



1993-94

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Manufacturing Industry

South Australia

**MANUFACTURING INDUSTRY
SOUTH AUSTRALIA
1993-94**

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AUSTRALIAN BUREAU OF STATISTICS

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INQUIRIES

- *for further information about statistics in this publication and the availability of related unpublished statistics*, contact John Ridley on Sydney (02) 9268 4541 or any other ABS office.
- *for information about other ABS statistics and services*, please refer to the back page of this publication.

INTRODUCTION

ABOUT THIS ISSUE

This publication contains detailed industry statistics compiled from a census of manufacturing establishments (see paragraph 7 of the Explanatory Notes) conducted in respect of 1993–94, with some comparative statistics for earlier years. It expands and updates the information which was published in *Manufacturing Industry, Australia, 1993–94, Preliminary* (8201.0), which was released on 13 December 1995 and *Manufacturing Industry, Australia, 1993–94* (8221.0), which was released on 18 October 1996.

The 1993–94 manufacturing census sought information on employment, wages and salaries and turnover for all manufacturing establishments. In addition to data for these items, this publication contains (in table 3) data on gross product at factor cost (average 1989–90 prices).

As part of the 1993–94 manufacturing collection, a sample of approximately 18,000 establishments was asked to supply additional information on commodities produced and sold. Commodities information from this sample will be published in *Manufacturing Production, Australia: Principal Commodities Produced, 1993–94* (8365.0), to be released later in 1996.

Australian and New Zealand
Standard Industrial Classification
(ANZSIC)

This publication continues to use the Australian and New Zealand Standard Industrial Classification (ANZSIC), which replaced the Australian Standard Industrial Classification (ASIC) used prior to the 1992–93 reference year. Manufacturing collections dating back to the 1989–90 reference year have been coded to industry using ANZSIC and, therefore, all time series comparisons in this publication are made on a consistent ANZSIC basis. ASIC-based data are not available from 1992–93.

Data as contained in
this publication

As was foreshadowed in the previous issue of this publication, all data in this publication have been adjusted to allow for lags in processing new businesses to the ABS business register, and omission of some businesses from the business register. More information on these adjustments can be found in paragraphs 15 to 17 of the Explanatory Notes.

The industry code for 18,000 of the establishments included in the 1993–94 collection has been determined on an objective industry coding basis, compared to the more subjective industry coding which has occurred in each of the three previous manufacturing collections. More information on this subject can be found in paragraph 18 of the Explanatory Notes.

For the above reasons, comparison of industry class (especially) level data for 1993–94 with data for 1992–93 and earlier years as previously published should be undertaken with caution.

UNPUBLISHED DATA

A considerable amount of data from the annual manufacturing collection is available in unpublished form. More detailed information to satisfy individual user requirements may be available on request. Further details can be obtained by referring to the *Information Paper: Availability of Statistics Related to Manufacturing, 1996* (8205.0) or by contacting the NSW Office of the ABS — see page iii for contact details.

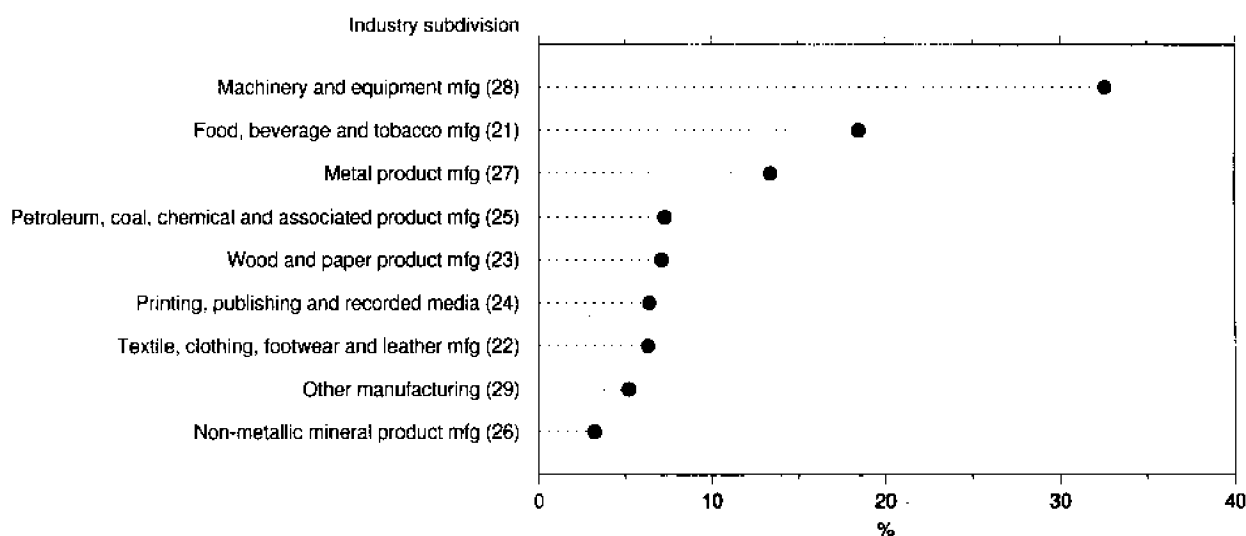
SUMMARY OF FINDINGS

Overview Turnover for the year 1993–94 by manufacturing establishments operating in South Australia was \$16,807m. This represents a 10.8% increase, in current price terms, from the \$15,172m turnover recorded for the year 1992–93. In constant price terms (1989–90 prices), manufacturing gross product increased by 9.9% in 1993–94 from 1992–93. Manufacturing employment at the end of June 1994 was 86,200, 0.5% lower than 12 months earlier. The last year that South Australia recorded an annual increase in manufacturing employment was in the 12 months to June 1989.

MANUFACTURING ESTABLISHMENT DATA

Employment (Tables 1 and 2) The 1993–94 manufacturing census recorded 86,200 persons employed at the end of June 1994. Machinery and equipment manufacturing (32.6%), Food, beverage and tobacco manufacturing (18.5%) and Metal product manufacturing (13.4%) were once again the major contributors to employment at the end of June 1994. Non-metallic mineral product manufacturing (3.2%) and Other manufacturing (5.2%) remain the smallest contributors.

DISTRIBUTION OF EMPLOYMENT BY INDUSTRY SUBDIVISION, SA, JUNE 1994



Manufacturing employment decreased by 0.5% between June 1993 and June 1994. Three of the nine industry subdivisions recorded decreases in the level of employment over this period. Petroleum, coal, chemical and associated product manufacturing (down 8.5% from 6,800 persons to 6,300 persons), Textile, clothing, footwear and leather manufacturing (down 7.1% from 5,800 persons to 5,400 persons) and Metal product manufacturing (down 7.0% from 12,400 persons to 11,500 persons) recorded the decreases. Of the four industry subdivisions to record an increase in employment, the largest in percentage terms was Wood and paper product manufacturing (up 9.6% from 5,600 persons to 6,100 persons). Employment in the remaining two industry subdivisions was unchanged – Printing, publishing and recorded media (5,500 persons) and Non-metallic mineral product manufacturing (2,800 persons).

South Australia accounted for 9.5% of persons employed in manufacturing nationally at June 1994, the same proportion as the previous year. The percentage contribution to total manufacturing employment by the other States and Territories at the end of June 1994 was: New South Wales 33.7%, Victoria 31.4%, Queensland 15.2%, Western Australia 7.2%, Tasmania 2.4%, the Australian Capital Territory 0.5% and the Northern Territory 0.3%.

South Australia accounted for 14.4% of total Australian employment in the Machinery and equipment manufacturing industry subdivision.

Longer term trends
(June 1990 to June 1994)

Employment in the South Australian manufacturing industry decreased by 15,200 persons (down 15.0% from 101,400 persons to 86,200 persons) over the period June 1990 to June 1994. Eight of the nine industry subdivisions recorded decreases over this period, with Non-metallic mineral product manufacturing (down 29.8% from 3,900 persons to 2,800 persons), Textile, clothing, footwear and leather manufacturing (down 28.4% from 7,600 persons to 5,400 persons), Metal product manufacturing (down 26.5% from 15,700 persons to 11,500 persons) and Other manufacturing (down 24.0% from 5,900 persons to 4,500 persons) recording the largest percentage decreases. Wood and paper product manufacturing, although fluctuating from year to year, was recorded at 6,100 persons for both June 1990 and June 1994.

Between June 1990 and June 1994, the decrease in employment in South Australia was the third largest in both absolute and percentage terms amongst the States and Territories. The largest decrease in both absolute and percentage terms was recorded by Victoria, where employment decreased by 72,600 persons (down 20.3% from 358,700 persons to 286,000 persons). Other large percentage decreases were recorded by Tasmania (down 20.1% from 27,000 persons to 21,600 persons) and New South Wales (down 13.6% from 354,900 persons to 306,800 persons). The other decreases were recorded by the Northern Territory (down 8.8% from 3,200 persons to 2,900 persons) and Western Australia (down 8.1% from 71,200 persons to 65,400 persons). Employment in Queensland remained unchanged at 138,500 persons. During this period, the only increase in employment amongst the States and Territories was recorded by the Australian Capital Territory (up 7.5% from 3,900 persons to 4,200 persons).

The percentage contribution by South Australia to Australian manufacturing employment has decreased marginally since June 1990, decreasing by 0.1 percentage points to 9.5%. The percentage contribution by Victoria has also declined since June 1990 (decreasing by 2.5 percentage points to 31.4%), as has Tasmania (down 0.2 percentage points to 2.4%). Queensland increased its percentage share of employment over this period (up 2.1 percentage points to 15.2%), as did Western Australia (up 0.5 percentage points to 7.2%) and New South Wales (up 0.1 percentage points to 33.7%). Both Territories showed no change over this period.

Turnover
(Tables 1 and 2)

Turnover for the year 1993-94 by manufacturing establishments operating in South Australia was \$16,807.3m. This represents a 10.8% increase, in current price terms, from \$15,171.9m turnover recorded for the year 1992-93. Machinery and equipment manufacturing remains the subdivision with the largest contribution, by far, to turnover in the manufacturing industry.

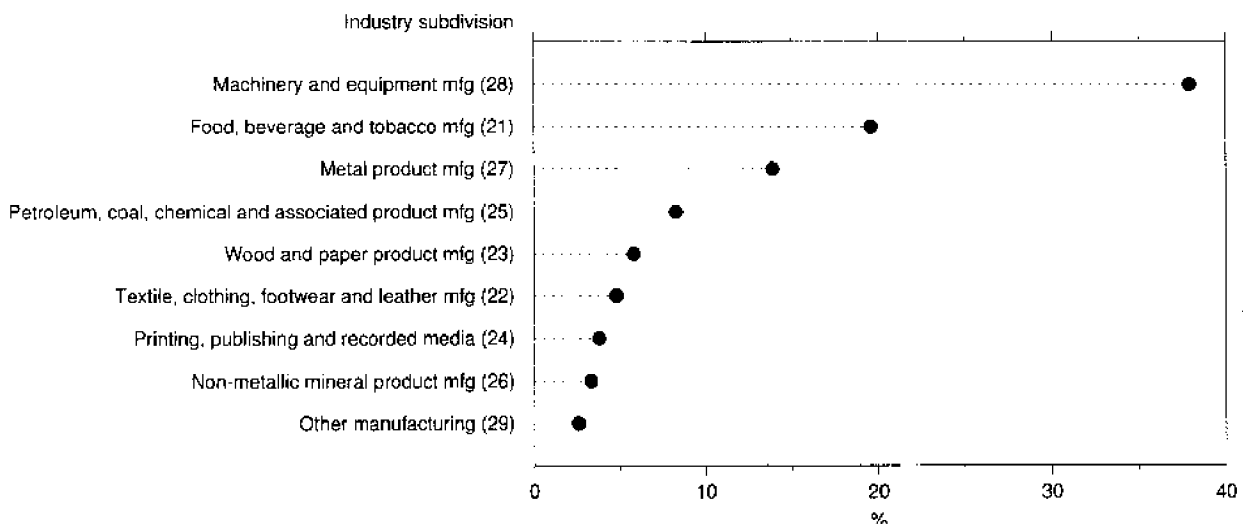
Turnover increased, in current price terms, in five of the nine industry subdivisions over the period 1992-93 to 1993-94. The subdivision recording the largest percentage increase was Machinery and equipment manufacturing (up 23.7%). This subdivision alone accounted for 74.4% of the total increase in turnover for the State from 1992-93 to 1993-94. The four industry subdivisions recording decreases, in current price terms, in turnover over the period all recorded small decreases, with the largest in percentage terms Metal product manufacturing (down 2.5%).

The industry subdivisions contributing the largest proportions to total turnover in South Australia and the most notable industry groups within those as a percentage of total turnover were:

- Machinery and equipment manufacturing (37.9%), where the industry groups Motor vehicle and part manufacturing (ANZSIC group 281 at 24.6%) and Electrical equipment and appliance manufacturing (ANZSIC group 285 at 5.3%) were the most substantial.
- Food, beverage and tobacco manufacturing (19.6%), where the industry groups Beverage and malt manufacturing (ANZSIC group 218 at 6.9%) and Meat and meat product manufacturing (ANZSIC group 211 at 4.0%) were the most substantial.
- Metal product manufacturing (13.9%), where the industry group Iron and steel manufacturing (ANZSIC group 271 at 5.8%) was the most substantial.

Industry groups making a notable contribution to total turnover and not included in the subdivisions listed above included Paper and paper product manufacturing (ANZSIC group 233 at 2.6%), Plastic product manufacturing (ANZSIC group 256 at 2.6%) and Cement, lime, plaster and concrete product manufacturing (ANZSIC group 263 at 2.2%).

DISTRIBUTION OF TURNOVER BY INDUSTRY SUBDIVISION, SA, 1993-94



The percentage contribution by South Australia to total Australian manufacturing turnover in 1993-94 was 9.1%. This represents an increase of 0.4 percentage points on the contribution reported in 1992-93. The percentage contribution to turnover by the other States and Territories in 1993-94 was: New South Wales 34.1%, Victoria 32.0%, Queensland 14.4%, Western Australia 7.5%, Tasmania 2.2%, the Northern Territory 0.4% and the Australian Capital Territory 0.3%.

South Australia accounted for 18.2% of the total Australian turnover in the Machinery and equipment manufacturing industry subdivision.

Longer term trends
(1989-90 to 1993-94)

Turnover for the manufacturing industry in South Australia increased, in current price terms, by 11.1% over the period 1989-90 to 1993-94, although almost all of this increase occurred between 1992-93 and 1993-94. Six industry subdivisions recorded increases and three recorded decreases in turnover over the period 1989-90 to 1993-94. The largest percentage increases, in current price terms, were recorded in Wood and paper product manufacturing (up 39.7% from \$699.9m to \$978.1m), Food, beverage and tobacco manufacturing (up 22.1% from \$2,698.5m to \$3,294.6m) and Petroleum, coal, chemical and associated product manufacturing (up 14.4% from \$1,222.0m to \$1,398.6m). The largest percentage decreases, in current price terms, were recorded in Other manufacturing (down 11.8% from \$487.7m to \$430.2m) and Non-metallic mineral product manufacturing (down 10.1% from \$612.0m to \$550.2m).

Three of the States increased their share of Australian turnover between 1989-90 and 1993-94. South Australia increased its contribution by 0.2 percentage points (to 9.1% of Australian turnover). The other States to increase their contribution over the period were New South Wales (up 0.7 percentage points to 34.1%) and Queensland (up 0.5 percentage points to 14.4%). The three States to record a decrease were Victoria (down 0.8 percentage points to 32.0%), Western Australia (down 0.4 percentage points to 7.5%) and Tasmania (down 0.2 percentage points to 2.2%). The Northern Territory (at 0.4%) and the Australian Capital Territory (at 0.3%) maintained their share of Australian turnover over the period.

Ratio of wages and salaries to turnover (Tables 1 and 2)

In 1993-94, the ratio of wages and salaries to turnover for South Australia's manufacturing industry was 0.15; that is, on average, 15 cents in wages and salaries is paid for each \$1.00 of turnover. This ratio is a decrease from the ratio of 0.17 measured in 1989-90 and 0.16 in 1992-93.

The wages and salaries to turnover ratio decreased in eight of the nine industry subdivisions between 1989-90 and 1993-94, with the largest falls being recorded by Textile, clothing, footwear and leather manufacturing (down from 0.21 to 0.17), Wood and paper product manufacturing (0.23 to 0.19) and Petroleum, coal, chemical and associated product manufacturing (0.17 to 0.14). The ratio for Machinery and equipment manufacturing returned to the 1989-90 amount (0.14) after having risen in the years to 1992-93.

Of the industries available for publication, the largest ratios of wages and salaries to turnover in 1993–94 were recorded in Leather and leather substitute product manufacturing (ANZSIC class 2262) (0.49), Ceramic product manufacturing (ANZSIC class 2629) (0.42) and Services to printing (ANZSIC class 2413) (0.41). Of the industries available for publication, the smallest ratios of wages and salaries to turnover were recorded in Prepared animal and bird feed manufacturing (ANZSIC class 2174) (0.06), Seafood processing (ANZSIC class 2173) (0.07) and Pump and compressor manufacturing (ANZSIC class 2866) (0.08).

Turnover per person employed
(Tables 1 and 2)

The manufacturing industry subdivisions with the highest ratios of turnover per person employed in 1993–94 were Machinery and equipment manufacturing (\$226,200) and Petroleum, coal, chemical and associated product manufacturing (\$223,200). Other manufacturing recorded the lowest value for this ratio (\$95,800). Turnover per person employed for total manufacturing in 1993–94 was \$194,900, which is 11.3% higher than the figure recorded 12 months earlier. Various factors affect the magnitude of turnover per person employed. In general, industries which are labour intensive will record lower values of turnover per person employed than will those industries which are capital intensive. This ratio may also be influenced by commodity prices.

Gross product at factor cost
(average 1989–90 prices)
(Table 3)

Constant price estimates of gross product at factor cost are the most accurate measure of the relative growth or decline of the manufacturing industry, as they discount the impact of price changes. In constant price terms, manufacturing gross product at factor cost in South Australia increased by 9.9% from \$5,390.1m in 1992–93 to \$5,921.6m in 1993–94.

Five of the nine industry subdivisions recorded an increase in constant price estimates of gross product at factor cost over the period 1992–93 to 1993–94. The largest percentage increase was recorded by Machinery and equipment manufacturing (up 20.9%), followed by Food, beverage and tobacco manufacturing (up 10.9%) and Wood and paper product manufacturing (up 7.8%). The largest percentage decrease was recorded by Textile, clothing, footwear and leather manufacturing (down 6.2%).

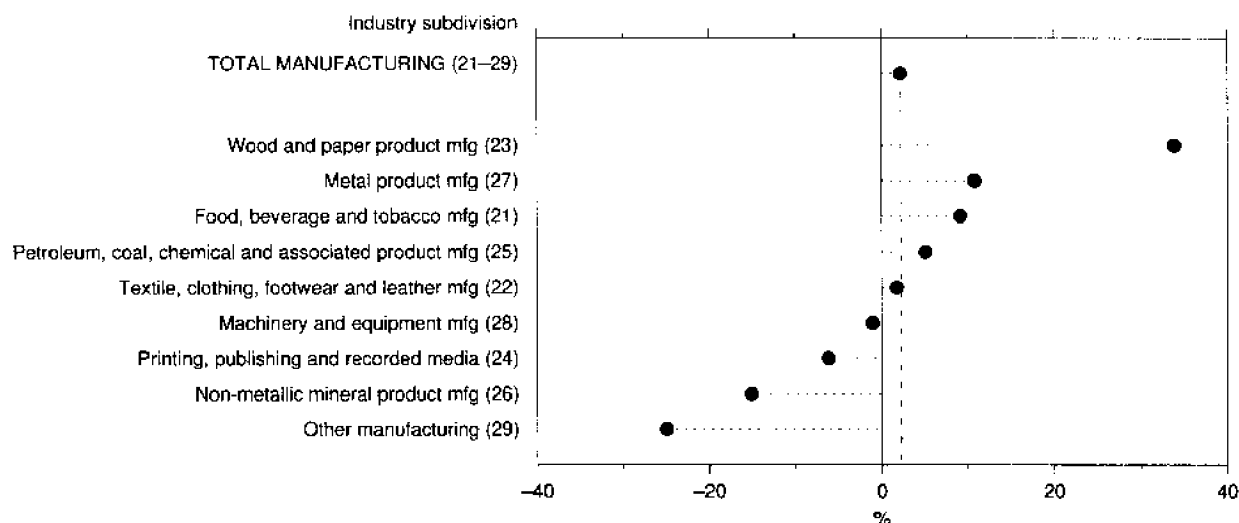
Longer term trends
(1989–90 to 1993–94)

Over the period 1989–90 to 1993–94, manufacturing gross product in constant price terms increased by 2.3%, though it had decreased each year from 1989–90 to 1992–93. Although there was this overall increase in constant price estimates of gross product at factor cost over this five year period, only five industry subdivisions recorded an increase with the other four industry subdivisions recording decreases.

The largest percentage increase, by far, was recorded by Wood and paper product manufacturing (up 33.9%), which was also the only industry subdivision to record an increase each year from 1989–90. Other subdivisions with notable percentage increases over the period were Metal product manufacturing (up 10.8%) and Food, beverage and tobacco manufacturing (up 9.2%). The largest percentage decreases were recorded by Other manufacturing (down 25.0%) and Non-metallic mineral product manufacturing (down 15.1%).

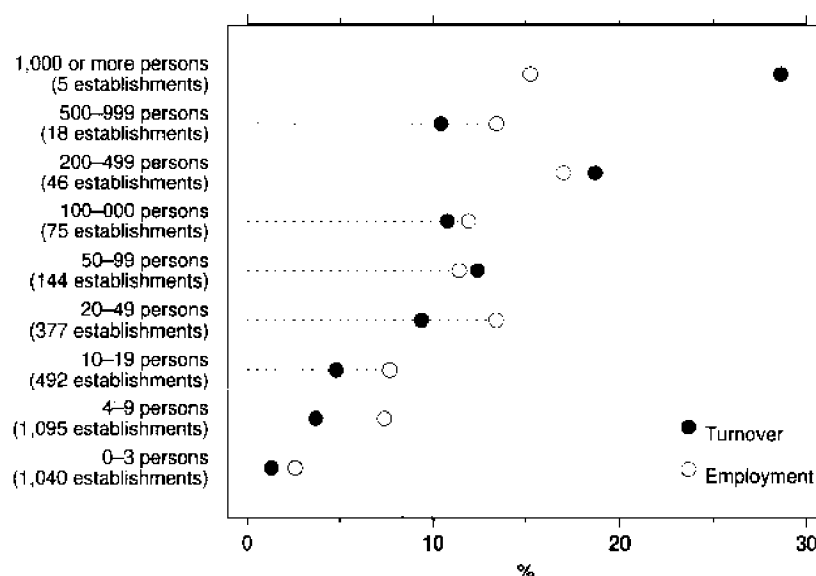
Over the period 1989–90 to 1993–94, there was an increase in gross product per person employed of 20.3%. Eight of the industry subdivisions recorded increases over this five year period. The largest percentage increases were recorded by Metal product manufacturing (up 50.7%), Textile, clothing, footwear and leather manufacturing (up 42.1%) and Wood and paper product manufacturing (up 34.2%). The decrease was recorded by Other manufacturing (down 1.3%).

PERCENTAGE CHANGE IN GROSS PRODUCT AT FACTOR COST (AVERAGE 1989-90 PRICES) BY INDUSTRY SUBDIVISION, SA, 1989-90 TO 1993-94



Employment size (Table 4) Of the 3,293 manufacturing establishments operating in South Australia at 30 June 1994, 144 were large establishments (employing 100 or more persons). While making up only 4.4% of all establishments, they accounted for 57.5% of employment at the end of June 1994 and 68.5% of manufacturing turnover for 1993-94. Although establishments employing 0-19 persons comprised 79.8% of manufacturing establishments in South Australia at 30 June 1994, they accounted for only 17.8% of employment and 9.7% of turnover. There were 5 manufacturing establishments employing 1,000 or more persons at the end of June 1994. They employed 15.2% of all persons working in the manufacturing industry in South Australia and contributed 28.6% of all manufacturing turnover.

DISTRIBUTION OF MANUFACTURING TURNOVER AND EMPLOYMENT BY EMPLOYMENT SIZE, SA, 1993-94



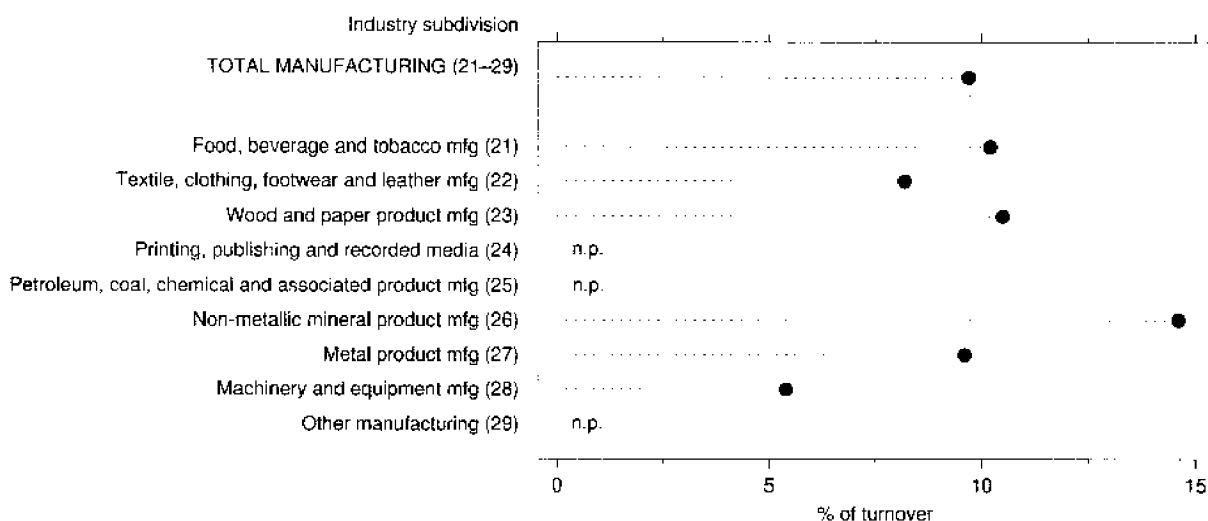
For 1993-94, the percentage distribution of turnover by employment size for the manufacturing industry was:

0-19 persons	—	9.7%
20-99 persons	—	21.8%
100 or more persons	—	68.5%

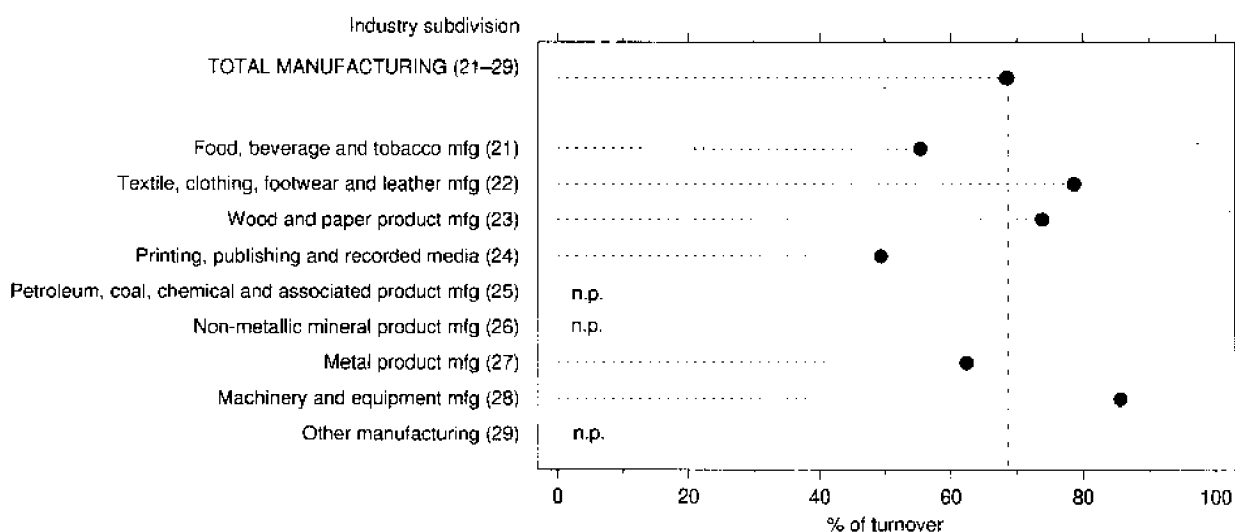
For five of the six industry subdivisions available for publication, more than 50% of turnover was contributed by large establishments (employing 100 or more persons). The industries where large establishments contributed most to turnover were Machinery and equipment manufacturing (85.7%), Textile, clothing, footwear and leather manufacturing (78.7%) and Wood and paper product manufacturing (73.9%). For the six industry subdivisions available for publication, small establishments (employing 0-19 persons) made a relatively significant contribution to turnover for Non-metallic mineral product manufacturing (14.6%).

DISTRIBUTION OF TURNOVER BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION
SA, 1993-94

0-19 PERSONS

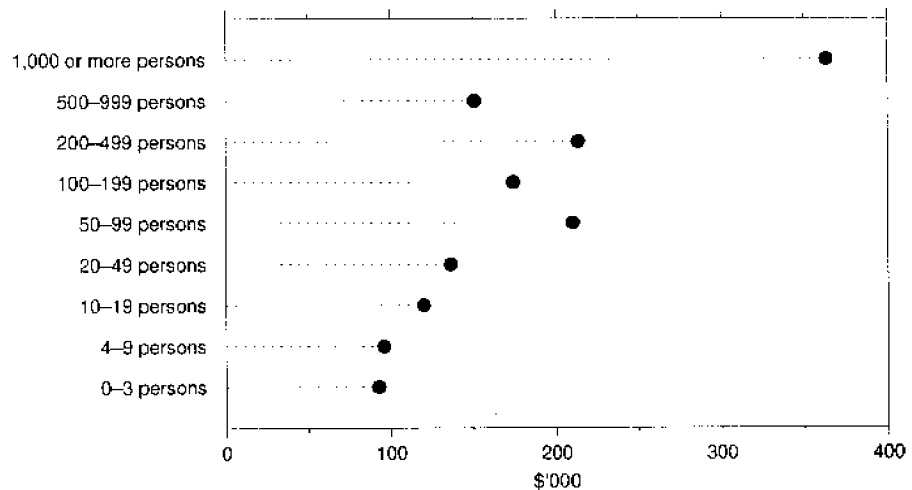


100 OR MORE PERSONS



Small establishments (employing 0–19 persons) displayed a much lower ratio of turnover per person employed at the end of June 1994 (\$106,000) than establishments in the larger size categories. Large establishments (employing 100 or more persons) recorded an average turnover per person employed of \$230,400, with establishments employing 1,000 or more persons having a ratio of \$363,000. It should be remembered that the data include all manufacturing industries and that different patterns may emerge through analysis of individual industries.

TURNOVER PER PERSON EMPLOYED BY EMPLOYMENT SIZE, SA, 1993–94



MANUFACTURING LOCATION DATA

Regional manufacturing activity
(Table 5)

As in previous years, the Adelaide Statistical Division continued to dominate manufacturing activity in South Australia in 1993–94. It contributed 76.9% of all locations at 30 June 1994, 78.1% of employment at the end of June 1994 and 76.0% of turnover for 1993–94. Other statistical divisions making a significant contribution were Northern (5.2% of employment and 8.1% of turnover), South East (6.0% of employment and 5.9% of turnover) and Outer Adelaide (5.3% of employment and 4.7% of turnover).

The Adelaide Statistical Division was also the leading contributor, by far, in seven out of the nine industry subdivisions. The exceptions were in Wood and paper product manufacturing, where South East Statistical Division contributed \$518.9m to turnover and employed 2,925 persons (compared to \$381.4m turnover and 2,795 persons employed for Adelaide Statistical Division) and Metal product manufacturing, where Northern Statistical Division contributed \$1,226.3m to turnover and employed 3,585 persons (compared to \$1,029.8m turnover and 7,323 persons employed for Adelaide Statistical Division).

Machinery and equipment manufacturing was the dominant industry subdivision in the Adelaide Statistical Division, contributing 48.8% of turnover and 40.2% of employment in the division. Metal product manufacturing was the dominant industry, by far, in the Northern Statistical Division, contributing 90.3% of turnover and 80.4% of employment in the division. Food, beverage and tobacco manufacturing was the dominant industry subdivision in three of the five remaining statistical divisions. These regions were Murray Lands (78.5% of turnover for the region), Outer Adelaide (78.0%) and Eyre (62.2%).

1

MANUFACTURING ESTABLISHMENTS¹: SUMMARY OF OPERATIONS BY INDUSTRY SUBDIVISION, SA 1989-90 TO 1993-94²

Industry subdivision			Establish- ments at 30 June ³	Employ- ment at end of June ⁴	Wages and salaries ^{5,6}	Turnover ⁶	Ratio of wages and salaries to turnover ⁶	Turnover per person employed ^{6,7}
ANZSIC code	Description		No.	'000	\$m	\$m	Ratio	\$'000
21	Food, beverage and tobacco mfg	1993-94	407	16.0	429.2	3 294.6	0.13	206.0
		1992-93	402	15.6	405.6	2 939.3	0.14	188.8
		1991-92	427	15.4	387.2	2 798.8	0.14	182.2
		1990-91	424	16.6	387.6	2 789.8	0.14	167.8
		1989-90	435	16.3	382.2	2 698.5	0.14	165.2
22	Textile, clothing, footwear and leather mfg	1993-94	224	5.4	140.5	811.3	0.17	149.7
		1992-93	221	5.8	145.8	824.6	0.18	141.4
		1991-92	243	6.0	157.7	822.7	0.19	136.7
		1990-91	261	6.8	154.6	786.3	0.20	116.1
		1989-90	258	7.6	153.6	732.2	0.21	96.8
23	Wood and paper product mfg	1993-94	255	6.1	184.7	978.1	0.19	159.7
		1992-93	258	5.6	170.0	861.0	0.20	154.1
		1991-92	271	5.8	161.1	774.1	0.21	133.8
		1990-91	279	5.6	157.4	757.7	0.21	135.2
		1989-90	289	6.1	158.0	699.9	0.23	114.0
24	Printing, publishing and recorded media	1993-94	334	5.5	154.9	643.7	0.24	116.7
		1992-93	311	5.5	157.5	652.3	0.24	118.6
		1991-92	338	5.5	158.1	629.2	0.25	115.4
		1990-91	329	5.9	158.7	583.6	0.27	99.5
		1989-90	341	6.0	152.8	594.4	0.26	98.4
25	Petroleum, coal, chemical and associated product mfg	1993-94	223	6.3	202.8	1 398.6	0.14	223.2
		1992-93	216	6.8	216.2	1 422.8	0.15	207.8
		1991-92	244	7.0	216.8	1 427.1	0.15	204.2
		1990-91	228	8.0	229.6	1 480.0	0.16	185.7
		1989-90	214	7.7	202.8	1 222.0	0.17	158.5
26	Non-metallic mineral product mfg	1993-94	152	2.8	91.5	550.2	0.17	198.5
		1992-93	131	2.8	96.6	536.9	0.18	191.7
		1991-92	156	2.9	87.1	506.5	0.17	173.7
		1990-91	171	3.2	101.6	562.9	0.18	173.2
		1989-90	187	3.9	112.8	612.0	0.18	155.0
27	Metal product mfg	1993-94	546	11.5	350.7	2 339.1	0.15	202.8
		1992-93	532	12.4	387.4	2 395.9	0.16	193.1
		1991-92	587	12.8	417.8	2 300.0	0.18	179.0
		1990-91	606	14.7	425.6	2 300.5	0.19	156.6
		1989-90	620	15.7	410.1	2 354.8	0.17	150.2

For footnotes see end of table.

MANUFACTURING ESTABLISHMENTS¹: SUMMARY OF OPERATIONS BY INDUSTRY SUBDIVISION, SA
1989-90 TO 1993-94²—continued

Industry subdivision			Establish- ments at 30 June ³	Employ- ment at end of June ⁴	Wages and salaries ^{5,6}	Turnover ⁶	Ratio of wages and salaries to turnover ⁶	Turnover per person employed ^{6,7}
ANZSIC code	Description		No.	'000	\$m	\$m	Ratio	\$'000
28	Machinery and equipment mfg	1993-94	695	28.1	903.5	6 361.6	0.14	226.2
		1992-93	706	27.8	830.5	5 144.3	0.16	185.3
		1991-92	724	28.6	831.2	5 508.6	0.15	192.6
		1990-91	723	29.7	842.0	5 694.0	0.15	191.6
		1989-90	753	32.1	823.6	5 729.6	0.14	178.5
29	Other manufacturing	1993-94	458	4.5	95.6	430.2	0.22	95.8
		1992-93	435	4.3	90.0	394.8	0.23	90.9
		1991-92	488	4.3	88.2	392.5	0.22	91.3
		1990-91	516	5.1	112.9	465.8	0.24	92.1
		1989-90	555	5.9	111.8	487.7	0.23	82.5
21-29	Total manufacturing	1993-94	3 293	86.2	2 553.4	16 807.3	0.15	194.9
		1992-93	3 212	86.6	2 499.7	15 171.9	0.16	175.1
		1991-92	3 479	88.3	2 505.1	15 159.4	0.17	171.7
		1990-91	3 537	95.6	2 570.0	15 420.7	0.17	161.4
		1989-90	3 652	101.4	2 507.6	15 131.2	0.17	149.2

¹ See paragraph 7 of the Explanatory Notes.

² For factors affecting comparability of data over the time periods shown, see paragraphs 14 to 19 of the Explanatory Notes.

³ See paragraphs 4 to 10 of the Explanatory Notes.

⁴ Includes working proprietors.

⁵ Excludes the drawings of working proprietors.

⁶ Value data are at current prices and, therefore, do not discount the impact of price changes.

⁷ Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
FOOD, BEVERAGE AND TOBACCO MFG							
Meat and meat product mfg							
2111	Meat processing	40	2 961	86.1	460.1	0.19	155.4
2112	Poultry processing	11	600	n.p.	n.p.	n.p.	n.p.
2113	Bacon, ham and smallgoods mfg	18	819	n.p.	n.p.	n.p.	n.p.
211	Total	70	4 381	116.3	668.6	0.17	152.6
Dairy product mfg							
2121	Milk and cream processing	3	n.p.	n.p.	n.p.	n.p.	n.p.
2122	Ice cream mfg	3	n.p.	n.p.	n.p.	n.p.	n.p.
2129	Dairy product mfg n.e.c.	12	528	n.p.	n.p.	n.p.	n.p.
212	Total	19	802	24.8	388.1	0.06	483.9
213	Fruit and vegetable processing	22	872	23.5	203.7	0.12	233.6
214	Oil and fat mfg	1	n.p.	n.p.	n.p.	n.p.	n.p.
Flour mill and cereal food mfg							
2151	Flour mill product mfg	8	175	5.1	57.8	0.09	330.5
2152	Cereal food and baking mix mfg	15	n.p.	n.p.	n.p.	n.p.	n.p.
215	Total	23	n.p.	n.p.	n.p.	n.p.	n.p.
Bakery product mfg							
2161	Bread mfg	51	n.p.	n.p.	n.p.	n.p.	n.p.
2162	Cake and pastry mfg	41	1 307	26.5	85.9	0.31	65.7
2163	Biscuit mfg	2	n.p.	n.p.	n.p.	n.p.	n.p.
216	Total	93	3 063	74.5	247.2	0.30	80.7
Other food mfg							
2171	Sugar mfg	—	—	—	—	—	—
2172	Confectionery mfg	13	294	6.1	33.1	0.19	112.5
2173	Seafood processing	23	735	15.1	222.6	0.07	302.9
2174	Prepared animal and bird feed mfg	16	270	7.1	118.7	0.06	439.8
2179	Food mfg n.e.c.	21	850	28.2	122.0	0.23	143.5
217	Total	72	2 150	56.7	496.4	0.11	230.9
Beverage and malt mfg							
2181	Soft drink, cordial and syrup mfg	15	715	n.p.	n.p.	n.p.	n.p.
2182	Beer and malt mfg	5	386	22.1	209.2	0.11	542.0
2183	Wine mfg	83	3 015	75.1	725.6	0.10	240.7
2184	Spirit mfg	3	76	n.p.	n.p.	n.p.	n.p.
218	Total	107	4 192	120.1	1 154.6	0.10	275.4
219	Tobacco product mfg	—	—	—	—	—	—
21	Total food, beverage and tobacco mfg	407	15 991	429.2	3 294.6	0.13	206.0

For footnotes see end of table.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
	TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG						
	Textile fibre, yarn and woven fabric mfg						
2211	Wool scouring	1	n.p.	n.p.	n.p.	n.p.	n.p.
2212	Synthetic fibre textile mfg	2	n.p.	n.p.	n.p.	n.p.	n.p.
2213	Cotton textile mfg	1	n.p.	n.p.	n.p.	n.p.	n.p.
2214	Wool textile mfg	—	—	—	—	—	—
2215	Textile finishing	2	n.p.	n.p.	n.p.	n.p.	n.p.
221	Total	7	1 206	n.p.	n.p.	n.p.	n.p.
	Textile product mfg						
2221	Made-up textile product mfg	57	395	7.1	38.0	0.19	96.2
2222	Textile floor covering mfg	2	n.p.	n.p.	n.p.	n.p.	n.p.
2223	Rope, cordage and twine mfg	—	—	—	—	—	—
2229	Textile product mfg n.e.c.	11	228	5.7	31.7	0.18	139.3
222	Total	70	n.p.	n.p.	n.p.	n.p.	n.p.
	Knitting mills						
2231	Hosiery mfg	—	—	—	—	—	—
2232	Cardigan and pullover mfg	4	n.p.	n.p.	n.p.	n.p.	n.p.
2239	Knitting mill product mfg n.e.c.	2	n.p.	n.p.	n.p.	n.p.	n.p.
223	Total	6	171	3.1	17.1	0.18	99.8
	Clothing mfg						
2241	Men's and boys' wear mfg	20	1 149	26.6	118.6	0.22	103.2
2242	Women's and girls' wear mfg	49	597	12.3	56.4	0.22	94.5
2243	Sleepwear, underwear and infant clothing mfg	4	62	1.3	6.1	0.22	97.7
2249	Clothing mfg n.e.c.	43	371	5.6	20.1	0.28	54.1
224	Total	117	2 179	45.8	201.2	0.23	92.3
225	Footwear mfg	14	936	24.2	111.2	0.22	118.8
	Leather and leather product mfg						
2261	Leather tanning and fur dressing	6	n.p.	n.p.	n.p.	n.p.	n.p.
2262	Leather and leather substitute product mfg	5	23	0.3	0.7	0.49	31.0
226	Total	11	n.p.	n.p.	n.p.	n.p.	n.p.
22	Total textile, clothing, footwear and leather mfg	224	5 421	140.5	811.3	0.17	149.7

For footnotes see end of table.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
WOOD AND PAPER PRODUCT MFG							
Log sawmilling and timber dressing							
2311	Log sawmilling	17	339	8.5	42.6	0.20	125.7
2312	Wood chipping	—	—	—	—	—	—
2313	Timber resawing and dressing	7	1 488	38.1	236.4	0.16	158.9
231	Total	24	1 828	46.6	279.0	0.17	152.6
Other wood product mfg							
2321	Plywood and veneer mfg	4	n.p.	n.p.	n.p.	n.p.	n.p.
2322	Fabricated wood mfg	2	n.p.	n.p.	n.p.	n.p.	n.p.
2323	Wooden structural component mfg	126	1 153	25.3	105.1	0.24	91.1
2329	Wood product mfg n.e.c.	78	735	12.9	56.0	0.23	76.2
232	Total	210	2 570	60.2	264.9	0.23	103.1
Paper and paper product mfg							
2331	Pulp, paper and paperboard mfg	4	198	n.p.	n.p.	n.p.	n.p.
2332	Solid paperboard container mfg	4	n.p.	n.p.	n.p.	n.p.	n.p.
2333	Corrugated paperboard container mfg	4	543	n.p.	n.p.	n.p.	n.p.
2334	Paper bag and sack mfg	3	n.p.	n.p.	n.p.	n.p.	n.p.
2339	Paper product mfg n.e.c.	5	597	n.p.	n.p.	n.p.	n.p.
233	Total	21	1 726	77.9	434.2	0.18	251.6
23	Total wood and paper product mfg	255	6 123	184.7	978.1	0.19	159.7
PRINTING, PUBLISHING AND RECORDED MEDIA							
Printing and services to printing							
2411	Paper stationery mfg	39	790	19.3	105.9	0.18	134.0
2412	Printing	166	2 040	51.0	210.0	0.24	103.0
2413	Services to printing	43	355	8.8	21.7	0.41	61.0
241	Total	248	3 184	79.1	337.6	0.23	106.0
Publishing							
2421	Newspaper printing or publishing	45	1 850	61.9	259.7	0.24	140.4
2422	Other periodical publishing	11	n.p.	n.p.	n.p.	n.p.	n.p.
2423	Book and other publishing	27	n.p.	n.p.	n.p.	n.p.	n.p.
242	Total	82	2 286	74.4	301.7	0.25	132.0
243	Recorded media manufacturing and publishing	3	45	1.5	4.4	0.33	98.2
24	Total printing, publishing and recorded media	334	5 515	154.9	643.7	0.24	116.7

For footnotes see end of table.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG							
251	Petroleum refining	2	n.p.	n.p.	n.p.	n.p.	n.p.
252	Petroleum and coal product mfg n.e.c.	6	n.p.	n.p.	n.p.	n.p.	n.p.
Basic chemical mfg							
2531	Fertiliser mfg	8	266	n.p.	n.p.	n.p.	n.p.
2532	Industrial gas mfg	2	n.p.	n.p.	n.p.	n.p.	n.p.
2533	Synthetic resin mfg	7	126	3.5	16.4	0.21	129.9
2534	Organic industrial chemical mfg n.e.c.	1	n.p.	n.p.	n.p.	n.p.	n.p.
2535	Inorganic industrial chemical mfg n.e.c.	13	455	n.p.	n.p.	n.p.	n.p.
253	Total	31	1 027	39.2	314.1	0.12	305.8
Other chemical product mfg							
2541	Explosive mfg	2	n.p.	n.p.	n.p.	n.p.	n.p.
2542	Paint mfg	9	n.p.	n.p.	n.p.	n.p.	n.p.
2543	Medicinal and pharmaceutical product mfg	7	405	n.p.	n.p.	n.p.	n.p.
2544	Pesticide mfg	1	n.p.	n.p.	n.p.	n.p.	n.p.
2545	Soap and other detergent mfg	11	131	3.5	21.6	0.16	164.6
2546	Cosmetic and toiletry preparation mfg	3	109	n.p.	n.p.	n.p.	n.p.
2547	Ink mfg	1	n.p.	n.p.	n.p.	n.p.	n.p.
2549	Chemical product mfg n.e.c.	6	53	1.4	14.9	0.10	282.0
254	Total	41	1 082	32.3	234.5	0.14	216.7
Rubber product mfg							
2551	Rubber tyre mfg	8	901	n.p.	n.p.	n.p.	n.p.
2559	Rubber product mfg n.e.c.	13	105	2.4	10.8	0.22	103.3
255	Total	20	1 007	n.p.	n.p.	n.p.	n.p.
Plastic product mfg							
2561	Plastic blow moulded product mfg	4	70	1.9	20.1	0.09	287.3
2562	Plastic extruded product mfg	13	n.p.	n.p.	n.p.	n.p.	n.p.
2563	Plastic bag and film mfg	12	652	17.3	93.0	0.19	142.7
2564	Plastic product, rigid fibre reinforced, mfg	14	n.p.	n.p.	n.p.	n.p.	n.p.
2565	Plastic foam product mfg	8	114	2.8	20.7	0.14	181.5
2566	Plastic injection moulded product mfg	71	1 442	40.3	210.5	0.19	146.0
256	Total	123	2 799	75.3	432.2	0.17	154.4
25	Total petroleum, coal, chemical and associated product mfg	223	6 265	202.8	1 398.6	0.14	223.2

For footnotes see end of table.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
NON-METALLIC MINERAL PRODUCT MFG							
261	Glass and glass product mfg	17	n.p.	n.p.	n.p.	n.p.	n.p.
Ceramic mfg							
2621	Clay brick mfg	8	230	8.5	50.4	0.17	219.0
2622	Ceramic product mfg	4	79	n.p.	n.p.	n.p.	n.p.
2623	Ceramic tile and pipe mfg	4	n.p.	n.p.	n.p.	n.p.	n.p.
2629	Ceramic product mfg n.e.c.	14	n.p.	1.4	3.2	0.42	n.p.
262	Total	31	438	12.9	66.6	0.19	152.0
Cement, lime, plaster and concrete product mfg							
2631	Cement and lime mfg	3	n.p.	n.p.	n.p.	n.p.	n.p.
2632	Plaster product mfg	13	n.p.	n.p.	n.p.	n.p.	n.p.
2633	Concrete slurry mfg	25	404	13.3	103.8	0.13	257.0
2634	Concrete pipe and box culvert mfg	11	86	2.4	11.8	0.20	137.1
2635	Concrete product mfg n.e.c.	32	398	11.5	71.9	0.16	180.6
263	Total	85	1 565	53.6	374.5	0.14	239.3
264	Non-metallic mineral product mfg n.e.c.	20	n.p.	n.p.	n.p.	n.p.	n.p.
26	Total non-metallic mineral product mfg	152	2 771	91.5	550.2	0.17	198.5
METAL PRODUCT MFG							
Iron and steel mfg							
2711	Basic iron and steel mfg	13	n.p.	n.p.	n.p.	n.p.	n.p.
2712	Iron and steel casting and forging	11	397	12.6	50.7	0.25	127.6
2713	Steel pipe and tube mfg	6	n.p.	n.p.	n.p.	n.p.	n.p.
271	Total	29	3 328	131.0	972.1	0.13	292.1
Basic non-ferrous metal mfg							
2721	Alumina production	—	—	—	—	—	—
2722	Aluminium smelting	2	n.p.	n.p.	n.p.	n.p.	n.p.
2723	Copper, silver, lead and zinc smelting, refining	2	n.p.	n.p.	n.p.	n.p.	n.p.
2729	Basic non-ferrous metal mfg n.e.c.	1	n.p.	n.p.	n.p.	n.p.	n.p.
272	Total	5	1 104	n.p.	n.p.	n.p.	n.p.

For footnotes see end of table.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
Non-ferrous basic metal product mfg							
2731	Aluminium rolling, drawing, extruding	—	—	—	—	—	—
2732	Non-ferrous metal rolling, drawing, extruding n.e.c.	1	n.p.	n.p.	n.p.	n.p.	n.p.
2733	Non-ferrous metal casting	9	n.p.	n.p.	n.p.	n.p.	n.p.
273	Total	10	369	n.p.	n.p.	n.p.	n.p.
Structural metal product mfg							
2741	Structural steel fabricating	79	1 071	28.2	166.7	0.17	155.6
2742	Architectural aluminium product mfg	77	908	22.5	130.9	0.17	144.2
2749	Structural metal product mfg n.e.c.	27	289	6.1	33.9	0.18	117.4
274	Total	183	2 268	56.9	331.5	0.17	146.2
Sheet metal product mfg							
2751	Metal container mfg	6	67	n.p.	n.p.	n.p.	n.p.
2759	Sheet metal product mfg n.e.c.	82	1 085	25.0	110.1	0.23	101.5
275	Total	87	1 152	n.p.	n.p.	n.p.	n.p.
Fabricated metal product mfg							
2761	Hand tool and general hardware mfg	10	121	2.8	8.0	0.35	66.4
2762	Spring and wire product mfg	23	n.p.	n.p.	n.p.	n.p.	n.p.
2763	Nut, bolt, screw and rivet mfg	10	150	3.4	13.7	0.25	91.2
2764	Metal coating and finishing	70	805	17.9	58.5	0.31	72.7
2765	Non-ferrous pipe fitting mfg	6	n.p.	n.p.	n.p.	n.p.	n.p.
2769	Fabricated metal product mfg n.e.c.	112	1 667	38.2	168.5	0.23	101.1
276	Total	231	3 311	74.7	294.0	0.25	88.8
27	Total metal product mfg	546	11 532	350.7	2 339.1	0.15	202.8
MACHINERY AND EQUIPMENT MFG							
Motor vehicle and part mfg							
2811	Motor vehicle mfg	7	8 365	n.p.	n.p.	n.p.	n.p.
2812	Motor vehicle body mfg	31	674	17.3	65.3	0.26	96.9
2813	Automotive electrical and instrument mfg	10	202	5.1	38.1	0.13	188.7
2819	Automotive component mfg n.e.c.	82	3 970	n.p.	n.p.	n.p.	n.p.
281	Total	130	13 210	437.1	4 134.9	0.11	313.0

For footnotes see end of table.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
Other transport equipment mfg							
2821	Shipbuilding	7	1 614	n.p.	n.p.	n.p.	n.p.
2822	Boatbuilding	34	162	2.6	9.9	0.27	60.8
2823	Railway equipment mfg	1	n.p.	n.p.	n.p.	n.p.	n.p.
2824	Aircraft mfg	14	n.p.	n.p.	n.p.	n.p.	n.p.
2829	Transport equipment mfg n.e.c.	8	79	1.5	7.0	0.21	88.5
282	Total	65	1 976	89.6	534.6	0.17	270.5
Photographic and scientific equipment mfg							
2831	Photographic and optical good mfg	17	935	24.2	86.4	0.28	92.4
2832	Medical and surgical equipment mfg	43	205	n.p.	n.p.	n.p.	n.p.
2839	Professional and scientific equipment mfg n.e.c.	22	1 404	n.p.	n.p.	n.p.	n.p.
283	Total	82	2 544	91.9	272.0	0.34	106.9
Electronic equipment mfg							
2841	Computer and business machine mfg	9	106	n.p.	n.p.	n.p.	n.p.
2842	Telecommunication, broadcasting and transceiving equipment mfg	5	265	n.p.	n.p.	n.p.	n.p.
2849	Electronic equipment mfg n.e.c.	24	319	8.4	36.8	0.23	115.4
284	Total	38	691	21.3	95.6	0.22	138.3
Electrical equipment and appliance mfg							
2851	Household appliance mfg	28	2 445	69.9	419.1	0.17	171.4
2852	Electric cable and wire mfg	1	n.p.	n.p.	n.p.	n.p.	n.p.
2853	Battery mfg	1	n.p.	n.p.	n.p.	n.p.	n.p.
2854	Electric light and sign mfg	21	n.p.	n.p.	n.p.	n.p.	n.p.
2859	Electrical equipment mfg n.e.c.	50	2 577	61.6	339.1	0.18	131.6
285	Total	101	5 684	155.3	878.6	0.18	154.6

For footnotes see end of table.

Industry class		Establish- ments at 30 June ²	Employ- ment at end of June ³	Wages and salaries ⁴	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁵
ANZSIC code	Description	No.	No.	\$m	\$m	Ratio	\$'000
Industrial machinery and equipment mfg							
2861	Agricultural machinery mfg	54	603	13.8	58.4	0.24	96.8
2862	Mining and construction machinery mfg	19	567	17.8	82.4	0.22	145.4
2863	Food processing machinery mfg	5	n.p.	n.p.	n.p.	n.p.	n.p.
2864	Machine tool and part mfg	73	1 043	29.1	79.3	0.37	76.0
2865	Lifting and material handling equipment mfg	30	478	14.2	58.7	0.24	122.8
2866	Pump and compressor mfg	9	142	4.1	52.0	0.08	366.2
2867	Commercial space heating and cooling equipment mfg	2	n.p.	n.p.	n.p.	n.p.	n.p.
2869	Industrial machinery and equipment mfg n.e.c.	87	987	23.9	87.7	0.27	88.8
286	Total	279	4 015	108.2	446.1	0.24	111.1
28	Total machinery and equipment mfg	695	28 119	903.5	6 361.6	0.14	226.2
OTHER MANUFACTURING							
Prefabricated building mfg							
2911	Prefabricated metal building mfg	20	228	4.7	34.7	0.14	152.3
2919	Prefabricated building mfg n.e.c.	5	53	1.1	7.4	0.15	139.0
291	Total	24	281	5.8	42.1	0.14	149.8
Furniture mfg							
2921	Wooden furniture and upholstered seat mfg	274	2 849	59.2	252.7	0.23	88.7
2922	Sheet metal furniture mfg	7	48	1.4	5.8	0.24	120.8
2923	Mattress mfg (except rubber)	7	n.p.	n.p.	n.p.	n.p.	n.p.
2929	Furniture mfg n.e.c.	30	n.p.	n.p.	n.p.	n.p.	n.p.
292	Total	317	3 319	69.8	297.6	0.23	89.7
Miscellaneous manufacturing							
2941	Jewellery and silverware mfg	33	141	3.1	13.7	0.22	97.2
2942	Toy and sporting good mfg	23	187	3.8	18.6	0.20	99.6
2949	Manufacturing n.e.c.	60	565	13.2	58.2	0.23	102.9
294	Total	116	893	20.0	90.5	0.22	101.3
29	Total other manufacturing	458	4 492	95.6	430.2	0.22	95.8
21-29	TOTAL MANUFACTURING	3 293	86 229	2 553.4	16 807.3	0.15	194.9

¹ See paragraph 7 of the Explanatory Notes.² See paragraphs 4 to 10 of the Explanatory Notes.³ Includes working proprietors.⁴ Excludes the drawings of working proprietors.⁵ Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

3

MANUFACTURING ESTABLISHMENTS¹: PERCENTAGE CHANGE IN GROSS PRODUCT AT FACTOR COST (AVERAGE 1989-90 PRICES)² BY INDUSTRY SUBDIVISION SA, 1989-90 TO 1993-94³

Industry subdivision		1989-90 to 1993-94					
ANZSIC code	Description	1989-90 to 1990-91	1990-91 to 1991-92	1991-92 to 1992-93	1992-93 to 1993-94	Percentage movement	Change in gross product per person employed ^{4,5}
21	Food, beverage and tobacco mfg	1.9	-5.8	2.7	10.9	9.2	11.6
22	Textile, clothing, footwear and leather mfg	11.8	1.4	-4.3	-6.2	1.8	42.1
23	Wood and paper product mfg	7.5	7.1	7.9	7.8	33.9	34.2
24	Printing, publishing and recorded media	6.9	2.1	1.4	-2.5	-6.1	2.9
25	Petroleum, coal, chemical and associated product mfg	13.6	-7.6	0.8	-0.7	5.1	29.3
26	Non-metallic mineral product mfg	-15.6	-8.7	6.6	3.4	-15.1	20.9
27	Metal product mfg	2.9	7.5	2.9	-2.7	10.8	50.7
28	Machinery and equipment mfg	-3.7	-5.9	-9.7	20.9	-1.0	13.0
29	Other manufacturing	-10.8	-20.2	-0.4	5.9	-25.0	-1.3
21-29	Total manufacturing	-0.4	-3.8	-2.9	9.9	2.3	20.3

¹ See paragraph 7 of the Explanatory Notes.

² See paragraphs 21 to 23 of the Explanatory Notes.

³ For factors affecting comparability of data over the time periods shown, see paragraphs 14 to 19 of the Explanatory Notes.

⁴ Based on employment at the end of June of the reference year. Includes working proprietors.

⁵ The basis for the calculation of this data item in this issue of the publication differs from that used in the 1992-93 issue of the publication. See paragraph 20 of the Explanatory Notes.

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number Proportion		Number Proportion		Amount Proportion		Amount Proportion	
	No.	%	No.	%	\$m	%	\$m	%
FOOD, BEVERAGE AND TOBACCO MFG								
0-3 persons	79	19.4	180	1.1	4.0	1.0	29.7	0.9
4-9 persons	114	28.0	687	4.3	12.8	3.1	97.3	3.0
10-19 persons	76	18.7	1 036	6.5	22.5	5.5	198.0	6.2
20-49 persons	66	16.2	2 018	12.6	42.9	10.5	397.5	12.4
50-99 persons	38	9.3	2 656	16.6	73.9	18.2	703.2	22.0
Total less than 100 persons	373	91.6	6 578	41.1	156.0	38.4	1 425.7	44.6
100-199 persons	15	3.7	2 104	13.2	57.2	14.1	493.7	15.5
200-499 persons	16	3.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	3	0.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	34	8.4	9 413	58.9	250.5	61.6	1 769.5	55.4
Total	407	100.0	15 991	100.0	406.5	100.0	3 195.2	100.0
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG								
0-3 persons	76	33.9	160	3.0	2.1	1.5	9.4	1.2
4-9 persons	75	33.5	420	7.7	6.3	4.5	26.4	3.3
10-19 persons	28	12.5	372	6.9	7.0	5.0	31.0	3.8
20-49 persons	24	10.7	696	12.8	12.9	9.2	48.5	6.0
50-99 persons	7	3.1	467	8.6	11.6	8.3	57.9	7.1
Total less than 100 persons	210	93.8	2 115	39.0	39.9	28.4	173.1	21.3
100-199 persons	8	3.6	1 105	20.4	31.2	22.2	172.1	21.2
200-499 persons	5	2.2	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	1	0.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	14	6.3	3 306	61.0	100.5	71.6	638.1	78.7
Total	224	100.0	5 421	100.0	140.5	100.0	811.2	100.0

For footnotes see end of table.

4 MANUFACTURING ESTABLISHMENTS¹: SUMMARY OF OPERATIONS BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION SA, 1993-94—continued

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number	Proportion	Number	Proportion	Amount	Proportion	Amount	Proportion
	No.	%	No.	%	\$m	%	\$m	%
WOOD AND PAPER PRODUCT MFG								
0-3 persons	85	33.3	206	3.4	3.3	1.8	14.6	1.5
4-9 persons	92	36.1	504	8.2	9.4	5.1	38.4	3.9
10-19 persons	36	14.1	501	8.2	10.8	5.8	49.9	5.1
20-49 persons	22	8.6	574	9.4	16.5	8.9	105.8	10.8
50-99 persons	5	2.0	317	5.2	9.1	4.9	46.8	4.8
Total less than 100 persons	240	94.1	2 102	34.3	49.1	26.6	255.4	26.1
100-199 persons	7	2.7	1 001	16.3	29.5	16.0	145.7	14.9
200-499 persons	6	2.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	2	0.8	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	15	5.9	4 021	65.7	135.6	73.4	722.7	73.9
Total	255	100.0	6 123	100.0	184.7	100.0	978.1	100.0
PRINTING, PUBLISHING AND RECORDED MEDIA								
0-3 persons	99	29.6	211	3.8	3.3	2.1	16.5	2.6
4-9 persons	128	38.3	749	13.6	15.2	9.8	56.1	8.7
10-19 persons	53	15.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
20-49 persons	33	9.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	12	3.6	789	14.3	18.6	12.0	96.5	15.0
Total less than 100 persons	326	97.6	3 533	64.1	80.9	52.2	326.0	50.6
100-199 persons	6	1.8	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	1	0.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	1	0.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	8	2.4	1 982	35.9	74.0	47.8	317.7	49.4
Total	334	100.0	5 515	100.0	154.9	100.0	643.7	100.0

For footnotes see end of table.

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number	Proportion	Number	Proportion	Amount	Proportion	Amount	Proportion
	No.	%	No.	%	\$m	%	\$m	%
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG								
0-3 persons	55	24.7	108	1.7	2.2	1.1	12.4	0.9
4-9 persons	67	30.0	392	6.3	9.5	4.7	58.7	4.2
10-19 persons	39	17.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
20-49 persons	38	17.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	8	3.6	525	8.4	17.3	8.6	209.7	15.1
Total less than 100 persons	208	93.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100-199 persons	8	3.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	6	2.7	1 477	23.6	57.6	28.7	319.4	23.0
500-999 persons	1	0.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	15	6.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	223	100.0	6 285	100.0	200.4	100.0	1 386.6	100.0
NON-METALLIC MINERAL PRODUCT MFG								
0-3 persons	57	37.5	126	4.5	1.8	2.0	11.9	2.2
4-9 persons	45	29.6	250	9.0	5.1	5.6	27.3	5.0
10-19 persons	23	15.1	335	12.1	7.9	8.7	41.0	7.5
20-49 persons	13	8.6	457	16.5	14.7	16.1	93.7	17.0
50-99 persons	7	4.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total less than 100 persons	146	96.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100-199 persons	4	2.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	2	1.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	6	3.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	152	100.0	2 771	100.0	91.5	100.0	550.2	100.0

For footnotes see end of table.

4 MANUFACTURING ESTABLISHMENTS¹: SUMMARY OF OPERATIONS BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION
SA, 1993-94—continued

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number Proportion		Number Proportion		Amount Proportion		Amount Proportion	
	No.	%	No.	%	\$m	%	\$m	%
METAL PRODUCT MFG								
0-3 persons	159	29.1	349	3.0	5.6	1.6	25.3	1.1
4-9 persons	200	36.6	1 180	10.2	23.3	6.7	95.0	4.1
10-19 persons	84	15.4	1 087	9.4	24.1	6.9	102.8	4.4
20-49 persons	67	12.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	25	4.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total less than 100 persons	534	97.8	6 332	54.9	150.3	43.0	875.7	37.6
100-199 persons	7	1.3	920	8.0	25.3	7.2	149.8	6.4
200-499 persons	2	0.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	2	0.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	1	0.2	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total 100 or more persons	12	2.2	5 200	45.1	199.6	57.0	1 456.0	62.4
Total	546	100.0	11 532	100.0	349.8	100.0	2 331.8	100.0
MACHINERY AND EQUIPMENT MFG								
0-3 persons	223	32.1	490	1.7	12.1	1.3	56.8	0.9
4-9 persons	229	32.9	1 347	4.8	29.3	3.2	148.9	2.3
10-19 persons	99	14.2	1 369	4.9	32.7	3.6	138.0	2.2
20-49 persons	78	11.2	2 417	8.6	64.7	7.2	270.7	4.3
50-99 persons	29	4.2	1 974	7.0	60.1	6.7	297.2	4.7
Total less than 100 persons	659	94.8	7 597	27.0	199.0	22.0	911.6	14.3
100-199 persons	16	2.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	8	1.2	2 722	9.7	93.7	10.4	426.9	6.7
500-999 persons	8	1.2	4 800	17.1	169.6	18.8	588.6	9.3
1 000 or more persons	4	0.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total 100 or more persons	36	5.2	20 522	73.0	704.1	78.0	5 447.4	85.7
Total	695	100.0	28 119	100.0	903.0	100.0	6 359.0	100.0

For footnotes see end of table.

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ²	
	Number Proportion		Number Proportion		Amount Proportion		Amount Proportion	
	No.	%	No.	%	\$m	%	\$m	%
OTHER MANUFACTURING								
0-3 persons	207	45.2	433	9.6	6.4	6.7	32.8	7.7
4-9 persons	145	31.7	838	18.7	15.0	15.7	61.7	14.4
10-19 persons	55	12.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
20-49 persons	36	7.9	1 110	24.7	25.0	26.2	118.2	27.6
50-99 persons	11	2.4	797	17.7	18.7	19.6	87.5	20.4
Total less than 100 persons	454	99.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100-199 persons	4	0.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	4	0.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	458	100.0	4 492	100.0	95.4	100.0	428.8	100.0
TOTAL MANUFACTURING								
0-3 persons	1 040	31.6	2 261	2.6	40.9	1.6	209.4	1.3
4-9 persons	1 095	33.3	6 368	7.4	125.8	5.0	609.8	3.7
10-19 persons	492	14.9	6 679	7.7	151.1	6.0	802.8	4.8
20-49 persons	377	11.4	11 527	13.4	282.2	11.2	1 575.6	9.4
50-99 persons	144	4.4	9 808	11.4	279.5	11.1	2 061.4	12.4
Total less than 100 persons	3 149	95.6	36 643	42.5	879.5	34.8	5 259.0	31.5
100-199 persons	75	2.3	10 285	11.9	299.4	11.8	1 793.9	10.8
200-499 persons	46	1.4	14 640	17.0	479.3	19.0	3 123.4	18.7
500-999 persons	18	0.5	11 532	13.4	392.3	15.5	1 742.4	10.4
1 000 or more persons	5	0.2	13 128	15.2	476.4	18.9	4 766.0	28.6
Total 100 or more persons	144	4.4	49 586	57.5	1 647.3	65.2	11 425.7	68.5
Total	3 293	100.0	86 229	100.0	2 526.8	100.0	16 684.7	100.0

¹ See paragraph 7 of the Explanatory Notes.² See paragraphs 4 to 10 of the Explanatory Notes.³ Includes working proprietors.⁴ Excludes the drawings of working proprietors.⁵ Figures may be slightly less than those presented in other tables, because they exclude those manufacturing establishments which operated during 1993-94 but were not operating at 30 June 1994. See paragraph 24 of the Explanatory Notes.

Industry subdivision		Locations at 30 June ²	Employment at end of June ³	Wages and salaries ⁴	Turnover
ANZSIC code	Description	No.	No.	\$m	\$m
ADELAIDE STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	210	8 239	229.7	1 606.2
22	Textile, clothing, footwear and leather mfg	200	5 027	133.9	777.0
23	Wood and paper product mfg	191	2 795	70.7	381.4
24	Printing, publishing and recorded media	277	4 733	138.4	589.9
25	Petroleum, coal, chemical and associated product mfg	201	5 698	187.6	1 233.5
26	Non-metallic mineral product mfg	117	2 138	73.4	497.2
27	Metal product mfg	438	7 323	184.1	1 029.8
28	Machinery and equipment mfg	592	26 877	874.1	6 215.8
29	Other manufacturing	387	4 056	87.6	397.1
21-29	Total manufacturing	2 612	66 885	1 979.5	12 727.9
OUTER ADELAIDE STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	81	2 875	72.1	613.1
22	Textile, clothing, footwear and leather mfg	9	147	n.p.	n.p.
23	Wood and paper product mfg	20	146	n.p.	n.p.
24	Printing, publishing and recorded media	17	192	4.2	12.8
25	Petroleum, coal, chemical and associated product mfg	5	111	1.8	7.4
26	Non-metallic mineral product mfg	21	241	6.7	18.9
27	Metal product mfg	34	335	7.1	62.6
28	Machinery and equipment mfg	28	193	4.4	18.3
29	Other manufacturing	35	292	6.1	22.5
21-29	Total manufacturing	249	4 533	108.1	785.7
YORKE AND LOWER NORTH STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	27	384	7.6	50.2
22	Textile, clothing, footwear and leather mfg	3	n.p.	n.p.	n.p.
23	Wood and paper product mfg	4	11	0.1	0.6
24	Printing, publishing and recorded media	9	106	1.7	2.8
25	Petroleum, coal, chemical and associated product mfg	2	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	9	33	0.5	3.2
27	Metal product mfg	13	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	15	89	n.p.	n.p.
29	Other manufacturing	6	22	0.3	1.8
21-29	Total manufacturing	88	966	21.4	184.3

For footnotes see end of table.

Industry subdivision		Locations at 30 June ²	Employment at end of June ³	Wages and salaries ⁴	Turnover
ANZSIC code	Description	No.	No.	\$m	\$m
MURRAY LANDS STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	36	1 943	54.8	474.8
22	Textile, clothing, footwear and leather mfg	3	n.p.	n.p.	n.p.
23	Wood and paper product mfg	12	134	n.p.	n.p.
24	Printing, publishing and recorded media	13	123	2.7	12.8
25	Petroleum, coal, chemical and associated product mfg	9	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	5	27	0.7	4.3
27	Metal product mfg	17	99	1.6	8.3
28	Machinery and equipment mfg	29	470	11.0	60.0
29	Other manufacturing	6	20	0.2	1.2
21-29	Total manufacturing	130	2 923	78.2	604.8
SOUTH EAST STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	43	1 435	40.5	396.3
22	Textile, clothing, footwear and leather mfg	6	244	n.p.	n.p.
23	Wood and paper product mfg	20	2 925	103.6	518.9
24	Printing, publishing and recorded media	13	191	3.6	11.9
25	Petroleum, coal, chemical and associated product mfg	4	29	n.p.	n.p.
26	Non-metallic mineral product mfg	19	89	1.5	8.8
27	Metal product mfg	17	120	2.1	10.0
28	Machinery and equipment mfg	19	95	n.p.	n.p.
29	Other manufacturing	15	49	0.5	3.9
21-29	Total manufacturing	155	5 177	159.1	994.8
EYRE STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	17	386	6.2	52.6
22	Textile, clothing, footwear and leather mfg	3	n.p.	n.p.	n.p.
23	Wood and paper product mfg	5	11	0.1	0.3
24	Printing, publishing and recorded media	7	38	0.9	3.6
25	Petroleum, coal, chemical and associated product mfg	—	—	—	—
26	Non-metallic mineral product mfg	4	22	0.4	3.2
27	Metal product mfg	9	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	15	164	4.2	21.5
29	Other manufacturing	5	10	0.2	0.4
21-29	Total manufacturing	65	677	12.7	84.6

For footnotes see end of table.

Industry subdivision		Locations at 30 June ²	Employment at end of June ³	Wages and salaries ⁴	Turnover
ANZSIC code	Description	No.	No.	\$m	\$m
NORTHERN STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	17	477	11.8	79.1
22	Textile, clothing, footwear and leather mfg	5	45	0.8	3.2
23	Wood and paper product mfg	9	48	0.8	4.1
24	Printing, publishing and recorded media	10	81	2.1	5.8
25	Petroleum, coal, chemical and associated product mfg	7	99	2.0	16.7
26	Non-metallic mineral product mfg	5	40	1.3	14.1
27	Metal product mfg	28	3 585	154.7	1 226.3
28	Machinery and equipment mfg	9	68	2.2	7.1
29	Other manufacturing	7	17	0.4	1.6
21-29	Total manufacturing	97	4 461	176.2	1 358.1
SOUTH AUSTRALIA EXCLUDING ADELAIDE STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	220	7 501	193.1	1 666.1
22	Textile, clothing, footwear and leather mfg	27	479	8.6	45.9
23	Wood and paper product mfg	69	3 276	112.7	570.5
24	Printing, publishing and recorded media	68	731	15.1	49.6
25	Petroleum, coal, chemical and associated product mfg	27	565	14.8	156.5
26	Non-metallic mineral product mfg	64	452	11.0	52.6
27	Metal product mfg	119	4 243	167.6	1 315.4
28	Machinery and equipment mfg	115	1 079	25.2	124.1
29	Other manufacturing	74	411	7.6	31.4
21-29	Total manufacturing	784	18 738	555.7	4 012.3
SOUTH AUSTRALIA					
21	Food, beverage and tobacco mfg	430	15 740	422.8	3 272.4
22	Textile, clothing, footwear and leather mfg	227	5 506	142.5	822.9
23	Wood and paper product mfg	260	6 071	183.4	951.9
24	Printing, publishing and recorded media	345	5 464	153.5	639.5
25	Petroleum, coal, chemical and associated product mfg	228	6 263	202.5	1 390.0
26	Non-metallic mineral product mfg	181	2 590	84.4	549.9
27	Metal product mfg	557	11 566	351.7	2 345.2
28	Machinery and equipment mfg	707	27 956	899.3	6 339.9
29	Other manufacturing	461	4 467	95.2	428.5
21-29	Total manufacturing	3 396	85 623	2 535.2	16 740.2

¹ See paragraph 10 of the Explanatory Notes.² See paragraphs 25 to 27 of the Explanatory Notes.³ Includes working proprietors.⁴ Excludes the drawings of working proprietors.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents final statistics for South Australia compiled from a census of manufacturing establishments for 1993-94, with some comparative statistics relating to preceding years.

2 The manufacturing collection is conducted on an annual basis. For the 1993-94 collection, businesses were requested to provide data on employment, wages and salaries and turnover for each manufacturing establishment. A sample of approximately 18,000 establishments was asked to supply additional information on commodities produced and sold. Commodities information from this sample will be published in *Manufacturing Production, Australia: Principal Commodities Produced, 1993-94* (8365.0), to be released later in 1996.

3 Manufacturing, as specified in Division C of the *Australian and New Zealand Standard Industrial Classification* (ANZSIC), broadly relates to the physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand.

SCOPE AND COVERAGE

4 The main unit for which statistics are reported in the 1993-94 manufacturing collection is the establishment. Prior to the 1988-89 census, this unit covered, in general, all the operations carried on under the ownership of one enterprise (business) at a single physical location.

5 The standard units definitions were revised for the 1988-89 census, with the establishment now being generally delineated on the basis of availability of accounting data rather than in terms of a location.

6 These new definitions were progressively implemented on the ABS central business register as reporting arrangements with individual businesses were finalised. The new management unit and establishment definitions were fully implemented on the ABS central business register in time for the 1990-91 census for those units classified to the manufacturing industry.

7 A manufacturing establishment is one predominantly engaged in manufacturing activities, but the data collected for it cover all activities of the establishment (including non-manufacturing activities). Conversely, there are some establishments predominantly engaged in non-manufacturing activities which also undertake limited manufacturing activities and which are excluded.

8 A small number of manufacturing establishments engage, in a significant way, in a variety of activities which are normally carried out by different industries. For example, a predominantly manufacturing establishment may also undertake significant amounts of wholesaling. Similarly, a manufacturing establishment may produce significant volumes of a variety of goods which are normally produced by different establishments in different manufacturing industries. In such cases, the original establishment is 'split' into a separate establishment for each significant activity which belongs to a separate industry. For the 1993-94 manufacturing collection, 'significant' was defined as \$6.6 million or more.

9 The statistics in this publication exclude some very small manufacturers. Those excluded are manufacturers not employing staff at 30 June 1994 (such as sole proprietorships or family partnerships) which had not registered as group employers with the Australian Taxation Office. Though a substantial number, these businesses would contribute only marginally to aggregate data were they to be included. In addition, the ABS attempts to obtain data for those businesses which ceased operation during the year, but it is not possible to obtain data for all of them.

STANDARD UNITS

10 For the definition of the standard units now in use, see the Glossary.

RELIABILITY OF ESTIMATES

11 The 1992-93 data contained in this publication are based on information obtained from samples of manufacturers and are, therefore, subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all manufacturers in the population. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because the data were obtained from only a sample of units. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the data had been obtained from all units, and about 19 chances in 20 that the difference will be less than two standard errors.

12 The standard error can also be expressed as a percentage of the estimate, and this is known as the relative standard error. The relative standard errors for the 1992-93 data presented in this publication are 3% or less. For further information, see the 1992-93 issue of this publication.

13 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 businesses and errors made in collection and processing of the data. Inaccuracies of this kind are referred to as non-sampling error and they may occur in any collection, whether it be a full count or only a sample. Every effort is made to reduce non-sampling error to a minimum by careful design of forms, editing of data and efficient operating procedures.

COMPARABILITY WITH PREVIOUS STATISTICS

14 As explained above, the standard units definitions were revised for the 1988-89 census and the new definitions were fully implemented on the ABS central business register in time for the 1990-91 census for units classified to the manufacturing industry.

15 There have been some revisions to the series in this publication due to adjustments to allow for lags in processing new businesses to the ABS business register, and the omission of some businesses from the business register. First, adjustments have been made to allow for new businesses which had commenced operations but for which details had not been processed on to the ABS business register in time for inclusion in the annual manufacturing industry collection. The magnitude of these adjustments varies slightly over time, and so estimates of movement from one period to the next can be affected. Adjustments of this type will continue to be applied in future periods. Second, adjustments have been made for businesses which had been in existence for several years, but, for various reasons revealed by recent investigations, were not previously added to the ABS business register. The ABS is remedying these omissions, but they had led to results being understated by small amounts which increased over the period 1992 to 1994.

16 The majority of businesses affected by these lags and omissions and to which both types of adjustments apply are small. Although these adjustments have resulted in counts of manufacturers in South Australia at 30 June 1994 being adjusted upward by 14%, the effect on 1993-94 turnover is much less at 2%. The effect on employment is an adjustment of 4%. Most industries were affected to a similar degree.

17 The time series statistics presented in this publication have been similarly affected and the industry subdivision data for years prior to 1993-94 have been accordingly adjusted. Adjustment factors for the more detailed manufacturing industries for each of the years 1989-90 to 1992-93 (inclusive) can be made available on request. At the same time, some revisions have been made to the underlying data previously published, as a result of further processing and/or additional information becoming available.

18 As explained above, about 18,000 establishments included in the 1993-94 collection were asked additional information on commodities produced and sold. The availability of this fine level commodity/activity data for these 18,000 units has enabled ABS survey processing staff to better identify those establishments which were actually in the scope of the manufacturing collection and those which should not be included in the manufacturing collection, because (for example) they were actually wholesalers or retailers. These fine level commodity/activity data have also enabled an objective industry code to be determined for these units, compared to the more subjective industry coding which has occurred in each of the three previous manufacturing collections. The industry code for the units not included in the commodity sample has continued to be a subjectively determined code.

19 The 1993-94 data contained in this publication include data relating to those manufacturers not employing staff at 30 June 1994 (such as sole proprietorships or family partnerships) which had registered as group employers with the Australian Taxation Office. Data in respect of these 'non-employers' were excluded from the scope of the manufacturing collection for the 1988-89 to 1992-93 (inclusive) reference years. However, the inclusion of these types of businesses has only had a marginal effect on statistical aggregates (except for the numbers of establishments and of locations, where the effect has been slightly more significant).

20 The basis for the calculation of the data used in table 3 of this publication for the data item 'Percentage change in gross product per person employed' is different to that used in the 1992-93 issue of this publication. The employment data now used are 'Employment at the end of June', whereas in the 1992-93 issue the conceptually more precise data item 'Average employment over the year' was used. For some industries, the values obtained by using these different methods may differ significantly and, therefore, care should be exercised when making inter-year comparisons. (The reason for making this change is that the detailed data necessary to calculate 'Average employment over the year' were not obtained by the 1993-94 collection.)

GROSS PRODUCT AT FACTOR COST

21 Table 3 presents data by industry subdivision for the period 1989-90 to 1993-94 (inclusive) related to constant price estimates of gross product at factor cost. The meaning and measurement of production at constant prices and the limitations and qualifications of the estimates are discussed in detail in *Australian National Accounts: Concepts, Sources and Methods* (5216.0).

22 The basic approach in compiling these data involves extrapolating a base year estimate of gross product (described below) by a measure of output at constant prices. Constant price turnover is used as the output indicator with which to extrapolate the base year gross product. To obtain constant price estimates of turnover, current price estimates at the ANZSIC class level are deflated by components of the price indices contained in *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (6412.0).

23 The base year gross product is estimated for each ANZSIC class using 1989-90 manufacturing census data for value added and adjusted value added. Value added is calculated using turnover, plus the increase (or less the decrease) in the value of stocks, less purchases, transfers in and selected expenses. Adjusted value added is defined as value added less land tax, rates and payroll tax, insurance premiums (other than for workers' compensation) and other business expenses. To conform to the national accounting concept of gross product at factor cost, further adjustments would be necessary using information from other than manufacturing census sources e.g. by the addition of workers' compensation paid less premiums received. However, due to data limitations, these further adjustments can only be made at the ANZSIC subdivision level and are not taken into account in this publication. (This is because the ANZSIC subdivision data contained in this publication are derived from the data calculated at the ANZSIC class level.) The base year gross product values used in this publication are derived by taking establishment based estimates of adjusted value added and applying a stock valuation adjustment. (See Section 8 of *Australian National Accounts: Concepts, Sources and Methods* (5216.0) for an explanation of how this adjustment is undertaken.)

EMPLOYMENT SIZE DATA

24 Summary of operations data at the industry subdivision level classified by employment size are presented in table 4. The statistics in this table relate only to those manufacturing establishments operating at 30 June 1994. As such, the figures presented may be slightly less than those presented in the other tables from the manufacturing collection. These other tables include data for those manufacturing establishments which operated at any time during 1993-94.

STATISTICAL DIVISION DATA

25 The location data presented in table 5 are based on additional data collected in the 1993–94 census. The extra data requested were the activity carried out at the location, the number of persons employed and the address of the location.

26 Employment data shown in this table are based on reported employment, but in the case of wages and salaries and turnover data they do not reflect reported data in all cases. This is because in those circumstances where an establishment operates at more than one location, the data have been synthesised to derive location-level wages and salaries and turnover data. (However, it should be noted that most establishments operate at only the one location.) The location-level synthesised data were derived by using the location data collected on activity and employment, and then pro-rating wages and salaries and turnover based on the reported employment.

27 As indicated in paragraph 7, a manufacturing establishment covers all activities of the establishment, including any non-manufacturing activities. In table 5, the non-manufacturing locations of manufacturing establishments have been excluded. For this reason, the State totals (for location data, other than the number of locations) in table 5 may be less than those shown in tables 1, 2 and 4 (for establishment data). However, it is also possible for the State totals in table 5 to be greater than those shown in tables 1, 2 and 4, as a result of individual locations of establishments being allocated a different industry classification to that of the 'parent' establishment.

USE OF ANZSIC

28 The 1992–93 manufacturing survey introduced the Australian and New Zealand Standard Industrial Classification (ANZSIC) into the annual manufacturing collection. This classification replaced the Australian Standard Industrial Classification (ASIC) previously used. All time series statistics contained in this publication are ANZSIC-based. Corresponding ANZSIC-based data for years prior to 1989–90 are not available, except for constant prices data (see paragraph 34). Similarly, ASIC-based data are not available from 1992–93.

INFORMATION PAPER

29 The *Information Paper: Availability of Statistics Related to Manufacturing, 1996* (8205.0) outlines the vast amount of data available about the manufacturing industry in both published and unpublished form available from the annual manufacturing collection and other ABS collections.

RELATED PUBLICATIONS

30 A series of publications (8221.1 to 8221.6) will be produced for each State. These are being progressively released. The publication 8221.1 includes data for the Australian Capital Territory.

31 Users may also wish to refer to the following publications:

- *Environment Protection Expenditure, Australia, 1992–93 and 1993–94* (4603.0), to be released early in 1997.
- *Labour Force, Australia* (6203.0).
- *Indexes of Industrial Production, Australia* (8125.0), issued quarterly.
- *Business Operations and Industry Performance, Australia, 1993–94* (8140.0), released on 6 September 1995.

- *Manufacturing Industry, Australia, Preliminary, 1994-95* (8201.0), released on 23 August 1996.
- *Information Paper: Availability of Statistics Related to Manufacturing, 1996* (8205.0), released on 21 March 1996.
- *Manufacturing Industry, Australia, 1993-94* (8221.0), released on 18 October 1996.
- *Manufacturing Production, Australia: Principal Commodities Produced, 1993-94* (8365.0), to be released later in 1996.

MONTHLY COMMODITY DATA

32 The monthly publication *Manufacturing Production, Australia* (8301.0) includes data for 61 major commodities.

BACK DATA AND UNPUBLISHED STATISTICS

33 A range of manufacturing industry statistics publications is available for previous years. As well, a considerable amount of data from the annual manufacturing collection exists in unpublished form. More detailed information to satisfy individual user requirements may be available on request. A charge is made for providing such information. The Information Paper referred to above provides more details.

34 In particular, constant prices data on an ANZSIC basis are available back to 1984-85. However, constant price estimates on a true ANZSIC basis are only available from 1989-90. Nevertheless, an exercise has been undertaken to convert estimates for earlier years onto an ANZSIC basis using the relationships that applied between ASIC and ANZSIC in the years 1990-91 and 1991-92. These estimates are available at both the Australian and State and Territory levels back to 1984-85. It should be noted that the relationships that applied in 1990-91 and 1991-92 are less likely to apply the earlier the reference year. Also, annual constant price estimates of gross product at factor cost for the period 1989-90 to 1993-94 (inclusive) by ANZSIC class are available as unpublished data. All of these data can be purchased from the ABS in Canberra by contacting Paul Curran on (06) 252 6801.

ROUNDING

35 Where figures have been rounded, discrepancies may occur between totals and the sums of the component items. Due to data being adjusted for lags in processing new businesses to the ABS business register and the omission of some businesses from the business register (see paragraph 15 above), this 'rounding rule' also applies to counts of establishments and of locations.

36 Proportions, ratios and other calculated figures shown in this publication have been calculated using unrounded estimates and may be different from, but are more accurate than, calculations based on the rounded estimates.

SYMBOLS AND OTHER USAGES

ANZSIC	Australian and New Zealand Standard Industrial Classification
ASIC	Australian Standard Industrial Classification
n.e.c.	not elsewhere classified
n.p.	not available for publication but included in totals where applicable
..	not applicable
—	nil or rounded to zero

GLOSSARY

ABS	Australian Bureau of Statistics
Adjusted value added	Value added less land tax, rates and payroll tax, insurance premiums (other than for workers' compensation) and other business expenses (e.g. cleaning, legal, office supplies and accounting). Referred to as 'Industry gross product' in some related publications.
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASIC	Australian Standard Industrial Classification
Capital work done for own use	The value of work done by the employees or proprietors of an establishment for the business' own use, or for rental or lease. This item includes the value of the cost of the materials and the wages and salaries involved.
Change in stocks	The value of total closing stocks minus total opening stocks.
Closing stocks	The value of all stocks of finished goods, work-in-progress, raw materials, fuels, containers and packaging as at the end of the financial year.
Employment at end of June	The number of working proprietors, working partners, permanent, part-time, temporary and casual employees, and managerial and executive employees working for an establishment during the last pay period in June each year. Employees absent on paid or prepaid leave are included, as are employees on workers' compensation who continue to be paid through the payroll system. Non-salaried directors, self-employed persons such as consultants, contractors and persons paid solely by commission without a retainer, and volunteer workers are excluded.
Enterprise group	A unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the Corporations Legislation Amendment Act 1991). These may be legal entities such as trusts and partnerships as well as companies. Majority ownership is not required for control to be exercised.
Establishment	The establishment is the smallest accounting unit of a business, within a State or Territory, controlling its productive activities and maintaining a specified range of detailed data enabling value added to be calculated. In general, an establishment covers all operations at a physical location, but may consist of a group of locations provided they are within the same State or Territory. The majority of establishments operate at one location only.
Establishments at 30 June	The number of establishments in operation at 30 June in the year of a given reference period.

Gross Domestic Product (GDP) Gross domestic product (also referred to as gross domestic product at market prices) is the total market value of goods and services produced in Australia within a given period after deduction of the cost of goods and services used up in the process of production, but before deducting allowances for the consumption of fixed capital. Thus, gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services.

Gross product at factor cost Gross product at factor cost is that part of the cost of producing the gross domestic product which consists of gross payments to factors of production (labour, land, capital and enterprise). It represents the value added by these factors in the process of production and is equivalent to gross domestic product less indirect taxes plus subsidies.

Gross product per person employed Gross product at factor cost of manufacturing establishments which operated during the year ended 30 June divided by employment at the end of June in the same year.

Industry class Within ANZSIC, there is a structure comprising four levels ranging from industry division (broadest level) to the industry class (finest level). At the industry class level, the activities are narrowly defined and recognised by a four digit code e.g. industry class 2331 for Pulp, paper and paperboard manufacturing. Usually, an activity is primarily confined to one class. However, some activities may be primary to more than one class.

Industry group This is the intermediate level within the manufacturing industry division of ANZSIC and is recognised by a three digit code e.g. industry group 233 for Paper and paper product manufacturing. It gives more detail than the industry subdivision and is created in a way that groups like industry classes together.

Industry subdivision This is the broadest level category within the manufacturing industry division of ANZSIC and is recognised by a two digit code e.g. industry subdivision 23 for Wood and paper product manufacturing. Industry subdivisions are built up from industry groups which, in turn, are built up from industry classes. The following table gives the manufacturing industry subdivision codes and their descriptions:

- 21 Food, beverage and tobacco mfg
- 22 Textile, clothing, footwear and leather mfg
- 23 Wood and paper product mfg
- 24 Printing, publishing and recorded media
- 25 Petroleum, coal, chemical and associated product mfg
- 26 Non-metallic mineral product mfg
- 27 Metal product mfg
- 28 Machinery and equipment mfg
- 29 Other manufacturing

Location A location is a physical unit of the establishment. It consists usually of an unbroken physical area or site, occupied by an establishment, at which, or from which, the establishment engages in productive activity on a relatively permanent basis. An establishment can consist of one or more locations. In specified circumstances, non-contiguous sites occupied by the same establishment can be combined to form a location.

Locations at 30 June The number of locations in operation at 30 June in the year of a given reference period.

Management unit	The management unit is the highest-level unit within a business, having regard to industry homogeneity, for which accounts are maintained; in nearly all cases, it coincides with the legal entity owning the business (that is, company, partnership, trust, sole operator, etc.). In the case of large diversified businesses, however, there may be more than one management unit, each coinciding with a 'division' or 'line of business'. A division or line of business is recognised where separate and comprehensive accounts are compiled for it.
Manufacturing establishment	An establishment predominantly engaged in manufacturing activities. The data collected for such establishments cover all activities of the establishment (including non-manufacturing activities). Conversely, there are some establishments predominantly engaged in non-manufacturing activities which also undertake limited manufacturing activities and which are excluded.
Manufacturing location	A location predominantly engaged in manufacturing activities.
Opening stocks	The value of all stocks of finished goods, work-in-progress, raw materials, fuels, containers and packaging as at the beginning of the financial year.
Own account capital work	The value of work done by the employees or proprietors of an establishment for the business' own use, or for rental or lease. This item includes the value of the cost of the materials and the wages and salaries involved.
Purchases, transfers in and selected expenses	Purchases of materials, components, containers, packaging, fuels, electricity and water, and of goods for resale, plus transfers in of goods from other establishments of the same business for further processing, assembly, installation or resale, plus contract, subcontract and commission expenses (including sales commission payments), repair and maintenance expenses, outward freight and cartage expenses, motor vehicle running expenses, and rent, leasing and hiring expenses. Transfers in are valued, for statistical purposes, at prices commensurate with the prices which would have been paid if the establishments concerned had been under separate ownership i.e. at commercial selling price.
Rent, leasing and hiring income	Includes royalties from mineral leases and income from operating leases, but excludes income from finance leases and payments received under hire purchase arrangements.
Sales and transfers out	Includes sales of goods produced by the establishment (or for it on commission) and of goods not produced by the establishment, sales or transfers to related businesses, progress payments billed on engineering and construction projects, and delivery charges. Also included are transfers out to other establishments of the same business. Transfers out are valued, for statistical purposes, at prices commensurate with the prices which would have been paid if the establishments concerned had been under separate ownership i.e. at commercial selling price. It excludes export freight charges, sales of fixed tangible assets, and sales tax, excise and duties received (on behalf of the Government).
Total government subsidies	Includes revenue received from government bodies in the form of bounties, subsidies and export grants. It also includes payments for Jobstart and subsidies for apprenticeship schemes. Excludes capital grants payments.

Turnover (See Note below). Sales (exclusive of excise and sales tax) of goods whether produced by the establishment or not, plus transfers out of goods to other establishments of the same business, plus bounties and subsidies on production, plus all other operating income from outside the establishment (such as commission income, repair and service income, and rent, leasing and hiring income), plus capital work done by an establishment's own employees for the business' own use, or for rental or lease. Receipts from interest, royalties, dividends and the sale of fixed tangible assets are excluded.

Note: Transfers to other establishments of the same business referred to in the definition of turnover are valued, for statistical purposes, at prices commensurate with the prices which would have been received if the establishments concerned had been under separate ownership, that is, at commercial selling price. A significant proportion of the commodities manufactured by some industries is manufactured on commission for non-manufacturing businesses from materials owned and supplied by those businesses. As a consequence, the turnover figures do not reflect the gross value of those commodities but only the commission earned relating to them.

Turnover per person employed Turnover of manufacturing establishments which operated during the year ended 30 June divided by employment at the end of June in the same year.

Value added Turnover, plus the increase (or less the decrease) in the value of stocks, less purchases, transfers in and selected expenses.

Wages and salaries The gross wages and salaries of all employees of the establishment. The item includes severance, termination and redundancy payments, but excludes reimbursements or allowances to employees for travel, entertainment, etc. The drawings of working proprietors are also excluded.

Wages and salaries to turnover ratio The wages and salaries paid by manufacturing establishments which operated during the year ended 30 June as a proportion of the turnover of manufacturing establishments which operated during the same year.

For more information . . .

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