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QUARTERLY INDEXES OF INDUSTRIAL PRODUCTION, AUSTRALIA DECEMBER QUARTER 1994

MAIN FEATURES

NOTE: *This issue presents for the first time, indexes of industrial production based on the Australian and New Zealand Standard Industrial Classification (ANZSIC) which has replaced the Australian Standard Industrial Classification (ASIC). Little scope change has resulted to the Mining industry or to the Manufacturing industry in total. Some change to the industry structure within manufacturing has occurred. The Electricity, gas and water industry was unaffected. See paragraph 2 of the Explanatory Notes for details of the more important effects.*

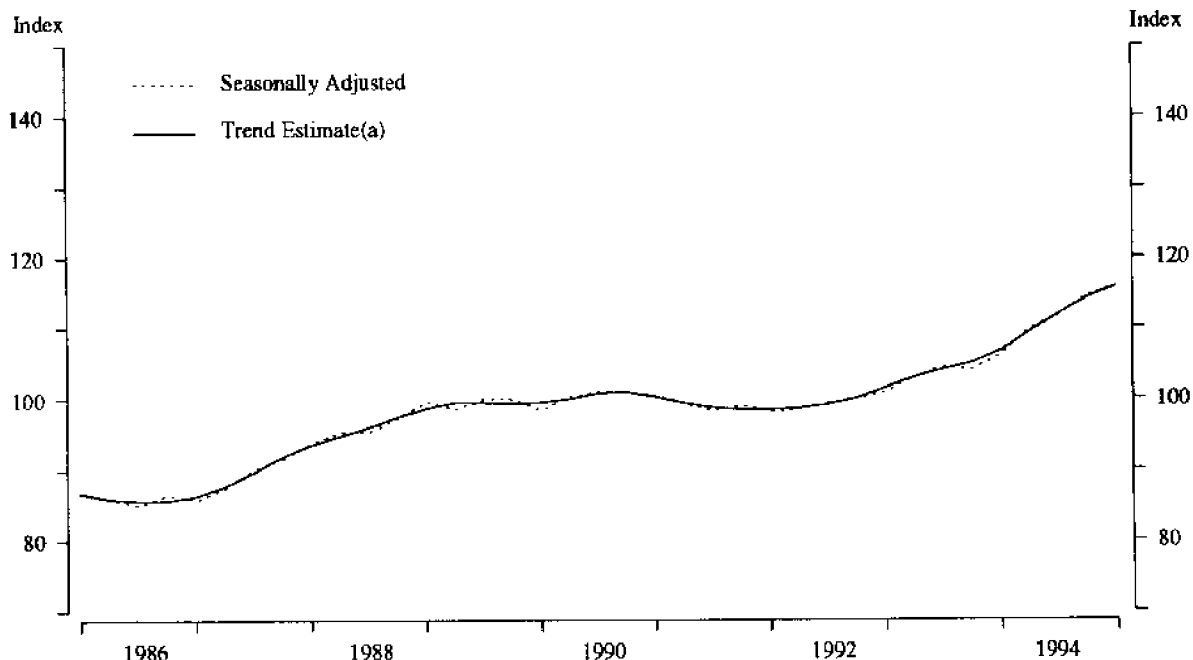
NEXT ISSUE: 6 JUNE 1995

The index of industrial production grew 1.4 per cent in Trend Terms in December quarter 1994, a slower Trend growth rate than that for the previous four quarters. The index has shown growth in Trend Terms for the last twelve quarters. The December quarter 1994 trend estimate stands 8.5 per cent above the December quarter 1993 estimate.

In the December quarter 1994, the mining production trend remained steady while the manufacturing industry trend grew by 1.8 per cent as did the trend for the electricity, gas and water utilities industry.

In seasonally adjusted terms rises of 1.7 per cent for manufacturing and 1.8 per cent for utilities combined with a fall of 0.9% in mining gave a 1.2 per cent growth for the industrial production index overall in December quarter 1994.

INDEX OF INDUSTRIAL GROSS PRODUCT AT AVERAGE 1989-90 PRICES
(BASE: 1989-90 = 100.0)

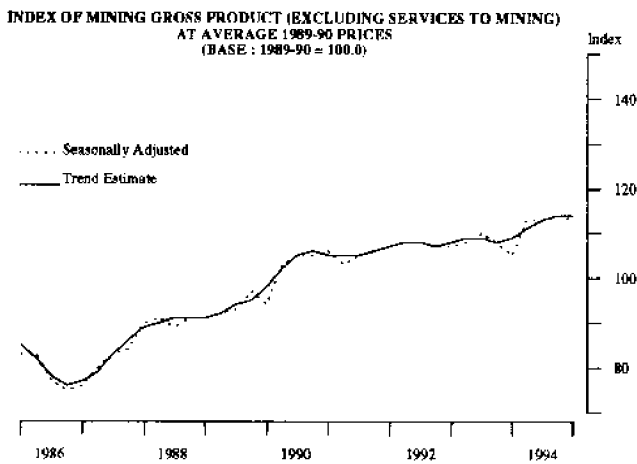


(a) See paragraphs 21 to 23 of the Explanatory Notes. Trend estimates for the most recent periods are provisional and could change when data for further quarters are available.

INQUIRIES

- for information about statistics in this publication and the availability of related unpublished statistics, contact Mr Harvey Bissett on Canberra (06) 252 5639 or any ABS State office.
- for information about other ABS statistics and services please contact Information Service Canberra (06) 252 6007, 252 6008 or any ABS State Office.

SUMMARY OF FINDINGS

*Components of the industrial production index**(i) Mining*

The trend estimate for the index of mining production levelled in the December quarter after four quarters of relatively buoyant growth which in turn followed a generally rising trend over several years.

(ii) Manufacturing

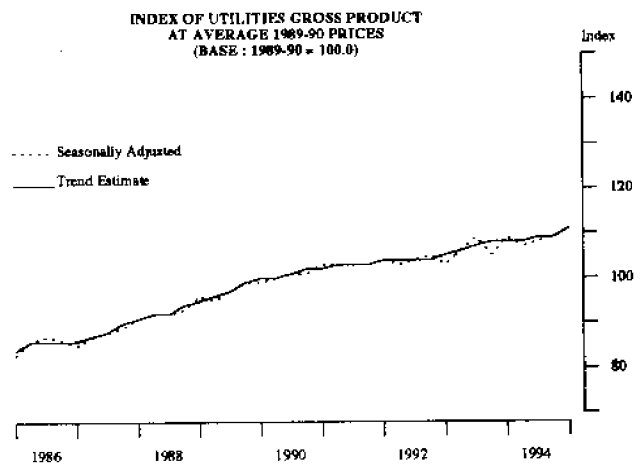
The trend estimate for the index of manufacturing production has grown consistently over the past three years but this growth period was preceded by three years of decline. Growth (up 1.8%) in the December quarter 1994 which followed sustained growth (2.3%, 3.1%, 2.9% and 2.5%) for the previous four quarters places the trend estimate 10.8 per cent above the estimate for the December quarter 1993 and nearly 23 per cent above the estimate for the December quarter 1992.

Eight of the nine manufacturing subdivisions have shown trend growth in the December quarter 1994. The trend estimate of production fell in Textiles, clothing, footwear and leather manufacturing for the December quarter 1994 with this subdivision falling to the lowest level in the period covered by this series. December quarter 1994 and other recent movements in the estimates of trend for each manufacturing subdivision are summarized below -

- *Food, beverages and tobacco manufacturing.* A 2.7 per cent rise in the trend series for this industry has brought the estimate to a record high level. The estimates have exhibited steady growth for the past four quarters and the December quarter 1994 stands 11.2 per cent higher than the estimate for December quarter 1993.
- *Textiles, clothing, footwear and leather manufacturing.* A 3.5 per cent fall in the trend estimate for this industry has produced a record low level for the period covered by this series. The trend estimates have exhibited steady decline for the past six quarters and the December quarter 1994 is 14 per cent below the level of December quarter 1993.
- *Wood, and paper products manufacturing.* A 2.2 per cent rise in the trend estimate for this industry has brought the estimate to the highest level since September quarter 1989. The trend estimates have exhibited steady growth for the past five quarters and the December quarter 1994 is 9 per cent above the level of December quarter 1993.

- *Printing, publishing and recorded media.* A 0.8 per cent rise in the trend estimate for this industry has brought the estimate to a record high level. Prior to this relatively modest growth in the December quarter 1994, the estimates grow strongly for four successive quarters. The estimate for December quarter 1994 stands almost 17 per cent above the estimate for December quarter 1993.
- *Petroleum, coal, chemical and associated product manufacturing.* A 1.0 per cent rise in the trend estimates for this industry has achieved a record high level. The estimates have exhibited steady growth over the past four quarters which in turn followed several quarters of strong growth. The estimate for December quarter 1994 is 7.4 per cent above the estimate for December quarter 1993.
- *Non-metallic mineral products manufacturing.* A 5.6 per cent rise in the trend estimate for this industry (which was the largest rise for any industry in that quarter) has brought the estimate to a record high level. The estimates have exhibited strong growth over the past eight quarters. The estimate for December quarter 1994 is almost 22 per cent above the estimate for December quarter 1993.
- *Metal products manufacturing.* A 2.6 per cent rise in the trend estimate for this industry has brought the estimate to a record high level. The estimates have exhibited strong growth over the past three quarters. The estimate for December quarter 1994 stands 8.9 per cent above the estimate for December quarter 1993.

- *Machinery and equipment manufacturing.* A 1.4 per cent rise in the trend estimate for this industry has brought the estimate to a record high level. The estimates have exhibited steady growth over the past three quarters which in turn followed three quarters of strong growth. The estimate for December quarter 1994 is 12 per cent above the estimate for December quarter 1993.
- *Other manufacturing.* A 1.8 per cent rise in the trend estimates for this industry has brought the estimate to a record high level. The estimates have exhibited steady growth over the past two quarters following strong growth for the previous five quarters. The estimate for December quarter 1994 is almost 19 per cent above the estimate for December quarter 1993.



(iii) *Electricity, gas and water utilities*

The trend for the index for electricity, gas and water shows a 1.8 per cent rise for the December quarter 1994. The estimate for December quarter 1994 stands 2.8 per cent above the estimate for December quarter 1993.

NOTE: Explanatory Notes are published at the back of this publication.

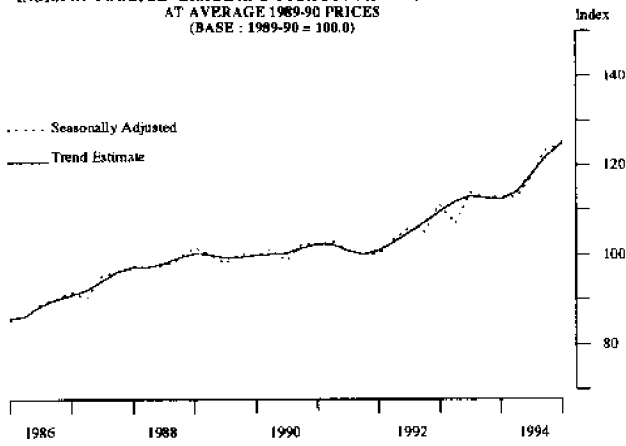
TABLE 1. INDEXES OF INDUSTRIAL GROSS PRODUCT AT AVERAGE 1989-90 PRICES—SEASONALLY ADJUSTED AND TREND ESTIMATES
Index numbers (Base : 1989-90 = 100.0)

	Quarters ended													
	1991-92			1992-93			1993-94			1994-95				
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
	<i>Seasonally adjusted</i>													
Mining (excluding services to mining)	106.0	107.0	108.0	108.0	107.0	107.0	108.0	110.0	108.0	105.0	113.0	113.0	114.0	113.0
Manufacturing	96.0	95.0	95.0	96.0	97.0	99.0	101.0	102.0	102.0	106.0	109.0	112.0	116.0	118.0
Electricity, gas and water	103.0	104.0	103.0	104.0	105.0	103.0	106.0	109.0	105.0	109.0	107.0	108.0	109.0	111.0
Total industrial production	99.1	98.3	98.7	99.4	100.0	101.0	102.9	104.5	104.0	106.2	109.8	111.7	114.5	115.9
	<i>Trend estimates</i>													
Mining (excluding services to mining)	106.0	107.0	108.0	108.0	107.0	108.0	109.0	109.0	108.0	109.0	111.0	113.0	114.0	114.0
Manufacturing	95.6	95.2	95.2	95.8	97.3	99.1	100.7	101.9	103.5	105.9	109.2	112.4	115.2	117.3
Electricity, gas and water	103.0	104.0	104.0	104.0	104.0	105.0	106.0	107.0	108.0	108.0	108.0	109.0	109.0	111.0
Total industrial production	98.6	98.6	98.8	99.2	100.1	101.5	103.0	104.0	105.0	106.7	109.3	112.0	114.2	115.8

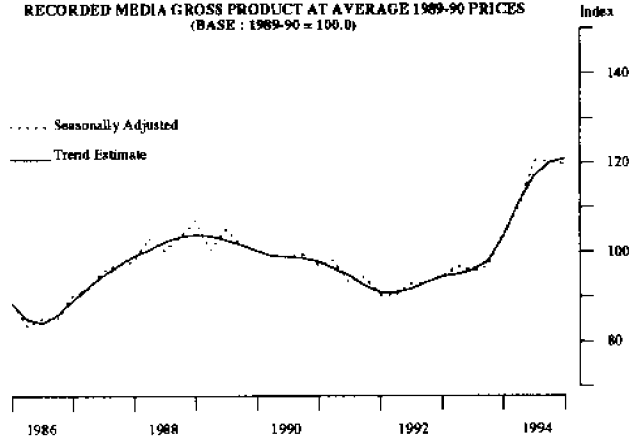
TABLE 2. PERCENTAGE CHANGES IN INDEXES OF INDUSTRIAL GROSS PRODUCT AT AVERAGE 1989-90 PRICES—SEASONALLY ADJUSTED AND TREND ESTIMATES

	Change from preceding quarter													
	1991-92			1992-93			1993-94			1994-95				
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	
	<i>Seasonally adjusted</i>													
Mining (excluding services to mining)	0.9	0.9	—	-0.9	—	0.9	1.9	-1.8	-2.8	7.6	—	0.9	-0.9	7.6
Manufacturing	-1.0	—	1.1	1.0	2.1	2.0	1.0	—	3.9	2.8	2.8	3.6	1.7	11.3
Electricity, gas and water	1.0	-1.0	1.0	1.0	1.9	2.9	2.8	-3.7	3.8	-1.8	0.9	0.9	1.8	1.8
Total industrial production	-0.8	0.4	0.7	0.6	1.0	1.9	1.6	-0.5	2.1	3.4	1.7	2.5	1.2	9.1
	<i>Trend estimates</i>													
Mining (excluding services to mining)	0.9	0.9	—	-0.9	0.9	0.9	—	-0.9	0.9	1.8	1.8	0.9	—	4.6
Manufacturing	-0.4	—	0.6	1.6	1.8	1.6	1.2	1.6	2.3	3.1	2.9	2.5	1.8	10.8
Electricity, gas and water	1.0	—	—	—	1.0	1.0	0.9	0.9	—	—	0.9	—	1.8	2.8
Total industrial production	—	0.2	0.4	0.9	1.4	1.5	1.0	1.0	1.6	2.4	2.5	2.0	1.4	8.5

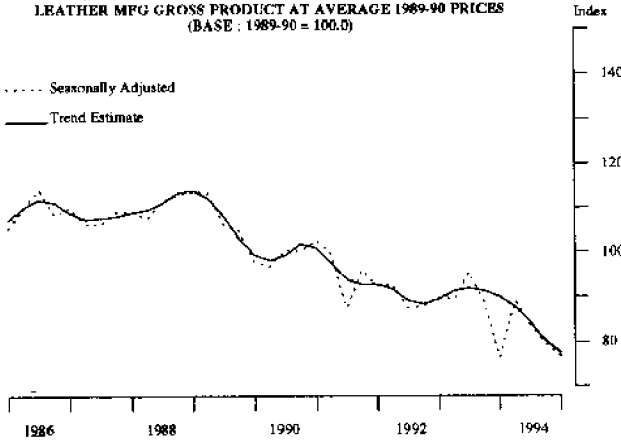
**INDEX OF FOOD, BEVERAGE AND TOBACCO MFG GROSS PRODUCT
AT AVERAGE 1989-90 PRICES
(BASE : 1989-90 = 100.0)**



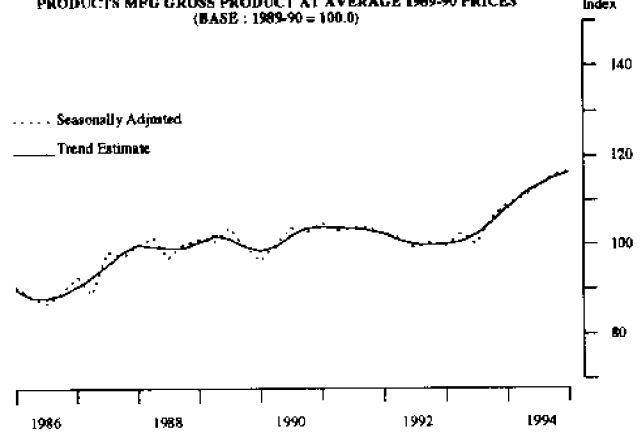
**INDEX OF PRINTING, PUBLISHING AND
RECORDED MEDIA GROSS PRODUCT AT AVERAGE 1989-90 PRICES
(BASE : 1989-90 = 100.0)**



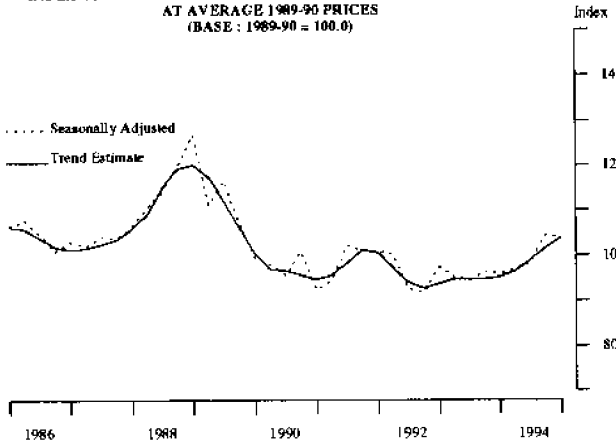
**INDEX OF TEXTILE, CLOTHING, FOOTWEAR AND
LEATHER MFG GROSS PRODUCT AT AVERAGE 1989-90 PRICES
(BASE : 1989-90 = 100.0)**



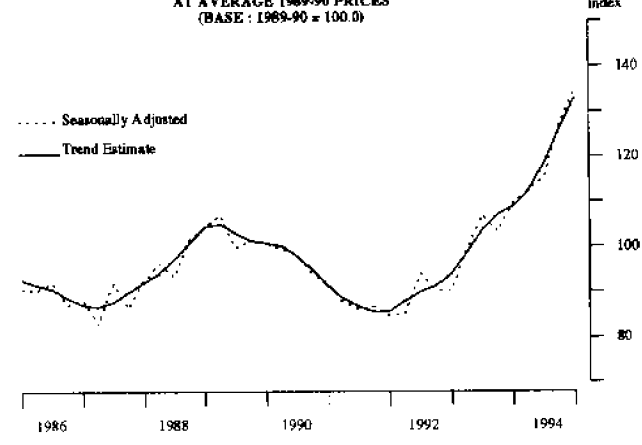
**INDEX OF PETROLEUM, COAL, CHEMICAL AND ASSOCIATED
PRODUCTS MFG GROSS PRODUCT AT AVERAGE 1989-90 PRICES
(BASE : 1989-90 = 100.0)**



**INDEX OF WOOD AND PAPER PRODUCTS MFG GROSS PRODUCT
AT AVERAGE 1989-90 PRICES
(BASE : 1989-90 = 100.0)**



**INDEX OF NON-METALLIC MINERAL PRODUCTS MFG GROSS PRODUCT
AT AVERAGE 1989-90 PRICES
(BASE : 1989-90 = 100.0)**



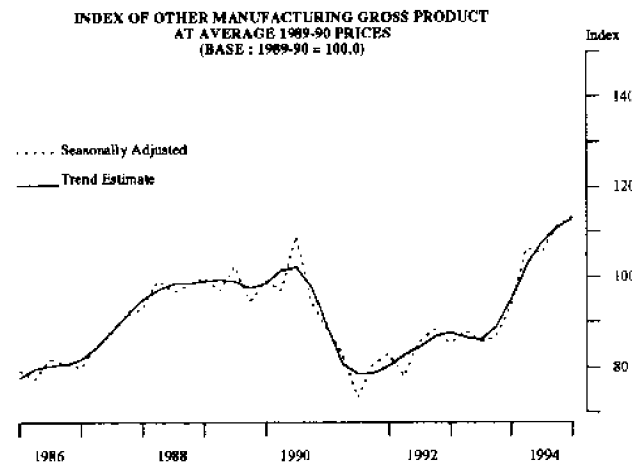
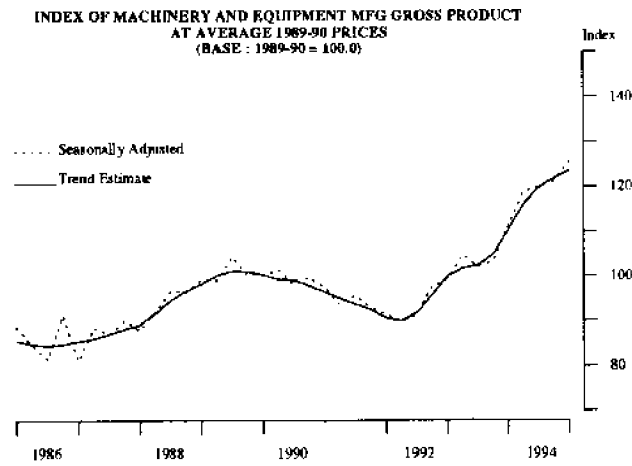
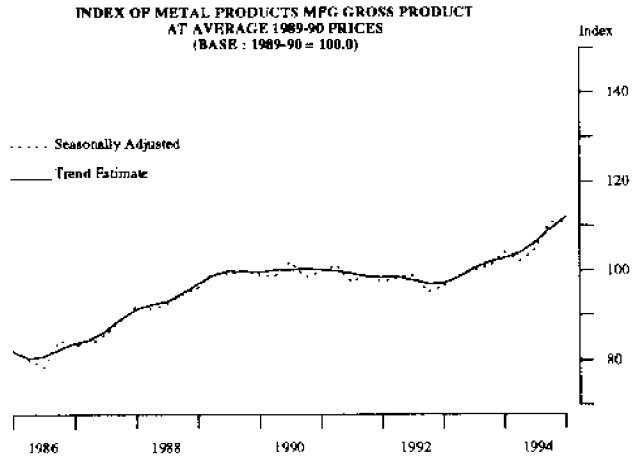


TABLE 3. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES, BY SUBDIVISION — SEASONALLY ADJUSTED
Index numbers (Base : 1989-90 = 100.0)

ANZSIC Sub- Divn.	Industry	Quarters ended													
		1991-92			1992-93			1993-94			1994-95				
		Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
21	Food, beverages and tobacco mfg	100.1	100.1	103.6	106.1	105.2	111.2	106.8	114.0	112.5	113.1	112.8	117.4	123.5	124.8
22	Textile, clothing, footwear and leather mfg	95.9	92.5	92.8	87.4	88.1	89.9	89.3	95.4	88.7	76.4	89.0	83.5	79.6	76.7
23	Wood and paper products mfg	101.0	100.9	100.2	92.5	91.7	97.4	95.1	94.7	96.4	95.9	97.1	98.4	104.3	104.1
24	Printing, publishing and recorded media mfg	94.4	90.4	90.2	93.0	93.2	94.4	96.8	95.8	96.8	104.0	110.1	120.3	120.1	119.5
25	Petroleum, coal, chemical & assoc products mfg	103.8	102.5	101.5	99.5	100.5	99.7	102.5	100.1	105.8	109.2	110.9	113.0	115.8	116.6
26	Non-metallic mineral products mfg	86.8	84.5	85.2	94.0	90.4	90.3	99.2	106.8	103.2	109.8	112.3	115.0	126.4	134.0
27	Metal products mfg	99.3	97.4	98.5	99.1	95.1	96.5	98.9	100.1	101.2	104.1	102.2	104.7	110.7	111.1
28	Machinery and equipment mfg	93.1	91.5	89.9	91.3	97.7	99.2	104.8	102.2	103.4	111.0	118.7	120.0	121.0	125.5
29	Other manufacturing	80.9	83.0	78.0	85.7	88.3	85.3	88.0	85.7	86.7	93.2	106.2	105.2	111.0	113.2
	Total manufacturing	96.0	95.0	95.0	96.0	97.0	99.0	101.0	102.0	102.0	106.0	109.0	112.0	116.0	118.0

TABLE 4. PERCENTAGE CHANGES IN INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY SUBDIVISION — SEASONALLY ADJUSTED

ANZSIC Sub- Divn.	Industry	Change from preceding quarter													
		1991-92			1992-93			1993-94			1994-95				
		Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	
21	Food, beverages and tobacco mfg	—	3.5	2.4	-0.8	5.7	-4.0	6.7	-1.3	0.5	-0.3	4.1	5.2	1.1	10.3
22	Textile, clothing, footwear and leather mfg	-3.5	0.3	-5.8	0.8	2.0	-0.7	6.8	-7.0	-13.9	16.5	-6.2	-4.7	-3.6	0.4
23	Wood and paper products mfg	-0.1	-0.7	-7.7	-0.9	6.2	2.4	-0.4	1.8	-0.5	1.3	1.3	6.0	-0.2	8.6
24	Printing, publishing and recorded media mfg	-4.2	-0.2	3.1	0.2	1.3	2.5	-1.0	1.0	7.4	5.9	9.3	0.2	-0.5	14.9
25	Petroleum, coal, chemical & assoc products mfg	-1.3	-1.0	2.0	1.0	-0.8	2.8	-2.3	5.7	3.2	1.6	1.9	2.5	0.7	6.8
26	Non-metallic mineral products mfg	-2.6	0.8	10.3	3.8	-0.1	9.9	7.7	-3.4	6.4	2.3	2.4	9.9	6.0	22.0
27	Metal products mfg	-1.9	1.1	0.6	-4.0	1.5	2.5	1.2	1.1	2.9	-1.8	2.4	5.7	0.4	6.7
28	Machinery and equipment mfg	-1.7	-1.7	1.6	7.0	1.5	5.6	-2.5	1.2	7.4	6.9	1.1	0.8	3.7	13.1
29	Other manufacturing	2.6	-6.0	9.9	3.0	-3.4	3.2	2.6	1.2	7.5	13.9	0.9	5.5	2.0	21.5
	Total manufacturing	-1.0	—	1.1	1.0	2.1	2.0	1.0	—	3.9	2.8	2.8	3.6	1.7	11.3

TABLE 5. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES, BY SUBDIVISION — TREND ESTIMATES
Index numbers (Base : 1989-90 = 100.0)

ANZSIC Sub- Divn.	Industry	Quarters ended													
		1991-92			1992-93			1993-94			1994-95				
		Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
21	Food, beverages and tobacco mfg	100.2	101.0	102.8	105.0	107.2	109.6	111.9	113.1	112.8	112.5	114.0	117.7	121.8	125.1
22	Textile, clothing, footwear and leather mfg	92.9	93.0	91.7	89.2	88.3	89.5	91.4	92.0	91.4	90.0	87.7	84.3	80.2	77.4
23	Wood and paper products mfg	101.2	100.5	97.1	94.0	92.9	93.8	94.9	94.9	94.8	95.3	96.5	98.9	101.7	103.9
24	Printing, publishing and recorded media mfg	92.6	91.0	90.9	91.7	93.3	94.6	95.2	95.9	98.0	103.4	111.2	116.9	119.9	120.9
25	Petroleum, coal, chemical & assoc products mfg	103.3	102.4	101.1	100.1	100.0	100.2	100.7	102.2	105.0	108.3	111.2	113.3	115.1	116.3
26	Non-metallic mineral products mfg	85.5	85.7	88.0	90.0	91.3	93.9	98.5	103.7	106.9	108.8	112.2	118.3	125.5	132.5
27	Metal products mfg	98.6	98.6	98.7	97.8	97.0	97.1	98.5	100.6	102.0	102.8	103.9	106.2	108.2	112.0
28	Machinery and equipment mfg	92.5	90.7	90.0	91.8	95.8	99.9	101.8	102.4	104.9	110.2	116.0	119.5	121.7	123.4
29	Other manufacturing	78.7	80.4	82.6	84.4	86.7	87.7	86.6	86.0	88.9	94.9	102.4	107.5	110.8	112.8
	Total manufacturing	95.6	95.2	95.2	95.8	97.3	99.1	100.7	101.9	103.5	105.9	109.2	112.4	115.2	117.3

TABLE 6. PERCENTAGE CHANGES IN INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES
BY SUBDIVISION — TREND ESTIMATES

ANZSIC Sub- Divn.	Industry	Change from preceding quarter													
		1991-92			1992-93			1993-94			1994-95				
		Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	
21	Food, beverages and tobacco mfg	0.8	1.8	2.1	2.1	2.2	2.1	1.1	0.3	-0.3	1.3	3.2	3.5	2.7	11.2
22	Textile, clothing, footwear and leather mfg	0.1	-1.4	-2.7	-1.0	1.4	2.1	0.7	-0.7	-1.5	-2.6	-3.9	-4.9	-3.5	14.0
23	Wood and paper products mfg	-0.7	3.4	-3.2	-1.2	1.0	1.2	1.2	-0.1	0.5	1.3	2.5	2.8	2.2	9.0
24	Printing, publishing and recorded media mfg	-1.7	-0.1	0.9	1.7	1.4	0.6	0.7	2.2	5.5	7.5	5.1	2.6	0.8	16.9
25	Petroleum, coal, chemical & assoc products mfg	-0.9	-1.3	-1.0	-0.1	0.2	0.5	1.5	2.7	3.1	2.7	1.9	1.6	1.0	7.4
26	Non-metallic mineral products mfg	0.2	2.7	2.3	1.4	2.8	4.9	5.3	3.1	1.8	3.1	5.4	6.1	5.6	21.8
27	Metal products mfg	—	0.1	-0.9	0.8	0.1	1.4	2.1	1.4	0.8	1.1	2.2	2.8	2.6	8.9
28	Machinery and equipment mfg	-1.9	-0.8	2.0	4.4	4.3	1.9	0.6	2.4	5.1	5.3	3.0	1.8	1.4	12.0
29	Other manufacturing	2.2	2.7	2.2	2.7	1.2	-1.3	-0.7	3.4	6.7	7.9	5.0	3.1	1.8	18.9
	Total manufacturing	-0.4	—	0.6	1.6	1.8	1.6	1.2	1.6	2.3	3.1	2.9	2.5	1.8	10.8

TABLE 7. INDEXES OF INDUSTRIAL GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY INDUSTRY — ORIGINAL.

Index numbers (Base : 1989-90 = 100.0)

	Mining excluding Services to mining	Manufacturing	Electricity, gas and water	Total
1976-77	56.5	78.8	57.3	70.9
1977-78	57.9	78.5	58.1	71.2
1978-79	59.4	81.7	61.2	74.0
1979-80	58.2	85.2	65.4	76.3
1980-81	59.2	87.0	68.3	78.0
1981-82	58.8	89.1	71.9	79.7
1982-83	61.1	81.8	73.9	76.1
1983-84	65.5	83.1	77.0	78.5
1984-85	74.0	87.3	81.8	84.1
1985-86	82.5	87.8	84.8	86.4
1986-87	78.5	90.0	86.8	87.5
1987-88	88.5	96.3	91.0	94.1
1988-89	91.8	102.0	95.3	99.0
1989-90	100.0	100.0	100.0	100.0
1990-91	104.8	98.0	102.0	99.9
1991-92	107.0	95.5	103.5	98.9
1992-93	108.0	99.5	106.0	102.1
1993-94	109.8	107.8	107.5	107.8
1978-79 — Sept.	60.1	82.0	62.2	74.5
Dec.	59.8	85.4	59.0	76.1
Mar.	57.1	76.6	61.0	70.2
June	60.6	82.7	62.4	75.1
1979-80 — Sept.	62.8	87.5	67.0	79.2
Dec.	62.1	88.9	64.3	79.5
Mar.	53.7	80.3	64.7	72.0
June	54.0	84.1	65.6	74.5
1980-81 — Sept.	60.2	87.8	69.7	78.9
Dec.	59.1	91.9	67.7	80.9
Mar.	59.4	81.2	66.7	74.3
June	58.2	87.0	68.9	77.9
1981-82 — Sept.	56.7	91.5	73.8	80.8
Dec.	60.4	93.9	69.6	82.6
Mar.	55.5	82.0	70.5	74.3
June	62.5	89.0	73.7	80.9
1982-83 — Sept.	60.9	90.0	77.3	81.5
Dec.	62.4	83.6	73.3	77.5
Mar.	58.1	72.4	71.4	69.3
June	62.8	81.2	73.7	76.2
1983-84 — Sept.	64.6	83.8	78.2	78.9
Dec.	64.2	85.9	75.4	79.6
Mar.	64.9	78.3	75.8	75.3
June	68.4	84.2	78.5	80.2
1984-85 — Sept.	73.0	90.0	84.0	86.2
Dec.	73.0	89.0	81.0	84.7
Mar.	71.0	81.0	80.0	78.9
June	79.0	89.0	82.0	86.5
1985-86 — Sept.	90.0	91.0	87.0	90.1
Dec.	84.0	93.0	82.0	89.8
Mar.	81.0	81.0	84.0	81.3
June	75.0	86.0	86.0	84.3
1986-87 — Sept.	78.0	92.0	89.0	89.1
Dec.	77.0	93.0	84.0	88.9
Mar.	78.0	83.0	86.0	82.7
June	81.0	92.0	88.0	89.4
1987-88 — Sept.	87.0	97.0	93.0	94.2
Dec.	92.0	100.0	90.0	97.1
Mar.	88.0	91.0	91.0	90.4
June	87.0	97.0	90.0	94.5
1988-89 — Sept.	94.0	103.0	96.0	100.1
Dec.	93.0	108.0	95.0	103.2
Mar.	89.0	95.0	94.0	93.7
June	91.0	102.0	96.0	98.9
1989-90 — Sept.	101.0	103.0	103.0	102.7
Dec.	96.0	104.0	99.0	101.7
Mar.	99.0	94.0	99.0	95.6
June	104.0	99.0	99.0	100.0
1990-91 — Sept.	109.0	102.0	104.0	103.8
Dec.	107.0	103.0	102.0	103.6
Mar.	99.0	92.0	101.0	94.8
June	104.0	95.0	101.0	97.4
1991-92 — Sept.	110.0	98.0	107.0	101.8
Dec.	107.0	99.0	103.0	101.1
Mar.	104.0	90.0	102.0	94.3
June	107.0	95.0	102.0	98.4
1992-93 — Sept.	111.0	99.0	109.0	102.7
Dec.	107.0	103.0	102.0	103.8
Mar.	104.0	95.0	105.0	98.3
June	110.0	101.0	108.0	103.4
1993-94 — Sept.	113.0	105.0	110.0	106.8
Dec.	105.0	111.0	108.0	109.2
Mar.	108.0	104.0	106.0	104.8
June	113.0	111.0	106.0	110.5
1994-95 — Sept.	119.0	118.0	114.0	117.5
Dec.	113.0	123.0	110.0	119.2

TABLE 8. INDEXES OF INDUSTRIAL GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY INDUSTRY — SEASONALLY ADJUSTED AND TREND ESTIMATES
Index numbers (Base : 1989-90 = 100.0)

	<i>Seasonally adjusted</i>				<i>Trend estimates</i>			
	<i>Mining excluding Services to mining</i>	<i>Manufacturing</i>	<i>Electricity, gas and water</i>	<i>Total</i>	<i>Mining excluding Services to mining</i>	<i>Manufacturing</i>	<i>Electricity, gas and water</i>	<i>Total</i>
1978-79 —								
Sept.	59.1	79.9	59.5	72.6	58.3	80.4	59.4	72.6
Dec.	58.5	81.1	60.0	73.1	58.5	81.3	60.6	73.4
Mar.	59.1	82.6	62.3	74.5	59.1	82.5	61.7	74.4
June	60.7	83.3	62.9	75.5	60.4	83.7	63.0	75.7
1979-80 —								
Sept.	61.6	85.2	64.3	77.1	60.8	84.7	64.3	76.6
Dec.	60.8	84.6	65.2	76.6	59.0	85.5	65.2	76.6
Mar.	55.6	86.7	66.1	76.5	56.5	85.5	65.8	76.0
June	54.2	84.6	66.1	74.9	55.4	85.4	66.4	75.8
1980-81 —								
Sept.	58.8	85.1	67.0	76.6	56.8	86.0	67.2	76.5
Dec.	58.0	87.6	68.6	78.1	59.0	86.8	68.0	77.8
Mar.	61.6	87.7	68.4	79.1	59.3	87.7	68.8	78.5
June	58.5	87.4	69.2	78.2	58.2	88.1	69.4	78.5
1981-82 —								
Sept.	55.4	88.5	70.7	78.2	57.0	88.7	70.1	78.6
Dec.	59.3	89.7	70.6	80.0	57.3	89.4	71.2	79.3
Mar.	57.5	88.8	72.4	79.2	58.9	89.8	72.5	80.1
June	62.9	89.1	74.1	81.0	60.2	88.7	73.7	80.0
1982-83 —								
Sept.	59.4	86.9	74.2	78.8	60.3	85.4	74.2	78.1
Dec.	61.1	80.0	74.2	75.1	60.2	81.7	74.0	75.8
Mar.	60.0	78.3	73.2	73.6	60.8	79.6	73.7	74.7
June	63.3	81.2	74.1	76.4	61.7	79.9	74.1	75.2
1983-84 —								
Sept.	63.0	80.9	75.1	76.3	62.5	81.5	75.0	76.5
Dec.	62.8	82.5	76.5	77.3	63.8	82.8	76.4	77.8
Mar.	67.0	84.6	77.7	80.0	65.9	84.0	77.7	79.3
June	69.1	84.1	78.9	80.5	68.4	85.0	79.1	80.8
1984-85 —								
Sept.	70.0	88.0	80.0	83.7	69.0	86.2	81.0	82.4
Dec.	71.0	85.0	82.0	81.8	72.0	86.3	82.0	83.0
Mar.	73.0	87.0	82.0	83.7	76.0	87.2	82.0	84.3
June	81.0	90.0	82.0	87.2	81.0	88.5	83.0	86.2
1985-86 —								
Sept.	87.0	89.0	84.0	87.6	85.0	89.0	83.0	87.4
Dec.	83.0	89.0	83.0	86.7	85.0	88.0	84.0	86.9
Mar.	83.0	87.0	86.0	86.1	82.0	87.3	86.0	86.1
June	77.0	87.0	87.0	85.1	78.0	87.7	86.0	85.7
1986-87 —								
Sept.	75.0	90.0	86.0	86.6	76.0	88.3	86.0	85.7
Dec.	76.0	89.0	85.0	85.8	77.0	89.1	86.0	86.4
Mar.	80.0	90.0	87.0	87.5	79.0	90.3	87.0	87.8
June	83.0	93.0	88.0	90.3	83.0	92.0	88.0	89.8
1987-88 —								
Sept.	84.0	94.0	89.0	91.7	86.0	94.0	90.0	92.0
Dec.	90.0	95.0	91.0	93.8	89.0	95.6	91.0	93.7
Mar.	91.0	97.0	92.0	95.5	90.0	96.8	92.0	94.9
June	89.0	98.0	92.0	95.5	91.0	98.5	92.0	96.2
1988-89 —								
Sept.	91.0	100.0	93.0	97.3	91.0	100.3	94.0	97.5
Dec.	91.0	103.0	96.0	99.7	91.0	101.6	95.0	98.8
Mar.	92.0	101.0	95.0	98.7	92.0	102.2	96.0	99.6
June	93.0	103.0	97.0	100.0	94.0	101.7	97.0	99.6
1989-90 —								
Sept.	97.0	101.0	99.0	99.9	95.0	100.7	99.0	99.4
Dec.	94.0	99.0	99.0	98.5	98.0	99.9	100.0	99.6
Mar.	103.0	100.0	100.0	100.5	102.0	99.6	100.0	100.1
June	105.0	100.0	101.0	101.1	105.0	99.8	101.0	100.9
1990-91 —								
Sept.	105.0	100.0	101.0	101.0	106.0	99.7	102.0	101.1
Dec.	106.0	99.0	103.0	100.6	105.0	98.7	102.0	100.4
Mar.	103.0	98.0	103.0	99.4	105.0	97.5	103.0	99.5
June	105.0	96.0	103.0	98.5	105.0	96.4	103.0	98.9
1991-92 —								
Sept.	106.0	96.0	103.0	99.1	106.0	95.6	103.0	98.6
Dec.	107.0	95.0	104.0	98.3	107.0	95.2	104.0	98.6
Mar.	108.0	95.0	103.0	98.7	108.0	95.2	104.0	98.8
June	108.0	96.0	104.0	99.4	108.0	95.8	104.0	99.2
1992-93 —								
Sept.	107.0	97.0	105.0	100.0	107.0	97.3	104.0	100.1
Dec.	107.0	99.0	103.0	101.0	108.0	99.1	105.0	101.5
Mar.	108.0	101.0	106.0	102.9	109.0	100.7	106.0	103.0
June	110.0	102.0	109.0	104.5	109.0	101.9	107.0	104.0
1993-94 —								
Sept.	108.0	102.0	105.0	104.0	108.0	103.5	108.0	105.0
Dec.	105.0	106.0	109.0	106.2	109.0	105.9	108.0	106.7
Mar.	113.0	109.0	107.0	109.8	111.0	109.2	108.0	109.3
June	113.0	112.0	108.0	111.7	113.0	112.4	109.0	112.0
1994-95 —								
Sept.	114.0	116.0	109.0	114.5	114.0	115.2	109.0	114.2
Dec.	113.0	118.0	111.0	115.9	114.0	117.3	111.0	115.8

TABLE 9. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY SUBDIVISION — ORIGINAL

	<i>Food, beverages and tobacco mfg</i>	<i>Textile, clothing footwear and leather mfg</i>	<i>Wood and paper products mfg</i>	<i>Printing, publishing and recorded media</i>	<i>Petroleum, coal, chemical and assoc products mfg</i>
1976-77	81.2	89.4	93.6	67.0	74.8
1977-78	84.2	89.1	90.2	68.8	77.7
1978-79	85.5	94.0	93.4	72.5	81.8
1979-80	86.2	96.7	96.4	77.3	83.9
1980-81	87.2	98.7	99.9	79.2	83.7
1981-82	87.5	98.4	101.4	81.2	86.6
1982-83	87.2	91.9	89.5	77.0	84.0
1983-84	86.9	99.0	94.0	80.3	87.2
1984-85	87.9	102.4	98.6	87.4	89.4
1985-86	86.6	108.4	106.2	87.7	89.3
1986-87	91.8	107.9	102.5	90.8	92.5
1987-88	97.1	109.4	108.6	99.5	99.1
1988-89	99.7	111.5	118.9	104.1	101.5
1989-90	100.0	100.0	100.0	100.0	100.0
1990-91	102.2	97.5	97.4	97.1	103.7
1991-92	102.4	92.2	98.7	92.0	101.8
1992-93	109.3	90.6	94.6	95.0	100.7
1993-94	113.9	84.2	96.9	107.6	109.7
1978-79 — Sept.	84.4	95.2	99.2	71.9	84.3
Dec.	92.6	94.8	101.0	74.9	83.0
Mar.	83.2	86.8	82.4	68.3	76.9
June	81.6	99.1	90.8	74.7	82.8
1979-80 — Sept.	86.3	100.1	100.8	79.9	80.9
Dec.	90.0	102.6	95.3	79.3	91.2
Mar.	83.7	89.9	89.8	73.4	80.6
June	84.7	94.2	99.6	76.4	83.0
1980-81 — Sept.	87.7	108.2	107.1	80.8	83.0
Dec.	96.9	101.8	103.8	81.9	84.2
Mar.	84.4	88.5	87.3	74.8	81.7
June	79.8	96.3	101.2	79.4	85.9
1981-82 — Sept.	85.1	112.5	109.2	83.1	87.0
Dec.	94.5	99.8	107.3	84.5	90.4
Mar.	84.2	84.7	90.0	75.3	79.3
June	86.3	96.6	99.0	82.0	89.5
1982-83 — Sept.	89.3	103.6	95.9	79.4	86.7
Dec.	93.4	86.4	90.6	80.1	85.6
Mar.	83.2	78.4	75.3	71.1	77.6
June	82.7	99.1	96.1	77.3	86.2
1983-84 — Sept.	84.2	104.7	92.9	79.2	87.0
Dec.	91.7	98.3	100.8	83.0	90.5
Mar.	84.5	91.4	86.7	75.6	91.2
June	87.3	101.5	95.5	83.3	80.0
1984-85 — Sept.	88.8	113.6	105.3	89.4	88.9
Dec.	90.7	102.1	103.0	86.3	87.5
Mar.	83.6	87.6	87.5	81.9	87.5
June	88.5	106.4	98.5	91.9	93.5
1985-86 — Sept.	85.3	110.5	109.8	94.4	91.3
Dec.	91.2	109.2	112.3	95.6	92.6
Mar.	82.8	96.8	98.8	76.4	85.9
June	86.9	117.1	103.7	84.3	87.5
1986-87 — Sept.	89.4	115.0	104.6	86.6	89.4
Dec.	98.2	114.1	108.7	97.4	95.0
Mar.	86.8	94.0	93.8	84.3	86.4
June	92.8	108.3	103.0	94.7	99.2
1987-88 — Sept.	95.8	115.5	107.3	98.7	97.5
Dec.	104.0	113.5	112.0	105.5	102.2
Mar.	94.3	95.8	102.2	95.3	98.5
June	94.1	112.7	112.9	98.5	98.1
1988-89 — Sept.	98.7	119.5	123.9	105.5	100.3
Dec.	108.4	118.1	133.4	114.9	103.4
Mar.	97.6	102.0	103.4	93.3	97.3
June	94.1	106.5	114.9	102.7	105.1
1989-90 — Sept.	100.0	110.8	110.6	103.7	100.3
Dec.	106.4	101.2	104.2	107.2	98.2
Mar.	99.0	88.1	91.5	92.8	96.6
June	94.5	99.9	93.7	96.4	105.0
1990-91 — Sept.	102.5	105.5	104.4	101.9	103.5
Dec.	108.7	106.5	96.9	103.4	106.7
Mar.	100.9	91.4	89.0	92.4	99.8
June	96.8	86.7	99.2	90.5	104.7
1991-92 — Sept.	99.9	100.5	104.6	96.7	105.0
Dec.	106.5	96.1	106.0	96.1	104.2
Mar.	101.2	85.9	94.8	85.2	98.0
June	102.1	86.2	89.2	90.0	100.1
1992-93 — Sept.	104.8	92.0	95.0	95.3	101.9
Dec.	118.2	93.5	102.5	100.4	101.4
Mar.	104.1	83.1	90.3	91.6	99.1
June	110.0	93.9	90.7	92.8	100.3
1993-94 — Sept.	112.0	92.2	100.0	98.8	107.6
Dec.	120.3	79.6	101.1	110.7	111.0
Mar.	109.8	83.1	92.3	104.3	107.2
June	113.5	82.0	94.0	116.7	113.0
1994-95 — Sept.	122.7	82.8	108.3	122.3	118.1
Dec.	132.9	79.8	110.0	127.3	118.5

**TABLE 9. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY SUBDIVISION — ORIGINAL—continued**
Index numbers (Base: 1989-90 = 100.0)

	<i>Non-metallic mineral products mfg</i>	<i>Metal products mfg</i>	<i>Machinery and equipment mfg</i>	<i>Other mfg</i>	<i>Total mfg</i>
1976-77	81.2	63.8	81.6	68.7	78.8
1977-78	78.3	63.7	76.4	68.2	78.5
1978-79	80.4	67.9	77.7	73.9	81.7
1979-80	85.8	74.1	84.5	74.8	85.2
1980-81	88.0	77.6	80.0	77.2	87.0
1981-82	89.9	77.6	84.9	80.5	89.1
1982-83	77.4	67.1	80.7	73.2	81.8
1983-84	78.0	74.4	79.4	75.1	83.1
1984-85	84.3	81.3	86.6	79.6	87.3
1985-86	92.0	81.0	85.1	78.9	87.8
1986-87	87.6	84.3	87.1	83.2	90.0
1987-88	92.0	91.3	91.8	95.2	96.3
1988-89	103.1	97.3	99.9	99.5	102.0
1989-90	100.0	100.0	100.0	100.0	100.0
1990-91	90.0	99.3	96.8	85.0	98.0
1991-92	87.6	98.5	91.5	82.0	95.5
1992-93	96.5	97.5	100.9	86.8	99.5
1993-94	110.0	103.0	113.1	97.3	107.8
1978-79 — Sept.	79.3	65.7	78.9	76.8	82.0
Dec.	81.6	68.8	77.7	76.6	85.4
Mar.	78.9	66.9	68.9	67.5	76.6
June	81.9	70.2	85.2	74.6	82.7
1979-80 — Sept.	89.8	74.8	90.2	80.6	87.5
Dec.	84.7	73.0	92.7	78.6	88.9
Mar.	77.3	77.4	72.7	68.0	80.3
June	91.4	71.3	82.4	72.0	84.1
1980-81 — Sept.	89.2	75.4	80.6	79.1	87.8
Dec.	92.6	80.8	82.9	83.8	91.9
Mar.	84.7	75.2	70.2	68.4	81.2
June	85.4	79.1	86.3	77.3	87.0
1981-82 — Sept.	88.9	81.9	86.9	83.5	91.5
Dec.	98.0	77.8	86.2	88.9	93.9
Mar.	83.6	73.1	72.5	74.2	82.0
June	88.9	77.4	94.0	75.3	89.0
1982-83 — Sept.	82.9	74.9	97.2	82.7	90.0
Dec.	82.3	62.2	81.7	75.9	83.6
Mar.	64.7	59.6	65.7	64.9	72.4
June	79.8	71.8	78.3	69.3	81.2
1983-84 — Sept.	83.6	77.8	84.3	74.4	83.8
Dec.	79.7	73.8	80.4	79.7	85.9
Mar.	73.8	68.7	69.5	73.0	78.3
June	74.7	77.4	83.2	73.4	84.2
1984-85 — Sept.	85.4	83.3	89.8	89.7	90.0
Dec.	85.1	83.4	87.8	85.8	89.0
Mar.	77.8	74.3	79.2	71.2	81.0
June	88.7	84.0	89.5	71.6	89.0
1985-86 — Sept.	97.7	87.0	89.0	79.9	91.0
Dec.	95.5	85.3	92.0	85.1	93.0
Mar.	84.9	73.9	77.2	70.1	81.0
June	90.0	77.9	82.3	80.4	86.0
1986-87 — Sept.	90.0	88.2	95.3	83.8	92.0
Dec.	92.9	86.4	83.9	86.2	93.9
Mar.	78.3	77.7	80.9	75.9	83.0
June	89.2	85.0	88.1	86.7	92.0
1987-88 — Sept.	89.3	92.7	93.9	94.7	97.0
Dec.	97.2	95.1	90.9	101.3	100.0
Mar.	91.4	85.2	84.0	88.4	91.0
June	90.0	92.0	98.2	96.2	97.0
1988-89 — Sept.	105.5	98.3	100.2	100.4	103.0
Dec.	109.1	98.6	102.9	110.0	108.0
Mar.	101.9	93.5	90.2	85.5	95.0
June	95.8	98.7	106.3	102.1	102.0
1989-90 — Sept.	105.6	103.6	104.1	96.7	103.0
Dec.	105.1	101.3	103.5	109.7	104.0
Mar.	94.7	93.3	92.3	85.4	94.0
June	94.6	101.8	100.0	108.3	99.0
1990-91 — Sept.	98.0	101.6	103.0	97.0	102.0
Dec.	95.4	101.6	101.0	97.8	103.0
Mar.	83.1	96.4	85.5	73.2	92.0
June	83.5	97.4	97.5	71.8	95.0
1991-92 — Sept.	90.5	101.8	95.9	83.4	98.0
Dec.	87.3	99.2	94.9	92.0	99.0
Mar.	80.6	94.1	82.3	69.6	90.0
June	92.1	98.9	92.8	82.8	95.0
1992-93 — Sept.	94.1	97.2	100.5	92.0	99.0
Dec.	93.3	98.4	103.1	94.1	103.0
Mar.	93.6	94.5	96.3	79.2	95.0
June	105.0	100.0	103.6	81.8	101.0
1993-94 — Sept.	107.3	103.4	106.0	91.0	105.0
Dec.	113.4	106.2	115.5	102.4	111.0
Mar.	105.9	97.7	109.2	95.8	104.0
June	113.3	104.5	121.6	100.0	111.0
1994-95 — Sept.	131.3	113.0	124.0	116.7	118.0
Dec.	138.2	113.4	130.7	124.3	123.0

TABLE 10. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY SUBDIVISION — SEASONALLY ADJUSTED
Index numbers (Base : 1989-90 = 100.0)

	<i>Food, beverages and tobacco mfg</i>	<i>Textile, clothing footwear and leather mfg</i>	<i>Wood and paper products mfg</i>	<i>Printing, publishing and recorded media</i>	<i>Petroleum, coal, chemical and assoc. products mfg</i>
1978-79 --					
Sept.	84.8	88.9	94.0	69.3	84.0
Dec.	86.1	91.8	95.4	71.4	80.6
Mar.	85.9	95.9	92.4	73.2	80.6
June	84.8	99.4	90.7	75.3	81.8
1979-80 --					
Sept.	86.8	92.7	95.4	77.2	80.3
Dec.	83.5	100.2	90.2	75.7	88.7
Mar.	86.6	99.9	100.0	78.8	84.7
June	88.1	94.4	99.7	76.7	82.0
1980-81 --					
Sept.	88.2	99.0	101.1	78.1	82.3
Dec.	89.9	100.2	98.2	78.3	81.8
Mar.	87.4	98.7	98.0	80.1	86.0
June	82.8	96.5	101.3	79.4	84.7
1981-82 --					
Sept.	85.5	102.2	103.3	80.8	86.2
Dec.	87.8	98.4	101.7	80.9	88.1
Mar.	87.3	94.9	101.1	80.8	83.5
June	89.3	96.7	99.3	81.8	88.1
1982-83 --					
Sept.	89.7	93.3	90.5	77.5	85.7
Dec.	87.1	85.7	85.8	76.5	83.7
Mar.	86.4	88.1	84.7	76.4	81.2
June	85.3	99.4	96.2	76.9	85.3
1983-84 --					
Sept.	84.6	94.4	87.8	77.8	86.2
Dec.	85.7	97.6	95.2	78.8	89.0
Mar.	87.6	102.8	97.6	81.3	94.5
June	89.8	101.6	95.6	82.9	79.2
1984-85 --					
Sept.	89.7	107.3	101.4	88.0	88.7
Dec.	84.8	98.6	97.6	80.0	85.7
Mar.	87.3	100.0	95.5	89.7	90.0
June	90.3	103.5	99.7	92.8	93.0
1985-86 --					
Sept.	86.2	104.5	105.7	93.0	91.1
Dec.	85.2	105.4	106.4	88.6	90.7
Mar.	86.3	110.3	107.8	83.5	88.4
June	88.9	114.3	104.8	85.2	86.9
1986-87 --					
Sept.	90.3	108.6	101.0	85.2	89.3
Dec.	91.8	110.2	103.0	90.3	93.0
Mar.	90.1	106.4	102.0	91.9	89.0
June	95.4	106.3	104.1	95.9	98.4
1987-88 --					
Sept.	96.5	109.3	103.8	97.1	97.4
Dec.	97.3	109.4	106.3	98.0	99.9
Mar.	97.4	107.6	110.7	103.2	101.8
June	97.5	111.5	114.1	100.3	97.0
1988-89 --					
Sept.	99.1	113.0	119.9	103.6	100.2
Dec.	101.7	113.9	126.9	107.1	101.2
Mar.	100.2	113.3	111.3	100.4	100.7
June	98.1	106.3	116.5	105.1	103.8
1989-90 --					
Sept.	100.2	104.9	107.1	101.5	99.8
Dec.	99.9	97.7	99.3	100.4	96.3
Mar.	101.3	96.8	98.0	99.1	100.1
June	98.6	100.6	95.6	99.1	103.8
1990-91 --					
Sept.	102.6	100.1	101.0	99.5	102.7
Dec.	102.2	102.7	92.4	97.0	104.9
Mar.	103.2	99.5	94.5	98.2	103.3
June	100.9	87.6	102.2	93.3	103.8
1991-92 --					
Sept.	100.1	95.9	101.0	94.4	103.8
Dec.	100.1	92.5	100.9	90.4	102.5
Mar.	103.6	92.8	100.2	90.2	101.5
June	106.1	87.4	92.5	93.0	99.5
1992-93 --					
Sept.	105.2	88.1	91.7	93.2	100.5
Dec.	111.2	89.9	97.4	94.4	99.7
Mar.	106.8	89.3	95.1	96.8	102.5
June	114.0	95.4	94.7	95.8	100.1
1993-94 --					
Sept.	112.5	88.7	96.4	96.8	105.8
Dec.	113.1	76.4	95.9	104.0	109.2
Mar.	112.8	89.0	97.1	110.1	110.9
June	117.4	83.5	98.4	120.3	113.0
1994-95 --					
Sept.	123.5	79.6	104.3	120.1	115.8
Dec.	124.8	76.7	104.1	119.5	116.6

TABLE 10. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY SUBDIVISION — SEASONALLY ADJUSTED *continued*
Index numbers (Base : 1989-90 = 100.0)

	<i>Non-metallic mineral products mfg</i>	<i>Metal products mfg</i>	<i>Machinery and equipment mfg</i>	<i>Other mfg</i>	<i>Total mfg</i>
1978-79 — Sept.	77.4	64.8	75.9	72.1	79.9
Dec.	77.8	67.3	74.5	73.4	81.1
Mar.	84.3	69.8	78.9	75.6	82.6
June	82.1	70.4	81.6	75.6	83.3
1979-80 — Sept.	87.5	73.2	86.4	75.9	85.2
Dec.	80.8	71.6	89.0	75.0	84.6
Mar.	82.5	81.1	83.7	75.6	86.7
June	91.6	71.3	79.0	73.6	84.6
1980-81 — Sept.	86.7	73.0	76.6	75.0	85.1
Dec.	88.7	79.6	79.8	79.7	87.6
Mar.	90.5	79.5	81.3	75.3	87.7
June	85.5	79.1	82.7	79.7	87.4
1981-82 — Sept.	86.5	78.8	81.8	79.3	88.5
Dec.	94.2	76.9	83.4	84.0	89.7
Mar.	89.5	77.9	84.3	81.0	88.8
June	88.9	77.0	90.0	78.1	89.1
1982-83 — Sept.	80.4	71.7	90.8	78.8	86.9
Dec.	79.0	61.7	79.6	71.7	80.0
Mar.	69.2	63.9	76.4	70.3	78.3
June	79.6	71.3	75.1	72.3	81.2
1983-84 — Sept.	81.4	74.1	78.5	71.1	80.9
Dec.	76.5	73.0	78.5	75.1	82.5
Mar.	79.2	74.0	80.4	79.0	84.6
June	74.5	76.8	79.9	76.2	84.1
1984-85 — Sept.	82.8	79.9	86.1	85.5	88.0
Dec.	80.9	80.2	84.7	80.2	85.0
Mar.	83.4	80.7	86.5	78.5	87.0
June	90.6	84.6	88.9	73.3	90.0
1985-86 — Sept.	94.7	83.4	85.3	76.3	89.0
Dec.	90.7	82.2	88.8	79.3	89.0
Mar.	90.4	80.1	84.5	77.5	87.0
June	92.2	78.5	81.5	81.9	87.0
1986-87 — Sept.	87.1	84.6	91.5	80.6	90.0
Dec.	88.3	83.4	81.0	79.9	89.0
Mar.	82.9	83.9	88.6	84.7	90.0
June	92.0	85.6	87.0	87.5	93.0
1987-88 — Sept.	86.4	89.1	90.3	91.9	94.0
Dec.	92.5	92.2	87.9	92.9	95.0
Mar.	96.3	91.5	92.2	99.3	97.0
June	93.3	92.6	96.8	96.7	98.0
1988-89 — Sept.	101.8	94.7	96.5	98.2	100.0
Dec.	104.2	96.1	99.4	99.9	103.0
Mar.	107.1	99.6	99.1	96.9	101.0
June	99.7	99.2	104.5	102.5	103.0
1989-90 — Sept.	101.5	100.1	100.3	94.6	101.0
Dec.	100.8	99.1	100.1	99.2	99.0
Mar.	99.4	98.6	101.5	96.9	100.0
June	98.2	102.1	98.1	109.3	100.0
1990-91 — Sept.	93.9	98.7	99.7	94.6	100.0
Dec.	92.0	99.7	97.6	88.2	99.0
Mar.	87.5	101.4	93.7	82.9	98.0
June	86.0	97.5	95.7	73.3	96.0
1991-92 — Sept.	86.8	99.3	93.1	80.9	96.0
Dec.	84.5	97.4	91.5	83.0	95.0
Mar.	85.2	98.5	89.9	78.0	95.0
June	94.0	99.1	91.3	85.7	96.0
1992-93 — Sept.	90.4	95.1	97.7	88.3	97.0
Dec.	90.3	96.5	99.2	85.3	99.0
Mar.	99.2	98.9	104.8	88.0	101.0
June	106.8	100.1	102.2	85.7	102.0
1993-94 — Sept.	103.2	101.2	103.4	86.7	102.0
Dec.	109.8	104.1	111.0	93.2	106.0
Mar.	112.3	102.2	118.7	106.2	109.0
June	115.0	104.7	120.0	105.2	112.0
1994-95 — Sept.	126.4	110.7	121.0	111.0	116.0
Dec.	134.0	111.1	125.5	113.2	118.0

TABLE 11. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY SUBDIVISION --- TREND ESTIMATES

		Index numbers (Base : 1989-90 = 100.0)				
		<i>Food, beverages and tobacco mfg</i>	<i>Textile, clothing footwear and leather mfg</i>	<i>Wood and paper products mfg</i>	<i>Printing, publishing and recorded media</i>	<i>Petroleum, coal, chemical and assoc. products mfg</i>
1978-79	Sept.	85.2	90.7	93.8	69.7	82.7
	Dec.	85.4	92.5	93.6	71.5	82.7
	Mar.	85.8	94.5	92.2	73.7	81.6
	June	85.6	96.0	91.4	75.5	81.9
1979-80	Sept.	85.2	96.8	91.6	76.7	84.3
	Dec.	85.3	97.4	93.8	77.4	86.0
	Mar.	86.1	97.4	97.0	77.7	86.0
	June	87.5	97.4	99.4	77.9	84.0
1980-81	Sept.	89.0	97.7	99.4	78.3	82.8
	Dec.	88.6	98.2	98.0	78.9	83.9
	Mar.	86.6	98.5	98.4	79.8	85.2
	June	85.1	98.5	99.8	80.3	86.7
1981-82	Sept.	85.1	98.8	101.4	80.8	87.2
	Dec.	86.6	98.2	101.8	81.3	87.2
	Mar.	88.3	96.8	100.2	81.5	87.3
	June	89.0	94.2	96.4	80.5	87.2
1982-83	Sept.	88.8	90.7	90.4	78.7	86.2
	Dec.	87.7	88.5	86.4	77.0	84.6
	Mar.	86.1	89.9	86.6	76.6	83.7
	June	85.1	93.4	89.2	77.1	84.8
1983-84	Sept.	84.9	96.5	91.8	78.0	88.4
	Dec.	85.9	98.5	93.4	79.4	90.4
	Mar.	87.8	100.0	95.2	81.6	89.6
	June	88.7	101.1	96.4	83.4	87.8
1984-85	Sept.	87.3	103.7	98.8	83.9	87.1
	Dec.	87.1	101.8	97.1	85.1	87.9
	Mar.	87.5	101.1	96.9	88.0	89.6
	June	87.8	102.2	99.2	91.5	91.4
1985-86	Sept.	87.0	104.6	103.5	91.9	91.8
	Dec.	85.8	107.3	106.3	88.3	90.1
	Mar.	86.3	110.3	105.9	85.0	88.2
	June	88.5	112.0	103.9	84.2	88.1
1986-87	Sept.	90.0	111.3	101.9	86.0	88.9
	Dec.	90.9	108.9	101.2	89.1	90.6
	Mar.	92.1	107.5	101.7	92.3	92.8
	June	94.2	107.7	102.5	94.8	95.4
1987-88	Sept.	96.2	108.2	103.6	97.0	98.4
	Dec.	97.2	109.0	105.9	99.1	100.0
	Mar.	97.2	109.7	109.1	100.5	99.6
	June	98.0	111.1	115.0	102.3	99.4
1988-89	Sept.	99.4	113.4	119.3	103.4	99.3
	Dec.	100.3	114.0	120.1	103.9	100.6
	Mar.	100.0	112.2	117.3	103.7	102.1
	June	99.3	108.2	111.9	102.7	101.4
1989-90	Sept.	99.5	103.2	106.0	101.6	99.6
	Dec.	99.9	99.3	100.4	100.3	98.6
	Mar.	100.2	98.2	96.9	99.2	99.6
	June	100.4	99.3	96.6	98.9	102.1
1990-91	Sept.	101.5	101.9	95.7	98.7	103.7
	Dec.	102.4	101.0	94.8	97.8	103.9
	Mar.	102.3	97.4	95.7	96.4	103.8
	June	101.0	93.9	98.4	94.8	103.7
1991-92	Sept.	100.2	92.9	101.2	92.6	103.3
	Dec.	101.0	93.0	100.5	91.0	102.4
	Mar.	102.8	91.7	97.1	90.9	101.1
	June	105.0	89.2	94.0	91.7	100.1
1992-93	Sept.	107.2	88.3	92.9	93.3	100.0
	Dec.	109.6	89.5	93.8	94.6	100.2
	Mar.	111.9	91.4	94.9	95.2	100.7
	June	113.1	92.0	94.9	95.9	102.2
1993-94	Sept.	112.8	91.4	94.8	98.0	105.0
	Dec.	112.5	90.0	95.3	103.4	108.3
	Mar.	114.0	87.7	96.5	111.2	111.2
	June	117.7	84.3	98.9	116.9	113.3
1994-95	Sept.	121.8	80.2	101.7	119.9	115.1
	Dec.	125.1	77.4	103.9	120.9	116.3

TABLE 11. INDEXES OF MANUFACTURING GROSS PRODUCT AT AVERAGE 1989-90 PRICES,
BY SUBDIVISION — TREND ESTIMATES *continued*
Index numbers (Base : 1989-90 = 100.0)

		<i>Non-metallic</i>		<i>Machinery</i>		<i>Other</i>	<i>Total</i>
		<i>mineral</i>	<i>Metal</i>	<i>and</i>	<i>Other</i>		
		<i>products mfg</i>	<i>products mfg</i>	<i>equipment mfg</i>	<i>mfg</i>		<i>mfg</i>
1978-79	Sept.	77.4	65.7	76.4	72.3	80.4	
	Dec.	79.3	67.2	76.2	74.3	81.3	
	Mar.	82.1	69.5	78.6	75.5	82.5	
	June	84.3	70.8	83.0	76.2	83.7	
1979-80	Sept.	83.7	72.7	86.9	76.2	84.7	
	Dec.	83.3	74.9	87.5	75.7	85.5	
	Mar.	84.9	75.4	84.4	75.0	85.5	
	June	87.0	74.8	80.2	75.2	85.4	
1980-81	Sept.	89.0	75.2	78.3	76.2	86.0	
	Dec.	89.0	77.2	79.5	77.3	86.8	
	Mar.	87.6	79.7	81.6	78.1	87.7	
	June	87.6	79.5	82.7	79.1	88.1	
1981-82	Sept.	88.6	78.5	82.9	81.1	88.7	
	Dec.	90.8	78.2	83.7	82.4	89.4	
	Mar.	90.8	78.0	86.9	82.0	89.8	
	June	87.4	75.6	89.4	79.9	88.7	
1982-83	Sept.	81.5	70.0	88.0	76.7	85.4	
	Dec.	76.4	65.1	82.5	73.6	81.7	
	Mar.	74.8	65.2	77.4	71.5	79.6	
	June	76.8	69.5	76.1	71.1	79.9	
1983-84	Sept.	78.9	73.0	77.9	73.1	81.5	
	Dec.	79.2	73.9	79.3	75.2	82.8	
	Mar.	77.0	74.7	80.4	77.3	84.0	
	June	76.0	77.5	81.3	79.7	85.0	
1984-85	Sept.	81.3	79.7	84.7	84.6	86.2	
	Dec.	82.4	80.7	85.4	81.1	86.3	
	Mar.	85.5	82.1	86.1	77.7	87.2	
	June	89.9	83.5	86.9	75.7	88.5	
1985-86	Sept.	92.7	83.8	87.2	76.1	89.0	
	Dec.	92.8	82.0	85.6	77.8	88.0	
	Mar.	91.6	80.5	84.8	79.7	87.3	
	June	90.6	80.9	84.6	80.3	87.7	
1986-87	Sept.	88.8	82.5	84.9	80.7	88.3	
	Dec.	87.1	83.9	85.5	81.7	89.1	
	Mar.	86.8	84.7	86.2	84.3	90.3	
	June	87.8	86.4	87.1	87.9	92.0	
1987-88	Sept.	90.0	89.2	88.3	91.6	94.0	
	Dec.	92.1	91.3	89.3	94.9	95.6	
	Mar.	94.2	92.4	91.8	97.2	96.8	
	June	97.1	93.1	94.7	98.5	98.5	
1988-89	Sept.	101.0	94.8	96.8	98.6	100.3	
	Dec.	104.4	97.0	98.4	99.1	101.6	
	Mar.	104.9	98.9	100.2	99.5	102.2	
	June	103.0	100.0	101.2	99.1	101.7	
1989-90	Sept.	101.3	99.9	101.1	97.6	100.7	
	Dec.	100.8	99.8	100.3	98.6	99.9	
	Mar.	100.1	100.1	99.4	101.5	99.6	
	June	97.8	100.2	99.2	102.2	99.8	
1990-91	Sept.	94.9	100.5	98.0	97.8	99.7	
	Dec.	91.4	100.3	96.5	89.0	98.7	
	Mar.	88.5	100.0	95.1	80.9	97.5	
	June	86.8	99.5	93.8	78.6	96.4	
1991-92	Sept.	85.5	98.6	92.5	78.7	95.6	
	Dec.	85.7	98.6	90.7	80.4	95.2	
	Mar.	88.0	98.7	90.0	82.6	95.2	
	June	90.0	97.8	91.8	84.4	95.8	
1992-93	Sept.	91.3	97.0	95.8	86.7	97.3	
	Dec.	93.9	97.1	99.9	87.7	99.1	
	Mar.	98.5	98.5	101.8	86.6	100.7	
	June	103.7	100.6	102.4	86.0	101.9	
1993-94	Sept.	106.9	102.0	104.9	88.9	103.5	
	Dec.	108.8	102.8	110.2	94.9	105.9	
	Mar.	112.2	103.9	116.0	102.4	109.2	
	June	118.3	106.2	119.5	107.5	112.4	
1994-95	Sept.	125.5	109.2	121.7	110.8	115.2	
	Dec.	132.5	112.0	123.4	112.8	117.3	

EXPLANATORY NOTES

Introduction

This publication presents in index number form, quarterly estimates of gross product at constant prices (average 1989-90 prices) for the non-farm, goods producing sector which, for brevity, is termed the 'industrial sector' (see paragraph 3). Also presented are indexes for component industries, including individual manufacturing subdivisions.

Changes in this issue

2. Introduction of the Australian and New Zealand Standard Industrial Classification (ANZSIC) to replace the Australian Standard Industrial Classification (ASIC) has led to changes to the composition of most industries for which estimates are provided in this publication.

- (a) *Mining industry.* Only one small change whereby iron ore pelletising carried out separately from iron ore mining has been reclassified to manufacturing - within the metal products manufacturing subdivision;
- (b) *Manufacturing industry.* Changes into or out of the manufacturing industry as a whole are included below with the relevant subdivision. Only the more important changes and links have been identified. Finer details of the concordance between the ANZSIC and the ASIC are available from the ABS on request;
- (c) *Food, beverages and tobacco manufacturing.* Hot bread shops are no longer classified to this industry. They are now classified to bread retailing. Fish cleaning, filleting, freezing and related activities are now included in this industry. Under ASIC, they were classified to fish wholesaling;
- (d) *Textiles, clothing, footwear and leather manufacturing.* This industry is a composite of the ASIC subdivisions 23 - Textiles and 24 - Clothing and footwear as well as the leather and leather products manufacturing industries but without the cotton ginning industry which has been reclassified to agriculture;
- (e) *Wood and paper products manufacturing.* This industry comprises the wood and wood products manufacturing industries (except for furniture making which is now classified to the *Other manufacturing* subdivision) plus the paper and paperboard manufacturing and converting industries;
- (f) *Printing, publishing and recorded media.* This industry comprises printing and publishing along with recorded media manufacturing which was previously classified to other machinery and equipment.;
- (g) *Petroleum, coal, chemical and associated products manufacturing.* This industry comprises the ASIC subdivision 27 - Chemical, petroleum and coal products plus the plastics products manufac-

turing industries which under ASIC were classified to other manufacturing;

- (h) *Non metallic mineral products manufacturing.* This industry is, with minor exceptions, equivalent to ASIC Subdivision 28 - Non metallic minerals;
- (i) *Metal products manufacturing.* This industry is mainly a composite of the ASIC subdivisions 29 - Basic metal products and 31 - Fabricated metal products;
- (j) *Machinery and equipment manufacturing.* This industry is a composite of the ASIC subdivisions 32 - Transport equipment and 33 - Other machinery and equipment but without recorded media manufacturing;
- (k) *Other manufacturing.* This ANZSIC subdivision is not comparable to ASIC subdivision 34 - Miscellaneous manufacturing. The main components under ANZSIC are furniture manufacturing, prefabricated buildings manufacturing, jewellery and silverware manufacturing and toys, games and sporting goods manufacturing.

Scope of the estimates

3. The scope of the industrial sector referred to in this publication is defined to include all *establishments* classified to the Australian and New Zealand Standard Industrial Classification (ANZSIC) Division B (Mining), excluding ANZSIC subdivision 15 (Services to mining); Division C (Manufacturing); and Division D (Electricity, gas and water). The base year weights used in constructing the indexes in this publication have been derived from establishment data. However, the quarterly indicator series used for manufacturing are based on data relating to *business units* which may cover more than one establishment.

The table below sets out the base year weights associated with the major components of the industrial sector, and each manufacturing subdivision.

	1989-90 Weight %
<i>Mining (excluding services to mining)</i>	18.0
<i>Manufacturing</i>	67.5
Food, beverages and tobacco	13.7
Textiles, clothing, footwear, leather	3.7
Wood, and paper products	3.5
Printing, publishing, recorded media	6.4
Petroleum, coal, chemicals etc	6.5
Non-metallic mineral products	3.4
Metal products	11.4
Machinery and equipment	15.6
Other manufacturing	3.3
<i>Electricity, gas and water</i>	14.5
Total Industrial sector	100.0

4. The use of Manufacturers' sales and stocks data means that the manufacturing indexes have three important limitations as measures of manufacturing production:

- (a) changes in quarterly production by manufacturing establishments of non-manufacturing businesses are not reflected in the indexes;
- (b) changes in a part of the quarterly production of non-manufacturing establishments of manufacturing businesses are reflected in the indexes; and
- (c) changes in quarterly production by government bodies such as shipyards and railway workshops are not reflected in the indexes.

5. The scope of the data used in the manufacturing indicator series also differs slightly from the general definition of manufacturing gross product. The stocks estimates used include finished goods bought in, but not manufactured, by a business. As far as can be assessed this has not had a significant influence on the estimates.

Derivation of the estimates of gross product

6. The estimates are derived using the *gross output* method whereby base year (1989-90) estimates of gross product are extrapolated by constant price estimates of gross output. All the quarterly indexes contained in this publication have been *benchmarked*, where possible, to annual estimates (see paragraph 7 below). For further details on the derivation of constant price gross product for individual industries refer to Chapter 18 in *Australian National Accounts : Concepts, Sources and Methods* (5216.0).

Benchmarking

7. Deriving quarterly estimates presents special problems in that it is often difficult to adhere strictly to the definitions and concepts used in annual estimates. Frequently, it is not possible to use the same data sources as used for annual estimates, and alternative quarterly data sources are generally much less detailed. For example, annual estimates of gross product for the Mining industry (as published in *Australian National Accounts : National Income and Expenditure* (5204.0)) are compiled (using the double deflation method) from detailed output and input data from the annual census of mining establishments. On the other hand, the quarterly series draw on the quantities of minerals mined (gross output), reported in surveys of mining establishments. In such cases, where the quarterly estimates are inferior to the annual, the quarterly estimates are adjusted to agree with the annual estimates in such a way that preserves, as far as practical, the movements of the quarterly series. This is commonly referred to as *benchmarking*.

Data sources for quarterly output series

(i) Mining (excluding services to mining)

8. Quarterly constant price output estimates are derived for major ANZSIC classes by quantity revaluation (i.e. quantities produced each quarter multiplied by associated base year (1989-90) average prices). Estimates of quantities produced are obtained from data contained in *Quarterly Mineral Statistics* (Australian Bureau of Agriculture and Resource Economics) and *Mining Production,*

Australia (8405.0). Constant price estimates of value added are derived by the gross output method (see paragraph 6) for each ANZSIC class. Total quarterly estimates of value added are then benchmarked (see paragraph 7) to annual gross product estimates obtained from the mining census.

(ii) Manufacturing

9. Quarterly constant price estimates of gross output for 22 manufacturing industry groups (excluding petroleum) are derived by summing constant price estimates of manufacturers' sales of manufactured goods, other operating revenue (where significant) and changes in the level of stocks of finished goods and work-in-progress.

10. Constant price estimates of all components of manufacturing output are derived by price deflation, i.e. current price components (obtained from the quarterly Survey of Stocks and Manufacturers' Sales) are derived by fixed weighted producer price indexes (published in *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0)).

11. Quarterly petroleum production estimates are based on quarterly data published in *Major Energy Statistics* (released by the Department of Primary Industries and Energy).

12. Quarterly constant price estimates of output are used to derive constant price estimates of gross product at factor cost by the gross output method. The latter estimates are aggregated to 9 manufacturing ANZSIC subdivisions and then benchmarked to corresponding annual estimates of gross product at market prices (based on manufacturing census data).

(iii) Electricity

13. Quarterly quantities of electricity produced, as published in *Production of Energy Products, Australia* (8368.0), are benchmarked to annual gross product estimates based on the quantity of electricity sold (published by the Electricity Supply Association of Australia in *The Electricity Industry of Australia*).

(iv) Gas

14. Quarterly quantities of gas available through mains, are published in *Production of Energy Products, Australia* (8368.0), are benchmarked to gross product estimates derived from ABS economic census data relating to the performance of the gas production and distribution industry.

(v) Water and sewerage

15. Quarterly constant price output estimates are derived by quantity revaluation, i.e. quantities of water sold (to final consumers and for irrigation) and sewerage connections, are multiplied by average 1989-90 prices for each type of service. The quantity data are supplied by a selection of state and local government authorities. Quarterly output estimates are then benchmarked to annual constant price gross product estimates.

Sample revision

16. Each year the sample used for the survey of stocks and manufacturers' sales is revised. Differences between the old and revised samples have in general been apportioned back over the preceding quarters of each year, and incorporated in the estimates included in this publication. For more information on the sample revision, refer to *Stocks, Selected Industry Sales and Expected Sales, Australia* (5629.0).

Reliability of estimates

17. Because the measures used in the derivation of the manufacturing indexes are based on a sample survey, the indexes themselves are subject to sampling variability. In terms of original estimates the standard errors in percentage terms approximate the errors reported in *Stocks and Manufacturers' Sales, Australia* (5629.0). However, for constant price estimates the standard errors may be up to 10 per cent higher than those for the corresponding current price estimates because of the sampling variability contained in the prices data used to deflate the current price estimates. Seasonally adjusting the estimates has an insignificant effect on standard errors.

18. The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by respondents and errors made in collecting and processing data. Inaccuracies of this kind are known as non-sampling errors and may occur in any collection, whether it be a sample or a full count. In addition to the non-sampling errors which may occur in current prices estimates, there may be non-sampling errors introduced by the process of compiling constant price estimates. These further errors may arise from the introduction of additional data and from the assumptions and approximations which are necessary in compiling constant price estimates. Every effort is made to minimise non-sampling errors by careful design of forms, editing of data and efficient operating procedures.

Seasonal adjustment

19. Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences on the series may be more clearly recognized. Seasonal adjustment procedures do *not* aim to remove the irregular or non-seasonal influences which may be present in any particular quarter, such as the effect of a major industrial dispute or major plant breakdowns. Irregular factors of this nature can make it difficult to interpret the movement of the series even after adjustment for seasonal variation.

20. Seasonal adjustment may be carried out by various methods and the results may vary slightly according to the procedure adopted. Accordingly, seasonally adjusted statistics should not be regarded as in any way definitive. In interpreting particular seasonally adjusted statistics it is important to note the methods by which they have been derived and the limitations to which the methods used are subject. Details of the various seasonal adjustment methods used are available on request.

Trend estimates

21. The seasonally adjusted series can be smoothed to reduce the impact of the irregular component in the adjusted series. There are a number of ways of accomplishing this, depending on the intended uses of the smoothed series. If importance is attached to measuring the underlying change in the most recent periods, moving averages employing appropriate weighting patterns should be adopted; the choice of averaging technique will determine the degree of smoothness of the derived series. For example, a 9-term moving average will even out more of the short term fluctuation in a series (and therefore appear 'smoother') than will a 5-term moving average. However, the longer the term of the moving average the longer the series affected by revisions resulting from more recent data becoming available. Such smoothed seasonally adjusted estimates are referred to as 'trend estimates' in this publication.

22. Trend estimates included in this issue are derived using a 7-term Henderson moving average. (The weights of the 7-term average are available upon request.) As a moving average approaches the end of a time series and begins to run out of observations, asymmetric averages have been used. Unlike the asymmetric weights of the standard 7-term Henderson moving averages, the weights employed here have been tailored to suit the particular characteristics of individual manufacturing subdivisions.)

23. Users may wish to refer to the ABS Information Papers *A Guide to Interpreting Time Series — Monitoring 'Trends', An Overview* (1348.0) for more information on smoothing seasonally adjusted time series data.

Related publications

24. Users may also wish to refer to the following publications:

Australian National Accounts : National Income, Expenditure and Product (5204.0) — issued annually

Australian National Accounts : National Income, Expenditure and Product (5206.0) — issued quarterly

Australian National Accounts : Concepts, Sources and Methods (5216.0)

Manufacturing Industry, Australia (8221.0) — issued annually

Mining Industry, Australia (8402.0) — issued annually

Price Indexes of Articles Produced by Manufacturing Industry, Australia (6412.0) — issued monthly

Manufacturing Production, Australia (8301.0) — issued monthly

Stocks, Selected Industry Sales and Expected Sales, Australia (5629.0) — issued quarterly

The Australian Mining Industry (8414.0) — issued annually

25. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (1101.0). The ABS also issues on Tuesday 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.

Symbols and other usages

- nil or rounded to zero
- ANZSIC Australian and New Zealand Standard Industrial Classification
- ASIC Australian Standard Industrial Classification, 1983 edition

W. McLennan
Australian Statistician

