111.7	93.3	112.6	98.5	110.0	107.2
August	107.8	94.6	107.5	111.7	95.3	113.2	98.6	109.2	108.6
September	106.9	92.6	105.8	112.2	96.7	113.2	97.7	108.2	111.9
October	105.5	92.3	105.4	112.6	96.6	113.1	97.2	106.9	123.8

(a) Base of each index 1989-90 = 100.0

MANUFACTURING ANZSIC SUBDIVISION AND GROUP INDEXES (a) *continued*

<i>Period</i>	<i>Chemicals (253,254)</i>	<i>Rubber and plastics (255,256)</i>	<i>Non-metallic mineral products (26)</i>	<i>Basic metal products (271-273)</i>	<i>Fabricated metal products (274-276)</i>	<i>Transport equipment and parts (281,282)</i>	<i>Electronic equipment and other machinery (283-286)</i>	<i>Other manufacturing (29)</i>
1993-94	103.5	106.9	109.8	87.6	100.8	115.0	102.7	111.5
1994-95	107.8	118.8	114.3	94.0	104.4	116.2	106.4	112.3
1995-96	113.8	122.0	113.6	99.4	108.7	115.1	107.8	112.9
1995								
August	114.9	128.2	113.0	100.6	107.0	119.5	109.5	114.1
September	115.0	126.0	112.9	100.3	107.3	117.0	109.1	113.3
October	114.6	122.6	112.9	100.3	109.1	115.7	108.9	112.9
November	114.7	122.6	113.1	100.1	109.7	115.1	108.9	113.1
December	115.0	121.5	113.2	101.0	110.1	115.6	109.3	113.3
1996								
January	115.1	121.1	113.1	100.7	109.7	114.7	108.2	113.3
February	113.8	120.3	114.2	99.8	109.5	114.5	107.3	112.6
March	111.0	117.4	114.3	98.7	109.2	113.3	106.8	112.6
April	112.2	117.9	114.6	97.8	108.8	112.4	105.9	112.0
May	111.7	118.1	114.7	97.0	108.8	111.9	105.1	111.7
June	111.8	116.8	114.5	95.1	108.3	110.3	103.9	110.9
July	111.8	115.7	114.4	93.5	107.6	110.0	103.3	110.6
August	112.1	115.4	113.6	93.8	107.2	110.2	103.4	110.6
September	111.8	114.7	112.8	92.4	105.4	110.6	102.6	110.1
October	111.4	114.2	112.7	91.6	104.7	109.8	102.3	110.2

(a) Base of each index 1989-90 = 100.0

INDEXES OF METALLIC MATERIALS USED IN THE FABRICATED METAL PRODUCTS INDUSTRY (a)

Period	Iron & Steel	Aluminium	Copper & Brass	Zinc
1993-94	104.4	85.6	98.1	77.2
1994-95	105.5	94.5	119.3	76.8
1995-96	110.1	100.8	123.3	77.1
1995				
August	106.5	102.0	127.6	77.4
September	106.9	103.7	125.8	79.1
October	110.0	102.6	124.7	75.5
November	111.1	101.6	125.0	75.5
December	111.6	101.8	127.1	78.2
1996				
January	111.6	100.9	124.0	78.2
February	111.6	100.7	120.8	78.1
March	111.6	100.1	119.7	77.8
April	111.4	98.6	118.1	77.4
May	111.3	97.6	119.3	76.1
June	111.2	96.0	116.7	75.3
July	111.2	95.5	112.1	74.7
August	111.1	93.4	111.2	73.9
September	110.5	91.1	110.8	74.6
October	110.5	88.9	109.4	73.6

(a) Base of each index 1989-90 = 100.0

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents index numbers that are based on materials used by establishments classified to designated 'sectors' of Australian manufacturing industry — the Price Indexes of Materials Used in Manufacturing Industries (MUMI). They are calculated on the reference base 1989–90 = 100.0.

2 Index numbers for the current month and the previous month are preliminary and subject to revision.

SCOPE

3 The indexes are on a 'net sector' basis; that is, each relates only to those materials which are used in the defined 'sector' of Australian manufacturing industry and which have been produced by establishments outside that 'sector'. These establishments are either Australian manufacturing establishments classified to other manufacturing 'sectors' or to other divisions of Australian industry (eg 'Agriculture, Forestry and Fishing' or 'Mining') or are overseas producers (including overseas manufacturing establishments).

CLASSIFICATION

4 The Manufacturing Division index measures changes in the prices of materials used by establishments classified to Australian and New Zealand Standard Industrial Classification (ANZSIC) Division C, Manufacturing, which have been purchased or transferred in from establishments outside the Manufacturing Division. It excludes semi-processed materials which have been produced by establishments within the Manufacturing Division and sold or transferred to other establishments within the Manufacturing Division. The index reflects purchases of materials at the point of entry to the Manufacturing Division.

5 The indexes for ANZSIC Subdivisions and Groups measure changes in prices of materials used by establishments classified to each defined ANZSIC manufacturing 'sector' which have been purchased or transferred in from establishments outside that 'sector'. These exclude semi-processed materials which have been produced by establishments within the specific 'sector' and sold or transferred to establishments in the same 'sector'. The pricing and weights for these net 'sector' indexes therefore reflect purchases and transfers in at the point of entry to the respective ANZSIC Subdivision or Groups.

6 The coverage of the ANZSIC Subdivision and Group price indexes shown in Table 4 of this publication is as follows:—

- Food, beverages and tobacco — ANZSIC Subdivision 21 Food, Beverage and Tobacco Manufacturing;
- Textiles and textile products — ANZSIC Group 221 Textile, Fibre, Yarn and Woven Fabric Manufacturing and Group 222 Textile Product Manufacturing;
- Knitting mills and clothing — ANZSIC Group 223 Knitting Mills and Group 224 Clothing Manufacturing;
- Footwear — ANZSIC Group 225 Footwear Manufacturing;
- Leather and leather products — ANZSIC Group 226 Leather and Leather Product Manufacturing;
- Sawmilling and timber products — ANZSIC Group 231 Log Sawmilling and Timber Dressing and Group 232 Other Wood Product Manufacturing;
- Paper and paper products — ANZSIC Group 233 Paper and Paper Product Manufacturing;
- Printing and publishing — ANZSIC Subdivision 24 Printing, Publishing and Recorded Media;

EXPLANATORY NOTES

CLASSIFICATION (continued)

- Petroleum and coal products — ANZSIC Group 251 Petroleum Refining and Group 252 Petroleum and Coal Product Manufacturing n.e.c.;
- Chemicals — ANZSIC Group 253 Basic Chemical Manufacturing and Group 254 Other Chemical Product Manufacturing;
- Rubber and plastics — ANZSIC Group 255 Rubber Product Manufacturing and Group 256 Plastic Product Manufacturing;
- Non-metallic mineral products — ANZSIC Subdivision 26 Non-Metallic Mineral Product Manufacturing;
- Basic metal products — ANZSIC Group 271 Iron and Steel Manufacturing; Group 272 Basic Non-Ferrous Metal Manufacturing and Group 273 Non-Ferrous Basic Metal Product Manufacturing;
- Fabricated metal products — ANZSIC Group 274 Structural Metal Product Manufacturing; Group 275 Sheet Metal Product Manufacturing and Group 276 Fabricated Metal Product Manufacturing;
- Transport equipment and parts — ANZSIC Group 281 Motor Vehicle and Part Manufacturing and Group 282 Other Transport Equipment Manufacturing;
- Electronic equipment and other machinery — ANZSIC Group 283 Photographic and Scientific Equipment Manufacturing; Group 284 Electronic Equipment Manufacturing; Group 285 Electrical Equipment and Appliance Manufacturing and Group 286 Industrial Machinery and Equipment Manufacturing;
- Other manufacturing — ANZSIC Subdivision 29 Other Manufacturing.

ITEMS AND WEIGHTS

7 The indexes are fixed weights indexes. The items included in the indexes were selected on the basis of the values of materials used in 1989–90. The selected items were allocated weights in accordance with the estimated value of manufacturing usage.

8 Many of the selected items carry not only the weight of directly priced materials but also the weight of unpriced materials whose prices are considered to move similarly to those of directly priced materials.

9 Materials have been grouped on the basis of ANZSIC industry of origin (i.e. the industry in which, in accordance with the classification rules of ANZSIC, the materials are primarily produced in Australia or the industry in which the materials would be classified had the materials been produced in Australia). Percentage contributions, in 1989–90, of individual materials to the Manufacturing Division as a whole and to the ANZSIC Subdivision and Group indexes are shown in Appendix A of the July 1996 issue of this publication.

PRICE MEASUREMENT

10 For those materials subject to significant price variation throughout the month (e.g. agricultural materials, and metal ores and concentrates) average monthly prices are used in compiling these indexes. Other domestically produced materials are priced at the mid point of the month. Prices of these materials are generally obtained from suppliers (producers and wholesalers). Prices of imported materials are generally obtained from importers and relate to shipments arriving in Australia in the month.

11 In concept, pricing for these indexes is at the point at which the material physically enters the defined manufacturing 'sector'. Therefore, as far as possible prices are on a 'delivered into store' basis.

EXPLANATORY NOTES

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12 Transfers which do not take place on the open market present problems for the measurement of price change. An example is where a vertically integrated enterprise extracts a mineral (mining activity) and also processes it (manufacturing activity). Since material is transferred from one part of the enterprise to another there is usually no transaction price. In such instances, various methods of imputing changes in market prices have been adopted. Depending on circumstances and the availability of data, these methods include using changes in opportunity cost (based, for example, on the price of the material in an established market) or changes in the cost (based on expenses actually incurred in obtaining the material). Imputations of this kind, for example, enter partly into price series for ores used in the manufacture of metal concentrates.

13 In the case of some seasonal materials such as fruit and vegetables, where deliveries do not occur over the whole year, the previous season's prices are repeated for the months outside the selling season until the subsequent season's prices become operative.

14 For some items, where prices are only determined annually, the final prices are sometimes not known until the relevant season or contract period has been at least partly completed. Estimates of the current season or contract period price are used in index calculations until the final price becomes available.

INDEX NUMBERS

15 Index numbers for financial years are simple averages of monthly index numbers.

REVISIONS

16 Index numbers for the current month and for the previous month are preliminary and subject to revisions. From time to time index numbers for earlier months may also be revised. This will occur whenever the ABS obtains more complete information or discovers that incorrect prices have been used.

ANALYSIS OF INDEX CHANGES

17 Care should be taken when interpreting month-to-month movements in the indexes as short-term movements do not necessarily indicate changes in trend.

18 Movements in indexes from one period to another can be expressed as either changes in 'index points' or as percentage changes. The following example illustrates the method of calculating index points changes and percentage changes between any two periods:

Manufacturing Division index numbers —

October 1996	106.4	(see Table 1)
October 1995	109.2	(see Table 1)
Change in index points	-2.80	
Percentage change	$\frac{-2.80}{109.2} \times 100 =$	-2.6

19 Table 3 provides an analysis of the contributions materials (classified by ANZSIC industry of origin) make to the total Manufacturing Division index. For example, Grain sheep and beef cattle farming contributed 13.79 index points to the total Manufacturing division index number of 106.4 for October 1996 and -0.54 index points to the net change of 0.70 index points.

FURTHER INFORMATION

20 Further information on the indexes is presented in the publication *Producer and Foreign Trade Price Indexes: Concepts, Sources and Methods* (6419.0).

Figure 1. A schematic diagram of the experimental setup. The subject is seated in a chair, viewing a screen displaying a target. The target is a small circle. The subject's hand is positioned at the starting point, and the distance between the starting point and the target is indicated. The subject is instructed to move the hand to the target. The distance between the starting point and the target is 10 cm. The subject is instructed to move the hand to the target. The distance between the starting point and the target is 10 cm. The subject is instructed to move the hand to the target. The distance between the starting point and the target is 10 cm.

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