

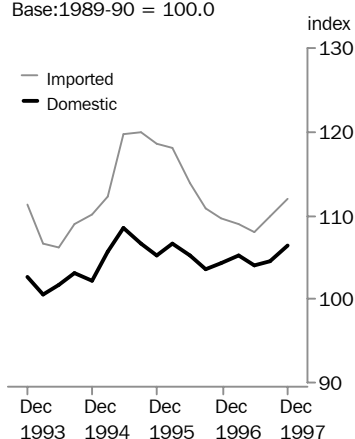
PRICE INDEXES OF MATERIALS USED IN MANUFACTURING INDUSTRIES

AUSTRALIA

EMBARGO: 11:30AM (CANBERRA TIME) FRI 23 JAN 1998

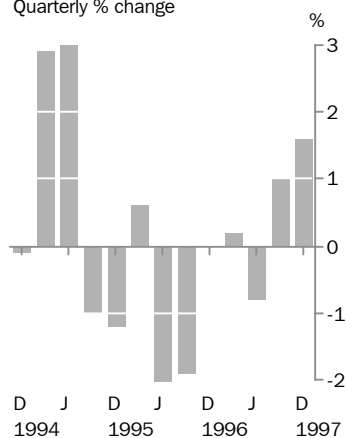
Manufacturing Division

Base:1989-90 = 100.0



Manufacturing Division

Quarterly % change



DECEMBER QTR KEY FIGURES

	% change Sep Qtr 97 to Dec Qtr 97	% change Dec Qtr 96 to Dec Qtr 97
Manufacturing division	1.6	2.0
Imported materials	1.8	2.1
Domestic materials	1.6	2.0

DECEMBER QTR KEY POINTS

MANUFACTURING DIVISION

- Higher crude oil prices were responsible for the majority of the increase in the index.

MAJOR MOVEMENTS

- Prices for imported and domestic crude oil increased as a result of higher world prices.
- Cattle prices increased.
- Wheat prices rose.
- Zinc prices fell due to lower world prices.
- Seasonal factors resulted in falls in milk prices.

- For further information about these and related statistics, contact Wohoro Ndohho on 02 6252 6424, or any ABS Office.

NOTES

FORTHCOMING ISSUES

ISSUE (Quarter)

RELEASE DATE

March 1998

21 April 1998

June 1998

20 July 1998

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CHANGES IN THIS ISSUE

There are no changes in this issue.

.....

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	110.1	117.6	106.0
1996-97	106.0	109.4	104.2
1993			
December	105.8	111.3	102.7
1994			
March	102.6	106.6	100.5
June	103.3	106.2	101.8
September	105.1	108.9	103.1
December	105.0	110.2	102.2
1995			
March	108.0	112.2	105.7
June	112.4	119.6	108.5
September	111.3	119.9	106.6
December	110.0	118.6	105.3
1996			
March	110.7	118.1	106.7
June	108.2	113.9	105.2
September	106.1	110.8	103.5
December	106.1	109.6	104.2
1997			
March	106.3	108.9	105.1
June	105.4	108.1	104.0
September	106.5	109.9	104.6
December	108.2	111.9	106.3

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

MANUFACTURING DIVISION INDEX, Percentage Changes

Period	Manufacturing division	Imported materials	Domestic materials
--------	------------------------	--------------------	--------------------

Percentage Change from Previous Year

1993-94	-1.6	0.9	-3.0
1994-95	2.8	3.6	2.3
1995-96	2.3	4.3	1.0
1996-97	-3.7	-7.0	-1.7

Percentage Change from Corresponding Quarter of Previous Year

1993			
December	-1.3	3.0	-3.7
1994			
March	-3.5	-1.3	-4.6
June	-2.3	-2.2	-2.3
September	-1.9	-1.9	-1.9
December	-0.8	-1.0	-0.5
1995			
March	5.3	5.3	5.2
June	8.8	12.6	6.6
September	5.9	10.1	3.4
December	4.8	7.6	3.0
1996			
March	2.5	5.3	0.9
June	-3.7	-4.8	-3.0
September	-4.7	-7.6	-2.9
December	-3.5	-7.6	-1.0
1997			
March	-4.0	-7.8	-1.5
June	-2.6	-5.1	-1.1
September	0.4	-0.8	1.1
December	2.0	2.1	2.0

Percentage Change from Previous Quarter

1993			
December	-1.2	0.3	-2.3
1994			
March	-3.0	-4.2	-2.1
June	0.7	-0.4	1.3
September	1.7	2.5	1.3
December	-0.1	1.2	-0.9
1995			
March	2.9	1.8	3.4
June	4.1	6.6	2.6
September	-1.0	0.3	-1.8
December	-1.2	-1.1	-1.2
1996			
March	0.6	-0.4	1.3
June	-2.3	-3.6	-1.4
September	-1.9	-2.7	-1.6
December	0.0	-1.1	0.7
1997			
March	0.2	-0.6	0.9
June	-0.8	-0.7	-1.0
September	1.0	1.7	0.6
December	1.6	1.8	1.6

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

Industry of Origin	September Qtr 1997	December Qtr 1997	Change
Manufacturing division	106.5	108.2	1.7
Agriculture	28.90	28.97	0.07
Horticulture and fruit growing	2.32	2.32	0.00
Grain, sheep and beef cattle farming	15.15	15.32	0.17
Dairy cattle farming	5.27	5.10	-0.17
Poultry farming	1.65	1.67	0.02
Other livestock farming	1.60	1.62	0.02
Other crop growing	2.86	2.93	0.07
Forestry and logging	1.48	1.48	0.00
Coal mining	0.94	0.94	0.00
Oil and gas extraction	12.67	14.06	1.39
Metal ore mining	8.89	8.62	-0.27
Other mining	4.45	4.47	0.02
Construction material mining	2.65	2.65	0.00
Other mining	1.80	1.83	0.03
Textile, clothing, footwear and leather manufacturing	5.74	5.87	0.13
Textile, fibre, yarn and woven fabric manufacturing	5.09	5.22	0.13
Knitting mills	0.29	0.29	0.00
Leather and leather product manufacturing	0.35	0.35	0.00
Wood and paper product manufacturing	4.69	4.92	0.23
Log sawmilling and timber dressing	1.18	1.23	0.05
Other wood product manufacturing	0.37	0.39	0.02
Paper and paper product manufacturing	3.14	3.29	0.15
Petroleum, coal, chemical and associated product manufacturing	10.56	10.56	0.00
Basic chemical manufacturing	6.04	6.06	0.02
Other chemical product manufacturing	1.42	1.40	-0.02
Rubber product manufacturing	1.13	1.11	-0.02
Plastic product manufacturing	1.99	1.99	0.00
Non-metallic mineral product manufacturing	0.67	0.65	-0.02
Glass and glass product manufacturing	0.67	0.65	-0.02
Metal product manufacturing	5.46	5.44	-0.02
Iron and steel manufacturing	3.36	3.37	0.01
Non-ferrous basic metal product manufacturing	0.64	0.57	-0.07
Fabricated metal product manufacturing	1.45	1.50	0.05
Machinery and equipment manufacturing	10.79	11.00	0.21
Motor vehicle and part manufacturing	4.89	4.98	0.09
Other transport equipment	0.26	0.28	0.02
Photographic and scientific equipment manufacturing	0.94	0.96	0.02
Electronic equipment manufacturing	1.75	1.78	0.03
Electrical equipment and appliance manufacturing	1.29	1.32	0.03
Industrial machinery and equipment manufacturing	1.66	1.67	0.01
Electricity and gas supply	11.28	11.25	-0.03
Electricity supply	4.65	4.56	-0.09
Gas supply	6.62	6.69	0.07

(a) For an explanation of this table see paragraph 18 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	109.3	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
1996-97	106.2	93.0	105.9	111.0	95.0	113.7	97.0	105.8	117.2
1993									
December	107.6	89.6	108.5	102.3	99.0	117.1	90.3	104.0	106.1
1994									
March	107.3	89.5	105.6	102.2	98.1	114.7	88.4	102.6	93.1
June	107.9	93.1	106.3	103.7	99.0	111.3	88.1	100.2	94.6
September	108.0	98.1	107.9	107.5	99.2	108.8	90.7	99.8	100.0
December	109.3	102.6	108.4	108.4	101.3	109.5	92.9	100.2	93.6
1995									
March	111.5	103.4	108.5	110.1	103.7	112.0	97.5	100.8	100.8
June	115.3	107.9	112.2	111.9	103.4	114.9	102.2	103.5	106.3
September	114.4	105.8	112.6	111.9	95.6	114.9	109.1	112.6	98.0
December	112.1	101.3	111.7	111.3	96.7	114.1	112.1	115.5	98.4
1996									
March	110.0	99.9	111.3	111.6	95.0	114.3	110.0	115.0	110.7
June	110.4	96.5	110.0	112.1	92.9	112.8	101.8	113.2	106.7
September	107.7	94.1	107.2	111.9	95.1	113.0	98.3	109.1	109.2
December	104.9	91.9	105.2	111.0	95.9	113.2	97.8	106.7	123.8
1997									
March	105.0	92.5	105.4	110.1	95.6	113.4	96.4	104.7	125.0
June	107.3	93.5	105.8	110.9	93.3	115.2	95.4	102.7	110.7
September	109.3	95.8	106.3	109.2	90.5	117.1	95.9	102.8	109.2
December	110.4	96.4	107.9	110.0	93.4	118.6	95.9	104.3	120.2

(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	106.5	112.3
1995-96	113.9	122.0	113.7	99.4	108.7	115.1	107.8	112.8
1996-97	110.7	113.4	113.1	93.1	106.2	110.1	102.7	110.9
1993								
December	105.1	107.8	110.0	86.4	100.6	116.9	102.7	111.9
1994								
March	102.2	106.1	109.3	86.9	100.9	113.8	102.3	111.2
June	102.4	106.6	109.5	88.1	100.8	113.6	102.4	111.2
September	103.8	110.5	112.5	89.5	102.0	114.5	103.8	111.1
December	105.3	115.2	113.7	91.3	103.2	114.6	105.3	111.4
1995								
March	108.4	120.5	115.2	96.5	105.7	115.3	107.4	112.4
June	113.8	128.8	115.8	98.8	106.7	120.2	109.4	114.2
September	115.4	128.4	113.0	100.8	107.2	119.2	109.6	113.9
December	114.8	122.2	113.1	100.5	109.6	115.5	109.0	113.1
1996								
March	113.3	119.6	113.9	99.7	109.5	114.2	107.4	112.8
June	111.9	117.6	114.6	96.6	108.6	111.5	105.0	111.5
September	111.9	115.3	113.6	93.2	106.7	110.3	103.1	110.4
December	110.5	113.5	112.5	91.7	104.9	109.8	102.3	110.3
1997								
March	110.6	113.1	113.1	93.2	106.2	109.9	102.6	111.2
June	109.8	111.8	113.0	94.3	107.1	110.2	102.6	111.7
September	110.6	112.2	112.6	94.4	107.4	112.0	103.6	112.1
December	111.8	113.3	112.2	92.8	106.9	112.9	104.3	113.4

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

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

Period	Iron and steel	Aluminium	Copper and 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	77.2
1996-97	111.0	90.9	114.7	80.4
1993				
December	104.2	86.3	93.7	77.7
1994				
March	104.8	85.3	96.0	78.5
June	104.6	83.3	102.0	75.5
September	105.0	85.9	110.3	74.9
December	105.2	88.3	117.7	77.3
1995				
March	105.6	100.4	123.5	77.7
June	106.1	103.3	125.8	77.2
September	106.6	103.1	127.9	77.9
December	110.9	102.0	125.6	76.4
1996				
March	111.6	100.6	121.5	78.0
June	111.3	97.4	118.0	76.3
September	110.9	93.3	111.4	74.4
December	110.5	88.7	111.4	74.5
1997				
March	111.0	89.5	116.8	80.1
June	111.7	92.0	119.1	92.4
September	111.8	93.0	122.2	111.8
December	112.0	92.8	119.9	109.3

(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.

SCOPE

2 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 (e.g. 'Agriculture, Forestry and Fishing' or 'Mining') or are overseas producers (including overseas manufacturing establishments).

CLASSIFICATION

3 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.

4 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 .

5 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

6 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.

7 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.

8 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

9 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 quarter.

10 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

PRICE MEASUREMENT *continued*

11 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.

12 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 quarters outside the selling season until the subsequent season's prices become operative.

13 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

14 Index numbers for financial years are simple averages of quarterly index numbers.

REVISIONS

15 In cases where more complete information is obtained after index numbers for a period have been published, or it is discovered that incorrect prices have been used in compiling the indexes, revisions to index numbers may occur in subsequent issues of this publication.

ANALYSIS OF INDEX CHANGES

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

17 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 —

December Quarter 1997	108.2	(see Table 1)
December Quarter 1996	106.1	(see Table 1)
Change in index points	2.0	
Percentage change	2.0	
	$\frac{2.0}{106.1} \times 100 = 2.0$	

18 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 15.32 index points to the total Manufacturing division index number of 108.2 for December Quarter 1997 and 0.17 index points to the net change of 1.70 index points.

FURTHER INFORMATION

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

EXPLANATORY NOTES

RELATED PUBLICATIONS

20 Users may also wish to refer to the following publications which are available from ABS Bookshops:

- *Price Index of Materials Used in Coal Mining, Australia* (6415.0)
- *Price Index of Copper Materials, Australia* (6410.0)
- *Price Index of Articles Produced by Manufacturing Industry, Australia* (6412.0)
- *Price Index of Materials Used in Building Other than House Building, Six State Capital Cities* (6407.0)
- *Price Index of Materials Used in House Building, Six State Capital Cities* (6408.0)
- *Import Price Index, Australia* (6414.0)
- *Export Price Index, Australia* (6405.0).

21 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 *Release Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Release Advice are available from any ABS office.

UNPUBLISHED STATISTICS

22 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 Wohoro Ndooho on 02 6252 6424 or to any ABS office.

SYMBOLS AND OTHER USAGES

ANZSIC Australian and New Zealand Standard Industrial Classification
r revised

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