

MANUFACTURING INDUSTRY SOUTH AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) THURS 2 NOV 2000

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- For further information about these and related statistics, contact the National Information Service on 1300 135 070 or John Ridley on Sydney 02 9268 4541.

NOTES

ANNUAL MANUFACTURING INDUSTRY COLLECTION	The 1998–99 collection was conducted as a sample survey of approximately 17,000 manufacturing establishments nationally, which were requested to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported. A sub-sample of approximately 7,000 establishments was also asked to provide detailed structural and performance data, and value of sales for commodities produced.
ABOUT THIS ISSUE	For some time now, the ABS has been using Australian Taxation Office (ATO) information on group employer (GE) registrations to add new businesses to the ABS business register. After detailed investigation, it has now been decided to use GE information to delete from the business register those businesses which have ceased trading or are no longer employing staff. As a result, a large number of businesses have been removed from the ABS business register which has had a small impact on published aggregates. For more details, see paragraphs 11–13 of the Explanatory Notes.
DATA REVISIONS	The process of using GE information to delete businesses from the ABS business register has been introduced for the 1998–99 manufacturing survey. This has had an impact on previous years' data. Estimates in Table 1, for the previous three manufacturing collections (covering 1995–96 to 1997–98 inclusive) have been adjusted in such a way as to phase in the impact over this time.
REGIONAL DATA	For more information about the availability of sub-State estimates from the 1998–99 collection, see paragraph 25 of the Explanatory Notes.
DATA TO BE RELEASED IN OTHER PUBLICATIONS	<p>Detailed manufacturing industry statistics for each State are being released progressively in a series of publications, <i>Manufacturing Industry, [State], 1998–99</i> (Cat. nos 8221.1–8221.6). The publication for New South Wales (Cat. no. 8221.1) also contains selected data for the Australian Capital Territory.</p> <p>Management unit data and a wide range of manufacturing related ABS data, as well as data from other sources, will be presented in the compendium publication <i>Manufacturing, Australia, 2000</i> (Cat. no. 8225.0) to be released in December 2000. Management unit data at the total manufacturing level are also included in <i>Business Operations and Industry Performance, Australia, Preliminary, 1998–99</i> (Cat. no. 8142.0).</p>

Ian Crettenden
Regional Director, South Australia

MAIN FEATURES

OVERVIEW

Turnover for the year 1998–99 by manufacturing establishments operating in South Australia was \$20,181m, which resulted in an industry value added (IVA) for the year of \$6,414m. For turnover, this represents a 1.5% increase in current price terms from the \$19,874m recorded for 1997–98. These manufacturing establishments employed 83,400 persons at the end of June 1999 and paid \$3,031m in wages and salaries in 1998–99.

The percentage of Australian manufacturing employment in South Australia at the end of June 1999 was 9.0%, a decrease of 0.1 percentage points on that reported at the end of June 1998. The South Australian industry subdivision which made a significant contribution to national manufacturing employment at the end of June 1999 at the industry subdivision level was MACHINERY AND EQUIPMENT MANUFACTURING (14.6%).

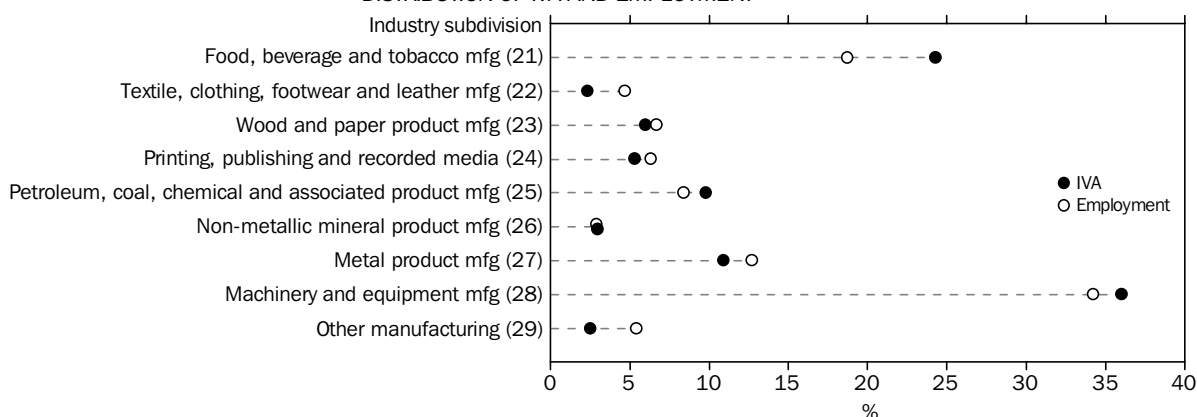
The percentage contribution by South Australia to total Australian manufacturing turnover and IVA in 1998–99 was 9.1% and 9.3% respectively. For turnover and IVA, this represents a decrease of 0.2 and 0.7 percentage points respectively on the contribution reported in 1997–98. The South Australian industry subdivision which made a significant contribution to national manufacturing turnover and IVA in 1998–99 at the industry subdivision level was also MACHINERY AND EQUIPMENT MANUFACTURING (17.5% and 16.5% respectively).

INDUSTRY VALUE ADDED

IVA for 1998–99 was \$6,414m. The industry subdivisions with the largest contribution to total manufacturing IVA and the most notable industry classes or groups within those subdivisions (as a percentage of South Australia's total manufacturing IVA) were:

- MACHINERY AND EQUIPMENT MANUFACTURING (36.0%), where the industry group MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC Group 281 at 22.7%) was, by far, the most substantial. A significant contribution was also recorded by the industry group ELECTRICAL EQUIPMENT AND APPLIANCE MANUFACTURING (ANZSIC Group 285 at 5.7%), especially by the industry class ELECTRICAL EQUIPMENT MANUFACTURING N.E.C. (ANZSIC Class 2859 at 2.8%).
- FOOD, BEVERAGE AND TOBACCO MANUFACTURING (24.3%), where the industry class WINE MANUFACTURING (ANZSIC Class 2183 at 11.0%) was the most substantial.

DISTRIBUTION OF IVA AND EMPLOYMENT



MAIN FEATURES *continued*

INDUSTRY VALUE ADDED

continued

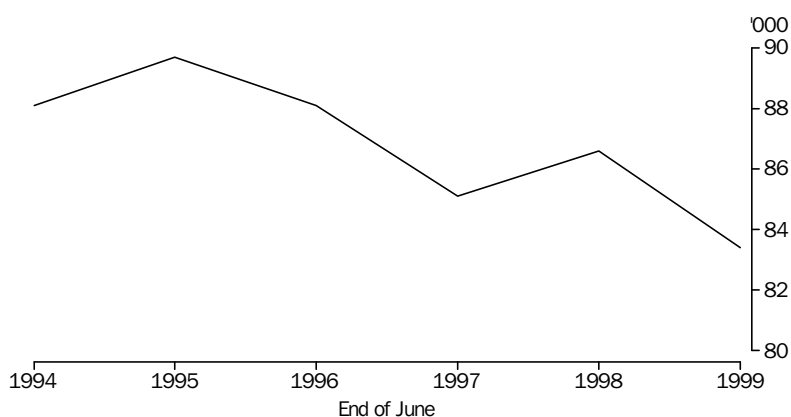
Industry classes (where publishable) making a notable contribution to industry value added and not included in the subdivisions listed above included NEWSPAPER PRINTING OR PUBLISHING (ANZSIC Class 2421 at 2.6%), BASIC IRON AND STEEL MANUFACTURING (ANZSIC Class 2711 at 2.4%), PLASTIC INJECTION MOULDED PRODUCT MANUFACTURING (ANZSIC Class 2566 at 2.0%), FABRICATED METAL PRODUCT MANUFACTURING N.E.C. (ANZSIC Class 2769 at 1.5%) and PRINTING (ANZSIC Class 2412 at 1.4%).

The South Australian manufacturing industry subdivision in 1998–99 with the highest IVA per person employed was FOOD, BEVERAGE AND TOBACCO MANUFACTURING at \$99,800 per person employed, followed by PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING at \$89,500 per person employed. In 1997–98, the rank order of these two industry subdivisions was the reverse.

EMPLOYMENT AND WAGES

The South Australian manufacturing industry employed 83,400 persons at the end of June 1999 and paid \$3,031m in wages and salaries in 1998–99. This represents an average of \$36,400 paid in annual wages and salaries per person employed at the end of June 1999, an increase of 5.6% on the \$34,400 recorded twelve months earlier. (Readers should note that the employment figure in this average measures the number of persons employed at the end of June and includes working proprietors. The wages and salaries figure excludes the drawings of working proprietors).

EMPLOYMENT



South Australian manufacturing employment increased from June 1994 (88,100 persons) to June 1995 (89,700 persons), but then fell to June 1997 (85,100 persons) before increasing again at the end of June 1998 (86,600 persons). Employment in the South Australian manufacturing industry decreased by 3.8% or 3,300 persons between June 1998 and June 1999 (83,400 persons). Over the five years from June 1994 to June 1999, employment fell by 5.4% or 4,700 persons.

Between June 1998 and June 1999, employment decreased in seven of the nine manufacturing industry subdivisions and increased in the other two. METAL PRODUCT MANUFACTURING recorded the largest decrease in absolute terms (1,200 persons) and the second largest decrease in percentage terms (down 10.3%). The industry subdivision with the largest percentage decrease was OTHER MANUFACTURING (down 16.3% or 900 persons). The industry subdivisions with the increases were PETROLEUM, COAL, CHEMICAL

MAIN FEATURES *continued*

EMPLOYMENT AND WAGES *continued*

AND ASSOCIATED PRODUCT MANUFACTURING (up 2.2% or 200 persons) and MACHINERY AND EQUIPMENT MANUFACTURING (up 1.5% or 400 persons).

Average wages and salaries paid per person employed at the end of June rose in all nine manufacturing industry subdivisions between 1997–98 and 1998–99.

The industry subdivisions to record the largest percentage increases in wages and salaries paid per person employed at the end of June were:

- OTHER MANUFACTURING (up 13.5%—from \$24,400 to \$27,700), where six (out of nine) industry classes recorded an increase. The main influence on the subdivision result was WOODEN FURNITURE AND UPHOLSTERED SEAT MANUFACTURING (ANZSIC Class 2921) (up 27.5%—from \$22,300 to \$28,400), where employment at the end of June fell by 21.9% but wages and salaries fell by only 0.4%. This ANZSIC class accounted for just over a half of both employment and wages and salaries in this subdivision.
- NON-METALLIC MINERAL PRODUCT MANUFACTURING (up 12.4%), where five (out of eleven) industry classes recorded an increase. The main influence on the subdivision result was the industry group CEMENT, LIME, PLASTER AND CONCRETE PRODUCT MANUFACTURING (ANZSIC Group 263) (up 10.3%—from \$40,500 to \$44,700).

Industry classes (where publishable) belonging to other industry subdivisions and which had the largest percentage increases between 1997–98 and 1998–99 in wages and salaries paid per person employed at the end of June were:

- WOOD PRODUCT MANUFACTURING N.E.C. (ANZSIC Class 2329) (up 45.8%—from \$18,900 to \$27,500);
- AGRICULTURAL MACHINERY MANUFACTURING (ANZSIC Class 2861) (up 44.5%—from \$20,800 to \$30,100); and
- PLASTIC EXTRUDED PRODUCT MANUFACTURING (ANZSIC Class 2562) (up 42.4%—from \$28,600 to \$40,700).

TURNOVER

Turnover rose, in current price terms, by \$306m to \$20,181m for 1998–99. This represents a 1.5% increase on the \$19,874m recorded for 1997–98.

Six of the nine manufacturing industry subdivisions recorded an increase in turnover between 1997–98 and 1998–99. MACHINERY AND EQUIPMENT MANUFACTURING, FOOD, BEVERAGE AND TOBACCO MANUFACTURING and METAL PRODUCT MANUFACTURING remain the largest contributors to total manufacturing turnover. The largest increase in dollar terms was recorded by MACHINERY AND EQUIPMENT MANUFACTURING (up \$296m or 4.1%), while the largest increase in percentage terms was recorded by WOOD AND PAPER PRODUCT MANUFACTURING (up 6.7% or \$71m). TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING recorded the largest decrease in both percentage (down 14.4%) and dollar terms (down \$111m). PRINTING, PUBLISHING AND RECORDED MEDIA (down \$37m or 4.8%) and METAL PRODUCT MANUFACTURING (down \$19m or 0.7%) also recorded decreases.

The industry groups (where publishable) with the largest percentage increases between 1997–98 and 1998–99 were:

- PHOTOGRAPHIC AND SCIENTIFIC EQUIPMENT MANUFACTURING (ANZSIC Group 283) (up 33.2% or \$65m), which included the industry classes PROFESSIONAL AND SCIENTIFIC EQUIPMENT MANUFACTURING N.E.C. (ANZSIC Class 2839) (up 59.5% or \$40m) and PHOTOGRAPHIC AND OPTICAL GOOD MANUFACTURING (ANZSIC Class 2831) (up 41.4% or \$38m);

MAIN FEATURES *continued*

TURNOVER *continued*

- FRUIT AND VEGETABLE PROCESSING (ANZSIC Group 213) (up 28.2% or \$61m);
- NON-METALLIC MINERAL PRODUCT MANUFACTURING N.E.C. (ANZSIC Group 264) (up 27.0% or \$8m); and
- ELECTRONIC EQUIPMENT MANUFACTURING (ANZSIC Group 284) (up 22.7% or \$52m).

The industry groups (where publishable) with the largest dollar increases between 1997–98 and 1998–99 were:

- MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC Group 281) (up \$207m or 4.2%);
- ELECTRICAL EQUIPMENT AND APPLIANCE MANUFACTURING (ANZSIC Group 285) (up \$100m or 10.0%); and
- BEVERAGE AND MALT MANUFACTURING (ANZSIC Group 218) (up \$88m or 4.3%), which included the industry class WINE MANUFACTURING (ANZSIC Class 2183) (up \$198m or 13.1%).

The industry groups (where publishable) with the largest percentage decreases between 1997–98 and 1998–99 were:

- OTHER TRANSPORT EQUIPMENT MANUFACTURING (ANZSIC Group 282) (down 30.1% or \$82m), which also recorded the largest dollar decrease between 1997–98 and 1998–99; and
- SHEET METAL PRODUCT MANUFACTURING (ANZSIC Group 275) (down 24.8% or \$27m).

The industry groups (where publishable) with the largest dollar decreases between 1997–98 and 1998–99 were:

- OTHER TRANSPORT EQUIPMENT MANUFACTURING (ANZSIC Group 282) (down \$82m or 30.1%);
- OTHER FOOD MANUFACTURING (ANZSIC Group 217) (down \$74m or 10.6%);
- IRON AND STEEL MANUFACTURING (ANZSIC Group 271) (down \$48m or 4.6%); and
- INDUSTRIAL MACHINERY AND EQUIPMENT MANUFACTURING (ANZSIC Group 286) (down \$46m or 6.8%), which included the industry class INDUSTRIAL MACHINERY AND EQUIPMENT MANUFACTURING N.E.C. (ANZSIC Class 2869) (down \$49m or 29.2%).

WINE

Wine manufacturing turnover in South Australia for 1998–99 was 51.2% of the national total for the industry. Wine manufacturing in South Australia accounted, however, for only 29.9% of the national increase in turnover in this industry between 1997–98 and 1998–99.

EXPORTS

For 1998–99, South Australian manufacturers directly exported \$3,106m of the goods that they produced. This represents an 8.0% increase on the \$2,875m recorded for 1997–98. The percentage of total sales and transfers out of goods for sale produced that were exported has also increased (from 15.3% for 1997–98 to 16.2% for 1998–99).

Manufacturers' direct exports increased in six out of the nine industry subdivisions between 1997–98 and 1998–99 and decreased in three. However, the main contribution to the overall increase was made by MACHINERY AND EQUIPMENT MANUFACTURING (up \$253m or 30.1%—from \$839m to \$1,092m). The industry subdivisions to record the largest percentage increases in direct exports between 1997–98 and 1998–99 were OTHER MANUFACTURING (up 49.0%—from \$6m to \$9m) and WOOD AND PAPER PRODUCT MANUFACTURING (up 44.1%—from \$7m to \$10m). The industry subdivision to record the largest dollar decrease in direct exports was TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down \$50m or 16.8%—from \$297m to \$247m). The industry subdivision to record the

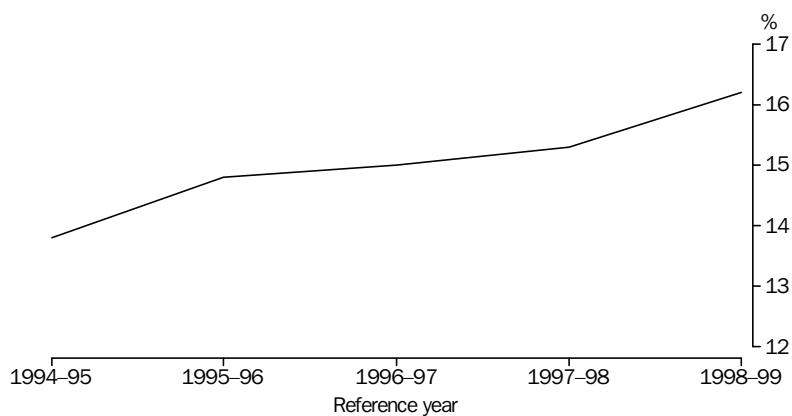
MAIN FEATURES *continued*

EXPORTS *continued*

largest percentage decrease was recorded by NON-METALLIC MINERAL PRODUCT MANUFACTURING (down 38.8% or \$10m—from \$26m to \$16m).

Commencing with the 1994–95 manufacturing collection, data on exports have been consistently collected as part of the annual manufacturing collection. Exports as a proportion of sales and transfers out of goods for sale produced has increased annually, rising from 13.8% for 1994–95 to 16.2% for 1998–99.

EXPORTS AS A PROPORTION OF GOODS PRODUCED



MANUFACTURING ESTABLISHMENTS(a)(b), Summary of Operations(c)

Reference year	Employment at end of June(d) '000	Wages and salaries(e)(f) \$m	Turnover(f) \$m	Industry gross product(f) \$m	Industry value added(f) \$m	Wages and salaries to turnover(f) ratio	Turnover per person employed (f)(g) \$'000	Industry value added per person employed (f)(h) \$'000
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
1998-99	15.6	517.8	4 630.7	..	1 556.3	0.11	297.1	99.8
1997-98	16.2	507.5	(i)4 603.3	(j)1 446.9	(j)1 485.8	0.11	283.6	91.5
1996-97	15.2	486.6	3 997.0	1 251.7	..	0.12	263.3	..
1995-96	17.2	(k)473.2	3 859.1	1 199.1	..	0.12	224.3	..
1994-95	17.2	454.6	3 579.6	..	..	0.13	208.6	..
1993-94	16.3	435.5	3 337.0	..	..	0.13	204.5	..
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
1998-99	3.9	124.8	659.1	..	150.3	0.19	168.9	38.5
1997-98	4.2	128.9	(i)769.6	(j)222.7	(j)230.0	0.17	181.5	54.3
1996-97	4.8	133.8	778.5	230.0	..	0.17	160.6	..
1995-96	4.9	(k)121.9	823.0	229.3	..	0.15	167.4	..
1994-95	5.3	141.9	819.9	..	..	0.17	155.0	..
1993-94	5.4	136.5	788.9	..	..	0.17	147.1	..
WOOD AND PAPER PRODUCT MANUFACTURING								
1998-99	5.6	189.2	1 129.5	..	382.9	0.17	201.1	68.2
1997-98	5.8	183.8	(i)1 058.8	(j)360.5	(j)371.7	0.17	183.2	64.3
1996-97	5.6	190.7	915.8	312.7	..	0.21	162.5	..
1995-96	5.6	(k)180.1	968.4	345.9	..	0.19	172.2	..
1994-95	5.9	198.5	985.6	..	..	0.20	167.4	..
1993-94	6.2	184.2	945.5	..	..	0.19	153.7	..
PRINTING, PUBLISHING AND RECORDED MEDIA								
1998-99	5.3	180.8	732.3	..	342.9	0.25	139.3	65.2
1997-98	5.7	187.1	(i)769.3	(j)344.2	(j)347.8	0.24	136.1	61.5
1996-97	5.6	178.0	800.5	346.7	..	0.22	142.5	..
1995-96	5.3	(k)153.3	719.4	342.2	..	0.21	135.4	..
1994-95	5.2	154.4	668.4	..	..	0.23	129.6	..
1993-94	5.8	158.1	656.6	..	..	0.24	114.0	..
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
1998-99	7.0	274.2	1 607.5	..	627.2	0.17	229.5	89.5
1997-98	6.9	248.3	(i)1 548.5	(j)620.4	(j)642.1	0.16	225.9	93.7
1996-97	6.7	248.0	1 454.9	567.4	..	0.17	217.1	..
1995-96	6.2	(k)215.6	1 283.6	527.9	..	0.17	206.2	..
1994-95	6.5	218.8	1 367.8	..	..	0.16	208.9	..
1993-94	6.5	208.2	1 431.1	..	..	0.15	220.8	..

.. not applicable

(a) See paragraph 5 of the Explanatory Notes.

(b) Group Employer information held by the Australian Taxation Office is now being used to delete those businesses which have ceased trading or are no longer employing staff. See paragraphs 11-13 of the Explanatory Notes.

(c) For factors affecting comparability of data over the time period shown, see paragraphs 14-20 of the Explanatory Notes.

(d) Includes working proprietors.

(e) Excludes the drawings of working proprietors.

(f) Value data are at current prices and therefore do not discount the impact of price changes.

(g) Turnover divided by the number of persons employed at the end of June.

(h) Industry value added divided by the number of persons employed at the end of June.

(i) From the 1997-98 manufacturing collection and onwards, new international standards apply to the calculation of turnover. For more details see paragraphs 14 and 15 of the Explanatory Notes.

(j) From the 1997-98 manufacturing collection and onwards, industry value added (IVA) replaces industry gross product (IGP) as the measure of an industry's contribution to gross domestic product. IGP has also been shown for 1997-98. For more details, see paragraphs 16 and 17 of the Explanatory Notes.

(k) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 19 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a)(b), Summary of Operations(c) *continued*

Reference year	Employment at end of June(d) '000	Wages and salaries(e)(f) \$m	Turnover(f) \$m	Industry gross product(f) \$m	Industry value added(f) \$m	Wages and salaries to turnover(f) ratio	Turnover per person employed (f)(g) \$'000	Industry value added per person employed (f)(h) \$'000
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
1998-99	2.4	99.3	597.3	..	192.7	0.17	246.5	79.5
1997-98	2.6	95.5	(i)590.3	(j)185.8	(j)192.8	0.16	225.4	73.6
1996-97	2.6	93.5	604.4	189.4	..	0.15	233.3	..
1995-96	2.6	(k)91.5	538.6	196.3	..	0.17	208.5	..
1994-95	2.8	91.8	543.3	..	..	0.17	196.3	..
1993-94	2.9	92.7	558.1	..	..	0.17	194.5	..
METAL PRODUCT MANUFACTURING								
1998-99	10.5	431.6	2 639.4	..	696.5	0.16	250.3	66.0
1997-98	11.8	445.4	(i)2 658.2	(j)934.6	(j)965.6	0.17	226.0	82.1
1996-97	11.2	403.7	2 511.3	804.7	..	0.16	223.3	..
1995-96	11.8	(k)403.2	2 544.9	739.4	..	0.16	215.9	..
1994-95	11.3	356.5	2 565.8	..	..	0.14	227.5	..
1993-94	11.8	352.9	2 342.2	..	..	0.15	198.8	..
MACHINERY AND EQUIPMENT MANUFACTURING								
1998-99	28.5	1 088.6	7 595.4	..	2 311.3	0.14	266.2	81.0
1997-98	28.1	1 053.2	(i)7 299.0	(j)2 516.4	(j)2 526.0	0.14	259.6	89.9
1996-97	28.2	1 017.5	6 911.9	2 245.2	..	0.15	245.0	..
1995-96	29.6	(k)1 005.0	6 943.8	2 151.1	..	0.14	234.9	..
1994-95	30.6	1 034.1	6 899.8	..	..	0.15	225.2	..
1993-94	28.5	906.1	6 373.8	..	..	0.14	223.8	..
OTHER MANUFACTURING								
1998-99	4.5	124.3	589.7	..	153.5	0.21	131.5	34.2
1997-98	5.4	130.8	(i)577.4	(j)169.1	(j)176.1	0.23	107.8	32.9
1996-97	5.1	119.9	558.1	161.3	..	0.21	110.2	..
1995-96	4.9	(k)114.3	497.6	184.5	..	0.23	102.0	..
1994-95	5.0	107.5	502.7	..	..	0.21	100.2	..
1993-94	4.9	101.3	455.4	..	..	0.22	93.1	..
TOTAL MANUFACTURING								
1998-99	83.4	3 030.6	20 180.9	..	6 413.6	0.15	242.1	76.9
1997-98	86.6	2 980.5	(i)19 874.4	(j)6 800.7	(j)6 937.8	0.15	229.5	80.1
1996-97	85.1	2 871.7	18 532.4	6 108.9	..	0.15	217.8	..
1995-96	88.1	(k)2 758.3	18 178.4	5 915.6	..	0.15	206.3	..
1994-95	89.7	2 758.2	17 932.8	..	..	0.15	199.8	..
1993-94	88.1	2 575.3	16 888.8	..	..	0.15	191.7	..

.. not applicable

(a) See paragraph 5 of the Explanatory Notes.

(b) Group Employer information held by the Australian Taxation Office is now being used to delete those businesses which have ceased trading or are no longer employing staff. See paragraphs 11-13 of the Explanatory Notes.

(c) For factors affecting comparability of data over the time period shown, see paragraphs 14-20 of the Explanatory Notes.

(d) Includes working proprietors.

(e) Excludes the drawings of working proprietors.

(f) Value data are at current prices and therefore do not discount the impact of price changes.

(g) Turnover divided by the number of persons employed at the end of June.

(h) Industry value added divided by the number of persons employed at the end of June.

(i) From the 1997-98 manufacturing collection and onwards, new international standards apply to the calculation of turnover. For more details see paragraphs 14 and 15 of the Explanatory Notes.

(j) From the 1997-98 manufacturing collection and onwards, industry value added (IVA) replaces industry gross product (IGP) as the measure of an industry's contribution to gross domestic product. IGP has also been shown for 1997-98. For more details, see paragraphs 16 and 17 of the Explanatory Notes.

(k) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 19 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a)(b), Industry Class

INDUSTRY CLASS		Employment at end of June (c)	Wages and salaries (d)	Turnover	Industry value added	Turnover per person employed (e)	Industry value added per person employed (f)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
FOOD, BEVERAGE AND TOBACCO MFG							
211	Meat and meat product mfg						
2111	Meat processing	2 154	64.0	378.5	93.1	175.7	43.2
2112	Poultry processing	621	np	np	np	np	np
2113	Bacon, ham and smallgoods mfg	736	np	np	np	np	np
	<i>Total</i>	3 510	103.5	622.7	149.1	177.4	42.5
212	Dairy product mfg						
2121	Milk and cream processing	np	np	np	np	np	np
2122	Ice cream mfg	np	np	np	np	np	np
2129	Dairy product mfg n.e.c.	316	11.3	141.7	20.4	449.1	64.7
	<i>Total</i>	877	34.0	401.6	87.9	458.0	100.2
213	Fruit and vegetable processing	693	30.6	276.3	95.3	398.6	137.4
214	Oil and fat mfg	np	np	np	np	np	np
215	Flour mill and cereal food mfg						
2151	Flour mill product mfg	121	5.3	73.4	22.4	607.0	184.9
2152	Cereal food and baking mix mfg	np	np	np	np	np	np
	<i>Total</i>	np	np	np	np	np	np
216	Bakery product mfg						
2161	Bread mfg	1 138	41.1	122.4	50.1	107.5	44.0
2162	Cake and pastry mfg	1 097	29.1	89.4	38.4	81.5	35.0
2163	Biscuit mfg	621	17.7	155.2	52.9	250.1	85.2
	<i>Total</i>	2 855	87.8	366.9	141.4	128.5	49.5
217	Other food mfg						
2171	Sugar mfg	—	—	—	—	—	—
2172	Confectionery mfg	380	7.2	29.4	11.1	77.3	29.3
2173	Seafood processing	661	18.2	247.1	49.1	374.1	74.3
2174	Prepared animal and bird feed mfg	217	7.4	127.9	16.3	590.6	75.4
2179	Food mfg n.e.c.	867	30.3	218.6	83.3	252.1	96.1
	<i>Total</i>	2 125	63.0	623.0	159.9	293.2	75.3
218	Beverage and malt mfg						
2181	Soft drink, cordial and syrup mfg	634	np	np	np	np	np
2182	Beer and malt mfg	223	13.6	169.8	53.7	760.7	240.7
2183	Wine mfg	3 969	135.4	1 702.0	706.9	428.8	178.1
2184	Spirit mfg	*70	np	np	np	np	np
	<i>Total</i>	4 897	179.6	2 131.6	862.0	435.3	176.0
219	Tobacco product mfg	—	—	—	—	—	—
21	Total food, beverage and tobacco mfg	15 588	517.8	4 630.7	1 556.3	297.1	99.8

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MANUFACTURING ESTABLISHMENTS(a)(b), Industry Class *continued*

INDUSTRY CLASS		Employment at end of June (c)	Wages and salaries (d)	Turnover	Industry value added	Turnover per person employed (e)	Industry value added per person employed (f)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG							
221	Textile fibre, yarn and woven fabric mfg						
2211	Wool scouring	np	np	np	np	np	np
2212	Synthetic fibre textile mfg	np	np	np	np	np	np
2213	Cotton textile mfg	132	5.3	25.2	4.2	190.9	32.0
2214	Wool textile mfg	—	—	—	—	—	—
2215	Textile finishing	np	np	np	np	np	np
	<i>Total</i>	929	np	np	np	np	np
222	Textile product mfg						
2221	Made-up textile product mfg	362	8.9	39.2	11.8	108.3	32.6
2222	Textile floor covering mfg	np	np	np	np	np	np
2223	Rope, cordage and twine mfg	—	—	—	—	—	—
2229	Textile product mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	583	14.4	67.6	18.4	116.1	31.7
223	Knitting mills						
2231	Hosiery mfg	—	—	—	—	—	—
2232	Cardigan and pullover mfg	np	np	np	np	np	np
2239	Knitting mill product mfg n.e.c.	—	—	—	—	—	—
	<i>Total</i>	np	np	np	np	np	np
224	Clothing mfg						
2241	Men's and boys' wear mfg	596	15.6	60.5	19.5	101.5	32.7
2242	Women's and girls' wear mfg	454	11.5	52.7	13.5	116.0	29.7
2243	Sleepwear, underwear and infant clothing mfg	np	np	np	np	np	np
2249	Clothing mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	1 489	35.7	141.7	45.2	95.2	30.3
225	Footwear mfg	651	np	np	np	np	np
226	Leather and leather product mfg						
2261	Leather tanning and fur dressing	np	np	np	np	np	np
2262	Leather and leather substitute product mfg	47	np	np	np	np	np
	<i>Total</i>	np	np	np	np	np	np
22	Total textile, clothing, footwear and leather mfg	3 902	124.8	659.1	150.3	168.9	38.5
WOOD AND PAPER PRODUCT MFG							
231	Log sawmilling and timber dressing						
2311	Log sawmilling	np	np	np	np	np	np
2312	Wood chipping	np	np	np	np	np	np
2313	Timber resawing and dressing	921	34.0	189.8	66.0	206.1	71.6
	<i>Total</i>	1 398	48.9	274.0	102.1	196.0	73.0
232	Other wood product mfg						
2321	Plywood and veneer mfg	275	np	np	np	np	np
2322	Fabricated wood mfg	273	np	np	np	np	np
2323	Wooden structural component mfg	1 301	33.2	126.7	49.7	97.4	38.2
2329	Wood product mfg n.e.c.	739	20.3	111.6	37.4	151.0	50.6
	<i>Total</i>	2 588	75.5	370.0	134.7	143.0	52.0

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MANUFACTURING ESTABLISHMENTS(a)(b), Industry Class *continued*

INDUSTRY CLASS ANZSIC		Employment at end of June (c)	Wages and salaries (d)	Turnover	Industry value added	Turnover per person employed (e)	Industry value added per person employed (f)
code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
WOOD AND PAPER PRODUCT MFG <i>cont.</i>							
233	Paper and paper product mfg						
2331	Pulp, paper and paperboard mfg	288	np	np	np	np	np
2332	Solid paperboard container mfg	np	np	np	np	np	np
2333	Corrugated paperboard container mfg	510	27.1	147.5	55.5	289.1	108.9
2334	Paper bag and sack mfg	np	np	np	np	np	np
2339	Paper product mfg n.e.c.	539	np	np	np	np	np
	<i>Total</i>	1 629	64.8	485.4	146.1	297.9	89.7
23	Total wood and paper product mfg	5 616	189.2	1 129.5	382.9	201.1	68.2
PRINTING, PUBLISHING AND RECORDED MEDIA							
241	Printing and services to printing						
2411	Paper stationery mfg	728	28.0	135.4	50.6	186.0	69.5
2412	Printing	2 127	61.2	236.9	92.9	111.4	43.7
2413	Services to printing	470	14.3	43.3	21.0	92.2	44.8
	<i>Total</i>	3 325	103.4	415.6	164.5	125.0	49.5
242	Publishing						
2421	Newspaper printing or publishing	1 651	69.8	282.7	168.6	171.2	102.1
2422	Other periodical publishing	138	3.6	11.7	3.9	84.4	28.1
2423	Book and other publishing	121	3.4	20.5	4.9	169.7	40.8
	<i>Total</i>	1 910	76.8	314.9	177.4	164.8	92.9
243	Recorded media manufacturing and publishing	*23	*0.5	*1.8	*1.0	**75.7	**43.6
24	Total printing, publishing and recorded media	5 259	180.8	732.3	342.9	139.3	65.2
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG							
251	Petroleum refining	297	18.5	90.2	45.2	303.8	152.3
252	Petroleum and coal product mfg n.e.c.	np	np	np	np	np	np
253	Basic chemical mfg						
2531	Fertiliser mfg	226	8.0	107.9	19.9	476.8	87.8
2532	Industrial gas mfg	np	np	np	np	np	np
2533	Synthetic resin mfg	20	np	np	np	np	np
2534	Organic industrial chemical mfg n.e.c.	np	np	np	np	np	np
2535	Inorganic industrial chemical mfg n.e.c.	462	24.0	180.0	59.1	389.7	127.9
	<i>Total</i>	826	38.2	320.4	96.9	387.9	117.3
254	Other chemical product mfg						
2541	Explosive mfg	np	np	np	np	np	np
2542	Paint mfg	462	18.1	99.1	39.2	214.2	84.7
2543	Medicinal and pharmaceutical product mfg	568	25.7	130.8	43.2	230.5	76.1
2544	Pesticide mfg	15	0.4	2.2	0.6	145.4	38.7
2545	Soap and other detergent mfg	95	2.7	15.5	4.4	163.0	45.8
2546	Cosmetic and toiletry preparation mfg	189	np	np	np	np	np
2547	Ink mfg	np	np	np	np	np	np
2549	Chemical product mfg n.e.c.	**186	**6.5	*25.2	*8.3	135.4	44.5
	<i>Total</i>	np	np	np	np	np	np

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MANUFACTURING ESTABLISHMENTS(a)(b), Industry Class *continued*

INDUSTRY CLASS ANZSIC		Employment at end of June (c)	Wages and salaries (d)	Turnover	Industry value added	Turnover per person employed (e)	Industry value added per person employed (f)
code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG <i>cont.</i>							
255	Rubber product mfg						
2551	Rubber tyre mfg	np	np	np	np	np	np
2559	Rubber product mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	1 000	47.8	225.8	101.6	225.8	101.6
256	Plastic product mfg						
2561	Plastic blow moulded product mfg	210	7.0	58.5	21.0	278.1	99.8
2562	Plastic extruded product mfg	459	18.7	118.0	39.8	257.0	86.8
2563	Plastic bag and film mfg	460	17.0	96.2	40.1	209.1	87.1
2564	Plastic product rigid fibre reinforced mfg	274	8.2	34.0	14.4	124.3	52.6
2565	Plastic foam product mfg	188	6.6	43.3	25.4	231.0	135.5
2566	Plastic injection moulded product mfg	1 687	48.2	282.4	129.2	167.3	76.5
	<i>Total</i>	3 278	105.8	632.3	269.9	192.9	82.3
25	Total petroleum, coal, chemical and associated product mfg	7 006	274.2	1 607.5	627.2	229.5	89.5
NON-METALLIC MINERAL PRODUCT MFG							
261	Glass and glass product mfg	557	24.1	125.8	45.1	225.9	80.9
262	Ceramic mfg						
2621	Clay brick mfg	158	np	np	np	np	np
2622	Ceramic product mfg	np	np	np	np	np	np
2623	Ceramic tile and pipe mfg	np	np	np	np	np	np
2629	Ceramic product mfg n.e.c.	*61	*0.3	1.5	0.6	**24.9	**10.1
	<i>Total</i>	267	8.4	44.6	16.1	167.5	60.4
263	Cement, lime, plaster and concrete product mfg						
2631	Cement and lime mfg	np	np	np	np	np	np
2632	Plaster product mfg	175	np	np	np	np	np
2633	Concrete slurry mfg	316	12.1	134.1	24.6	423.6	77.8
2634	Concrete pipe and box culvert mfg	np	np	np	np	np	np
2635	Concrete product mfg n.e.c.	496	16.0	92.7	30.3	186.9	61.2
	<i>Total</i>	1 305	58.3	387.8	120.0	297.1	91.9
264	Non-metallic mineral product mfg n.e.c.	295	8.5	39.0	11.5	132.5	39.1
26	Total non-metallic mineral product mfg	2 423	99.3	597.3	192.7	246.5	79.5
METAL PRODUCT MFG							
271	Iron and steel mfg						
2711	Basic iron and steel mfg	2 027	123.3	838.5	154.9	413.6	76.4
2712	Iron and steel casting and forging	np	np	np	np	np	np
2713	Steel pipe and tube mfg	np	np	np	np	np	np
	<i>Total</i>	2 769	151.0	991.2	224.6	357.9	81.1

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MANUFACTURING ESTABLISHMENTS(a)(b), Industry Class *continued*

INDUSTRY CLASS ANZSIC		Employment at end of June (c)	Wages and salaries (d)	Turnover	Industry value added	Turnover per person employed (e)	Industry value added per person employed (f)
code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
METAL PRODUCT MFG <i>cont.</i>							
272	Basic non-ferrous metal mfg						
2721	Alumina production	—	—	—	—	—	—
2722	Aluminium smelting	—	—	—	—	—	—
2723	Copper, silver, lead and zinc smelting, refining	np	np	np	np	np	np
2729	Basic non-ferrous metal mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	np	np	np	np	np	np
273	Non-ferrous basic metal product mfg						
2731	Aluminium rolling, drawing, extruding	np	np	np	np	np	np
2732	Non-ferrous metal rolling, drawing, extruding n.e.c.	np	np	np	np	np	np
2733	Non-ferrous metal casting	160	4.9	19.9	8.3	124.1	51.6
	<i>Total</i>	np	np	np	np	np	np
274	Structural metal product mfg						
2741	Structural steel fabricating	1 468	50.5	261.5	84.9	178.1	57.8
2742	Architectural aluminium product mfg	785	22.2	120.9	37.7	154.0	48.1
2749	Structural metal product mfg n.e.c.	420	12.2	*89.2	21.1	212.2	50.1
	<i>Total</i>	2 674	84.9	471.6	143.7	176.4	53.8
275	Sheet metal product mfg						
2751	Metal container mfg	np	np	np	np	np	np
2759	Sheet metal product mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	594	17.3	80.4	34.4	135.4	57.9
276	Fabricated metal product mfg						
2761	Hand tool and general hardware mfg	184	6.6	*32.7	*22.4	**177.2	**121.5
2762	Spring and wire product mfg	292	7.9	26.7	11.8	91.3	40.5
2763	Nut, bolt, screw and rivet mfg	76	np	np	np	np	np
2764	Metal coating and finishing	965	30.6	80.8	41.0	83.8	42.5
2765	Non-ferrous pipe fitting mfg	93	np	np	np	np	np
2769	Fabricated metal product mfg n.e.c.	1 635	55.1	242.2	94.2	148.1	57.6
	<i>Total</i>	3 245	104.4	400.3	175.3	123.4	54.0
27	Total metal product mfg	10 546	431.6	2 639.4	696.5	250.3	66.0
MACHINERY AND EQUIPMENT MFG							
281	Motor vehicle and part mfg						
2811	Motor vehicle mfg	7 449	np	np	np	np	np
2812	Motor vehicle body mfg	903	29.9	98.2	44.4	108.7	49.2
2813	Automotive electrical and instrument mfg	330	np	np	np	np	np
2819	Automotive component mfg n.e.c.	4 948	np	np	np	np	np
	<i>Total</i>	13 630	552.7	5 142.2	1 454.8	377.3	106.7
282	Other transport equipment mfg						
2821	Shipbuilding	818	np	np	np	np	np
2822	Boatbuilding	173	4.1	13.3	5.3	77.2	30.8
2823	Railway equipment mfg	np	np	np	np	np	np
2824	Aircraft mfg	218	9.2	33.4	9.1	153.1	41.8
2829	Transport equipment mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	1 297	67.0	183.2	97.0	141.2	74.8

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MANUFACTURING ESTABLISHMENTS(a)(b), Industry Class *continued*

INDUSTRY CLASS ANZSIC		Employment at end of June (c)	Wages and salaries (d)	Turnover	Industry value added	Turnover per person employed (e)	Industry value added per person employed (f)
code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
MACHINERY AND EQUIPMENT MFG <i>cont.</i>							
283	Photographic and scientific equipment mfg						
2831	Photographic and optical good mfg	1 009	38.1	129.8	57.2	128.7	56.7
2832	Medical and surgical equipment mfg	251	np	np	np	np	np
2839	Professional and scientific equipment mfg n.e.c.	696	np	np	np	np	np
	<i>Total</i>	1 956	68.6	262.6	94.6	134.2	48.4
284	Electronic equipment mfg						
2841	Computer and business machine mfg	*256	*8.8	*101.0	*14.8	**393.8	**57.8
2842	Telecommunication, broadcasting and transceiving equipment mfg	350	np	np	np	np	np
2849	Electronic equipment mfg n.e.c.	735	np	np	np	np	np
	<i>Total</i>	1 341	51.1	282.8	76.4	210.8	57.0
285	Electrical equipment and appliance mfg						
2851	Household appliance mfg	1 999	70.5	419.0	124.9	209.6	62.5
2852	Electric cable and wire mfg	np	np	np	np	np	np
2853	Battery mfg	np	np	np	np	np	np
2854	Electric light and sign mfg	323	np	np	np	np	np
2859	Electrical equipment mfg n.e.c.	3 354	100.4	539.5	178.5	160.9	53.2
	<i>Total</i>	5 973	194.5	1 093.3	364.0	183.0	60.9
286	Industrial machinery and equipment mfg						
2861	Agricultural machinery mfg	732	22.0	112.3	36.9	153.4	50.5
2862	Mining and construction machinery mfg	np	np	np	np	np	np
2863	Food processing machinery mfg	*169	*4.8	*36.1	*10.1	214.3	59.7
2864	Machine tool and part mfg	903	31.5	71.7	35.6	79.5	39.4
2865	Lifting and material handling equipment mfg	549	20.1	67.0	26.2	121.9	47.6
2866	Pump and compressor mfg	165	5.8	39.8	9.1	241.3	55.3
2867	Commercial space heating and cooling equipment mfg	np	np	np	np	np	np
2869	Industrial machinery and equipment mfg n.e.c.	987	33.0	118.7	51.3	120.3	52.0
	<i>Total</i>	4 335	154.8	631.4	224.4	145.7	51.8
28	Total machinery and equipment mfg	28 532	1 088.6	7 595.4	2 311.3	266.2	81.0
OTHER MANUFACTURING							
291	Prefabricated building mfg						
2911	Prefabricated metal building mfg	np	np	np	np	np	np
2919	Prefabricated building mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	469	13.5	85.5	20.4	182.4	43.5
292	Furniture mfg						
2921	Wooden furniture and upholstered seat mfg	2 384	67.7	320.3	71.2	134.3	29.8
2922	Sheet metal furniture mfg	35	1.0	4.2	1.8	120.8	51.6
2923	Mattress mfg (except rubber)	np	np	np	np	np	np
2929	Furniture mfg n.e.c.	np	np	np	np	np	np
	<i>Total</i>	2 916	81.7	386.1	92.4	132.4	31.7

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MANUFACTURING ESTABLISHMENTS(a)(b), Industry Class *continued*

INDUSTRY CLASS		Employment at end of June (c)	Wages and salaries (d)	Turnover	Industry value added	Turnover per person employed (e)	Industry value added per person employed (f)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
OTHER MANUFACTURING <i>cont.</i>							
294	Miscellaneous mfg						
2941	Jewellery and silverware mfg	*286	6.4	24.7	9.3	86.3	32.5
2942	Toy and sporting good mfg	261	7.6	34.1	11.2	130.8	43.1
2949	Manufacturing n.e.c.	554	15.1	59.4	20.1	107.3	36.4
	<i>Total</i>	<i>1 100</i>	<i>29.1</i>	<i>118.2</i>	<i>40.7</i>	<i>107.4</i>	<i>36.9</i>
29	Total other manufacturing	4 485	124.3	589.7	153.5	131.5	34.2
21-29	TOTAL MANUFACTURING	83 356	3 030.6	20 180.9	6 413.6	242.1	76.9

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(e) Turnover divided by the number of persons employed at the end of June.

(f) Industry value added divided by the number of persons employed at the end of June.

MANUFACTURING ESTABLISHMENTS(a)(b), Employment Size(c)

Employment size group	Employment at end of June(d)		Wages and salaries(e)(f)		Turnover(f)		Industry value added(f)	
	no.	%	\$m	%	\$m	%	\$m	%
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
0-4 persons	286	1.8	3.9	0.8	32.3	0.7	9.4	0.6
5-9 persons	717	4.6	18.5	3.6	147.6	3.2	41.4	2.7
10-19 persons	1 014	6.5	20.3	3.9	183.5	4.0	44.1	2.8
20-49 persons	1 752	11.2	57.1	11.1	534.2	11.6	167.1	10.8
50-99 persons	1 719	11.0	53.1	10.3	415.9	9.0	103.8	6.7
Total less than 100 persons	5 488	35.2	152.9	29.7	1 313.5	28.5	365.8	23.6
100-199 persons	2 768	17.8	98.4	19.1	757.7	16.4	241.3	15.5
200-499 persons	np	np	np	np	np	np	np	np
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	10 100	64.8	361.4	70.3	3 300.9	71.5	1 187.0	76.4
Total	15 588	100.0	514.3	100.0	4 614.4	100.0	1 552.9	100.0
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
0-4 persons	318	8.1	5.1	4.1	21.8	3.3	7.9	5.2
5-9 persons	309	7.9	5.8	4.7	18.5	2.8	7.2	4.8
10-19 persons	498	12.8	10.2	8.1	40.9	6.2	14.2	9.5
20-49 persons	405	10.4	10.4	8.3	45.3	6.9	13.8	9.2
50-99 persons	434	11.1	13.5	10.8	71.1	10.8	19.0	12.7
Total less than 100 persons	1 965	50.4	45.0	36.1	197.6	30.0	62.1	41.3
100-199 persons	897	23.0	34.9	28.0	143.5	21.8	24.5	16.3
200-499 persons	1 040	26.7	44.9	36.0	317.8	48.2	63.6	42.4
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	1 937	49.6	79.7	63.9	461.3	70.0	88.1	58.7
Total	3 902	100.0	124.7	100.0	658.9	100.0	150.2	100.0
WOOD AND PAPER PRODUCT MANUFACTURING								
0-4 persons	456	8.1	7.6	4.0	35.9	3.2	13.5	3.5
5-9 persons	445	7.9	11.0	5.8	39.1	3.5	12.8	3.4
10-19 persons	588	10.5	14.7	7.8	59.6	5.3	20.2	5.3
20-49 persons	536	9.5	18.6	9.9	90.7	8.1	31.2	8.2
50-99 persons	298	5.3	10.9	5.8	66.5	5.9	21.0	5.5
Total less than 100 persons	2 322	41.3	62.7	33.2	291.8	25.9	98.7	25.8
100-199 persons	1 236	22.0	47.5	25.2	263.1	23.4	113.5	29.7
200-499 persons	np	np	np	np	np	np	np	np
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	3 294	58.7	126.0	66.8	834.6	74.1	283.3	74.2
Total	5 616	100.0	188.7	100.0	1 126.4	100.0	382.0	100.0

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— nil or rounded to zero (including null cells)

(a) See paragraph 5 of the Explanatory Notes.

(b) Group employer information held by the Australian Taxation Office is now being used to delete those businesses which have ceased trading or are no longer employing staff. See paragraphs 11-13 of the Explanatory Notes.

(c) Data in this table reflect the size of individual manufacturing establishments. These data do not necessarily reflect the size of the business which owns and operates the establishment.

(d) Includes working proprietors.

(e) Excludes the drawings of working proprietors.

(f) Figures may differ slightly from those presented in other tables because they exclude those manufacturing establishments which operated during 1998-99 but were not operating at 30 June 1999. See paragraph 21 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a)(b), Employment Size(c) *continued*

Employment size group	Employment at end of June(d)		Wages and salaries(e)(f)		Turnover(f)		Industry value added(f)	
	no.	%	\$m	%	\$m	%	\$m	%
PRINTING, PUBLISHING AND RECORDED MEDIA								
0-4 persons	559	10.6	11.3	6.3	40.5	5.5	20.3	5.9
5-9 persons	566	10.8	11.7	6.5	43.0	5.9	17.2	5.0
10-19 persons	339	6.4	10.4	5.7	39.1	5.3	18.8	5.5
20-49 persons	973	18.5	31.1	17.2	112.8	15.4	47.6	13.9
50-99 persons	865	16.4	29.8	16.5	108.3	14.8	48.7	14.2
<i>Total less than 100 persons</i>	<i>3 302</i>	<i>62.8</i>	<i>94.3</i>	<i>52.1</i>	<i>343.7</i>	<i>46.9</i>	<i>152.7</i>	<i>44.5</i>
100-199 persons	np	np	np	np	np	np	np	np
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>1 957</i>	<i>37.2</i>	<i>86.5</i>	<i>47.9</i>	<i>388.5</i>	<i>53.1</i>	<i>190.3</i>	<i>55.5</i>
Total	5 259	100.0	180.8	100.0	732.3	100.0	342.9	100.0
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
0-4 persons	np	np	np	np	np	np	np	np
5-9 persons	np	np	np	np	np	np	np	np
10-19 persons	520	7.4	15.9	5.8	107.3	6.7	31.7	5.1
20-49 persons	1 321	18.9	45.9	16.8	242.2	15.1	83.0	13.3
50-99 persons	814	11.6	37.5	13.7	241.4	15.1	77.2	12.3
<i>Total less than 100 persons</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>
100-199 persons	np	np	np	np	np	np	np	np
200-499 persons	1 699	24.3	76.0	27.9	473.8	29.6	215.7	34.5
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>
Total	7 006	100.0	272.8	100.0	1 603.3	100.0	625.8	100.0
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
0-4 persons	np	np	np	np	np	np	np	np
5-9 persons	233	9.6	4.7	4.7	27.7	4.7	7.8	4.1
10-19 persons	230	9.5	7.9	8.0	82.5	13.9	23.1	12.0
20-49 persons	683	28.2	24.1	24.3	128.5	21.6	37.6	19.6
50-99 persons	456	18.8	22.3	22.5	116.8	19.6	38.8	20.2
<i>Total less than 100 persons</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>
100-199 persons	421	17.4	27.2	27.4	147.6	24.8	54.4	28.3
200-499 persons	np	np	np	np	np	np	np	np
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>	<i>np</i>
Total	2 423	100.0	99.1	100.0	595.2	100.0	191.8	100.0

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— nil or rounded to zero (including null cells)

(a) See paragraph 5 of the Explanatory Notes.

(b) Group employer information held by the Australian Taxation Office is now being used to delete those businesses which have ceased trading or are no longer employing staff. See paragraphs 11-13 of the Explanatory Notes.

(c) Data in this table reflect the size of individual manufacturing establishments. These data do not necessarily reflect the size of the business which owns and operates the establishment.

(d) Includes working proprietors.

(e) Excludes the drawings of working proprietors.

(f) Figures may differ slightly from those presented in other tables because they exclude those manufacturing establishments which operated during 1998-99 but were not operating at 30 June 1999. See paragraph 21 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a)(b), Employment Size(c) *continued*

Employment size group	Employment at end of June(d)		Wages and salaries(e)(f)		Turnover(f)		Industry value added(f)	
	no.	%	\$m	%	\$m	%	\$m	%
METAL PRODUCT MANUFACTURING								
0-4 persons	np	np	np	np	np	np	np	np
5-9 persons	np	np	np	np	np	np	np	np
10-19 persons	1 052	10.0	35.7	8.3	158.3	6.0	50.3	7.2
20-49 persons	1 519	14.4	51.6	12.0	251.6	9.5	96.3	13.8
50-99 persons	1 877	17.8	70.1	16.2	401.5	15.2	140.2	20.1
Total less than 100 persons	6 285	59.6	206.4	47.8	1 000.8	37.9	356.7	51.2
100-199 persons	1 375	13.0	68.8	15.9	556.9	21.1	138.1	19.8
200-499 persons	np	np	np	np	np	np	np	np
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	np	np	np	np	np	np	np	np
Total 100 or more persons	4 262	40.4	225.2	52.2	1 638.5	62.1	339.8	48.8
Total	10 546	100.0	431.6	100.0	2 639.4	100.0	696.5	100.0
MACHINERY AND EQUIPMENT MANUFACTURING								
0-4 persons	812	2.8	17.2	1.6	58.6	0.8	26.0	1.1
5-9 persons	1 292	4.5	32.3	3.0	129.0	1.7	48.4	2.1
10-19 persons	1 287	4.5	41.4	3.8	162.6	2.1	65.8	2.8
20-49 persons	3 151	11.0	106.5	9.8	396.4	5.2	156.3	6.8
50-99 persons	1 940	6.8	71.7	6.6	452.1	6.0	103.7	4.5
Total less than 100 persons	8 482	29.7	269.2	24.8	1 198.7	15.8	400.3	17.3
100-199 persons	3 541	12.4	124.2	11.4	738.2	9.7	208.6	9.0
200-499 persons	4 479	15.7	192.9	17.7	863.7	11.4	361.1	15.6
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	np	np	np	np	np	np	np	np
Total 100 or more persons	20 050	70.3	818.1	75.2	6 394.7	84.2	1 909.8	82.7
Total	28 532	100.0	1 087.3	100.0	7 593.4	100.0	2 310.1	100.0
OTHER MANUFACTURING								
0-4 persons	np	np	np	np	np	np	np	np
5-9 persons	658	14.7	14.6	12.0	73.0	12.5	22.0	14.5
10-19 persons	727	16.2	19.7	16.2	72.9	12.5	23.7	15.6
20-49 persons	763	17.0	22.2	18.3	98.8	17.0	33.8	22.3
50-99 persons	990	22.1	26.9	22.1	129.5	22.3	39.0	25.8
Total less than 100 persons	np	np	np	np	np	np	np	np
100-199 persons	np	np	np	np	np	np	np	np
200-499 persons	np	np	np	np	np	np	np	np
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	np	np	np	np	np	np	np	np
Total	4 485	100.0	121.8	100.0	581.5	100.0	151.4	100.0

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— nil or rounded to zero (including null cells)

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(c) Data in this table reflect the size of individual manufacturing establishments. These data do not necessarily reflect the size of the business which owns and operates the establishment.

(d) Includes working proprietors.

(e) Excludes the drawings of working proprietors.

(f) Figures may differ slightly from those presented in other tables because they exclude those manufacturing establishments which operated during 1998-99 but were not operating at 30 June 1999. See paragraph 21 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a)(b), Employment Size(c) *continued*

<i>Employment size group</i>	<i>Employment at end of June(d)</i>		<i>Wages and salaries(e)(f)</i>		<i>Turnover(f)</i>		<i>Industry value added(f)</i>	
	<i>no.</i>	<i>%</i>	<i>\$m</i>	<i>%</i>	<i>\$m</i>	<i>%</i>	<i>\$m</i>	<i>%</i>
TOTAL MANUFACTURING								
0-4 persons	3 687	4.4	72.0	2.4	297.3	1.5	117.4	1.8
5-9 persons	6 059	7.3	148.7	4.9	689.7	3.4	236.5	3.7
10-19 persons	6 254	7.5	176.2	5.8	906.7	4.5	291.9	4.6
20-49 persons	11 102	13.3	367.6	12.2	1 900.6	9.4	666.6	10.4
50-99 persons	9 392	11.3	335.8	11.1	2 003.1	9.9	591.6	9.2
<i>Total less than 100 persons</i>	<i>36 494</i>	<i>43.8</i>	<i>1 100.3</i>	<i>36.4</i>	<i>5 797.4</i>	<i>28.8</i>	<i>1 904.0</i>	<i>29.7</i>
100-199 persons	13 216	15.9	500.5	16.6	3 139.4	15.6	965.7	15.1
200-499 persons	16 224	19.5	649.9	21.5	4 701.3	23.3	1 719.9	26.9
500-999 persons	6 483	7.8	282.8	9.4	1 647.0	8.2	558.8	8.7
1 000 or more persons	10 939	13.1	487.5	16.1	4 859.6	24.1	1 255.2	19.6
<i>Total 100 or more persons</i>	<i>46 862</i>	<i>56.2</i>	<i>1 920.7</i>	<i>63.6</i>	<i>14 347.3</i>	<i>71.2</i>	<i>4 499.7</i>	<i>70.3</i>
Total	83 356	100.0	3 021.0	100.0	20 144.7	100.0	6 403.7	100.0

(a) See paragraph 5 of the Explanatory Notes.

(b) Group employer information held by the Australian Taxation Office is now being used to delete those businesses which have ceased trading or are no longer employing staff. See paragraphs 11-13 of the Explanatory Notes.

(c) Data in this table reflect the size of individual manufacturing establishments. These data do not necessarily reflect the size of the business which owns and operates the establishment.

(d) Includes working proprietors.

(e) Excludes the drawings of working proprietors.

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MANUFACTURING ESTABLISHMENTS(a)(b), Exported Production(c)—Employment Size(d)

INDUSTRY SUBDIVISION ANZSIC		Sales and transfers out of goods produced	Amount exported by this business or its agent	Exports as a proportion of sales and transfers out of goods produced
code	Description	\$m	\$m	%
0–49 PERSONS				
21	Food, beverage and tobacco mfg	848.4	167.5	19.7
22	Textile, clothing, footwear and leather mfg	119.7	6.2	5.2
23	Wood and paper product mfg	219.9	np	np
24	Printing, publishing and recorded media	210.1	9.3	4.4
25	Petroleum, coal, chemical and associated product mfg	np	33.1	np
26	Non-metallic mineral product mfg	np	np	np
27	Metal product mfg	545.1	24.4	4.5
28	Machinery and equipment mfg	660.7	np	np
29	Other manufacturing	np	6.7	np
21–29	Total manufacturing	3 511.5	309.2	8.8
50–99 PERSONS				
21	Food, beverage and tobacco mfg	391.6	35.9	9.2
22	Textile, clothing, footwear and leather mfg	66.5	np	np
23	Wood and paper product mfg	64.6	—	—
24	Printing, publishing and recorded media	95.0	np	np
25	Petroleum, coal, chemical and associated product mfg	236.2	14.8	6.3
26	Non-metallic mineral product mfg	99.2	np	np
27	Metal product mfg	370.9	np	np
28	Machinery and equipment mfg	413.7	np	np
29	Other manufacturing	119.0	np	np
21–29	Total manufacturing	1 856.7	130.7	7.0
100 OR MORE PERSONS				
21	Food, beverage and tobacco mfg	3 222.8	699.5	21.7
22	Textile, clothing, footwear and leather mfg	455.1	np	np
23	Wood and paper product mfg	827.5	np	np
24	Printing, publishing and recorded media	211.4	np	np
25	Petroleum, coal, chemical and associated product mfg	np	69.4	np
26	Non-metallic mineral product mfg	np	np	np
27	Metal product mfg	1 586.8	np	np
28	Machinery and equipment mfg	6 258.4	984.3	15.7
29	Other manufacturing	np	np	np
21–29	Total manufacturing	13 770.2	2 665.8	19.4
TOTAL				
21	Food, beverage and tobacco mfg	4 462.9	902.9	20.2
22	Textile, clothing, footwear and leather mfg	641.3	246.6	38.5
23	Wood and paper product mfg	1 112.0	9.8	0.9
24	Printing, publishing and recorded media	516.5	27.7	5.4
25	Petroleum, coal, chemical and associated product mfg	1 481.8	117.3	7.9
26	Non-metallic mineral product mfg	559.0	16.0	2.9
27	Metal product mfg	2 502.9	683.6	27.3
28	Machinery and equipment mfg	7 332.8	1 092.3	14.9
29	Other manufacturing	529.1	9.4	1.8
21–29	Total manufacturing	19 138.4	3 105.6	16.2

np not available for publication but included in totals where applicable, unless otherwise indicated

— nil or rounded to zero (including null cells)

(a) See paragraph 5 of the Explanatory Notes.

(b) Group employer information held by the Australian Taxation Office is now being used to delete those businesses which have ceased trading or are no longer employing staff. See paragraphs 11–13 of the Explanatory Notes.

(c) See paragraphs 22–24 of the Explanatory Notes.

(d) Data in this table reflect the size of individual manufacturing establishments. These data do not necessarily reflect the size of the business which owns and operates the establishment. Also, this table excludes those manufacturing establishments which operated during 1998–99 but were not operating at 30 June 1999. See paragraph 21 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a), Summary Data—Proportion of Exports(b)

INDUSTRY SUBDIVISION		Employment at end of June(c)	Wages and salaries(d)	Turnover	Industry value added
ANZSIC code	Description	%	%	%	%
DO NOT EXPORT					
21	Food, beverage and tobacco mfg	38.1	35.3	30.0	27.1
22	Textile, clothing, footwear and leather mfg	41.2	31.1	23.1	34.1
23	Wood and paper product mfg	88.2	85.0	85.0	87.3
24	Printing, publishing and recorded media	81.0	81.6	77.2	83.0
25	Petroleum, coal, chemical and associated product mfg	44.1	40.4	44.3	42.8
26	Non-metallic mineral product mfg	71.2	62.2	70.1	63.2
27	Metal product mfg	56.0	43.9	34.8	46.2
28	Machinery and equipment mfg	27.8	25.9	15.3	19.7
29	Other manufacturing	79.7	82.0	82.6	77.4
21-29	Total manufacturing	46.8	42.1	33.5	37.1
EXPORTS UP TO AND INCLUDING 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	51.9	54.7	60.4	66.4
22	Textile, clothing, footwear and leather mfg	42.8	42.7	39.4	42.8
23	Wood and paper product mfg	11.8	15.0	15.0	12.7
24	Printing, publishing and recorded media	18.4	17.7	21.5	16.3
25	Petroleum, coal, chemical and associated product mfg	np	np	np	np
26	Non-metallic mineral product mfg	np	np	np	np
27	Metal product mfg	np	np	np	np
28	Machinery and equipment mfg	62.6	63.7	77.2	72.5
29	Other manufacturing	19.5	17.6	17.1	22.0
21-29	Total manufacturing	46.0	49.1	57.0	56.3
EXPORTS MORE THAN 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	10.0	9.9	9.6	6.5
22	Textile, clothing, footwear and leather mfg	16.0	26.2	37.5	23.0
23	Wood and paper product mfg	—	—	—	—
24	Printing, publishing and recorded media	0.6	0.7	1.3	0.6
25	Petroleum, coal, chemical and associated product mfg	np	np	np	np
26	Non-metallic mineral product mfg	np	np	np	np
27	Metal product mfg	np	np	np	np
28	Machinery and equipment mfg	9.5	10.4	7.5	7.8
29	Other manufacturing	0.8	0.4	0.3	0.6
21-29	Total manufacturing	7.2	8.8	9.5	6.6

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— nil or rounded to zero (including null cells)

(a) See paragraph 5 of the Explanatory Notes.

(b) See paragraphs 22-24 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents final statistics for South Australia compiled from a survey of manufacturing establishments for 1998–99, with some comparative statistics relating to preceding years. The emphasis of this publication is on the release of statistics for the main data items included in the survey.

2 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.

3 The manufacturing collection is conducted on an annual basis. For the 1998–99 collection, a sample of approximately 17,000 establishments nationally were asked to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported. Data on IVA are also available from this collection. In addition, a variety of samples was selected to produce data on a range of other variables. The next manufacturing census will be conducted in respect of 2001–02, with sample surveys conducted for the next two years.

4 Estimates of IVA were compiled using data from the 17,000 sample population and a sub-sample of approximately 7,000 establishments which were asked to provide detailed structural and performance data. These 7,000 establishments were also asked to supply value of sales for commodities produced. The availability of this fine level commodity/activity data for these units has enabled better identification of inscope establishments as well as providing a basis for an objective industry code to be allocated to responding units. A sample of approximately 5,200 manufacturing management units was asked the detailed information required to derive operating profit before tax. Selected data from the annual manufacturing collection and data from other collections are included in the compendium publication *Manufacturing, Australia, 2000* (Cat. no. 8225.0).

SCOPE AND COVERAGE

5 The business unit for which statistics are presented in this publication is the establishment. 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; these are excluded from the collection.

6 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 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 1998–99 manufacturing collection, 'significant' was defined as turnover of \$7.3 million or more.

7 The statistics in this publication exclude some very small manufacturers. Those excluded are manufacturers not employing staff at 30 June of the reference year (such as sole proprietorships or family partnerships) which had not registered as group employers (GE) with the Australian Taxation Office (ATO). Though a substantial number, these businesses would contribute only marginally to aggregate data were they to be included. In addition, the ABS

EXPLANATORY NOTES *continued*

SCOPE AND COVERAGE

continued

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

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

RELIABILITY OF ESTIMATES

9 For information on this subject, see Technical Note 1.

DATA ADJUSTED

10 Data in this issue continue to be adjusted to allow for lags in processing new businesses to the ABS business register, i.e. adjustments have been made to allow for new businesses which had commenced operations but for which details had not been processed to the ABS business register in time for inclusion in the annual manufacturing industry collection. Adjustments of this type will continue to be applied in future periods. The majority of businesses affected by these lags are small in size. The effect of these adjustments on 1998–99 South Australian employment is an increase of 0.8% while the effect on turnover is an increase of 0.3%. All industry subdivisions were affected to a similar degree.

11 For some time now, the ABS has been using ATO information on GE registrations to add new businesses to the ABS business register. After detailed investigation, it has now been decided to use GE information to delete from the business register those businesses which have ceased trading or are no longer employing staff.

12 The process of using GE information to delete businesses from the ABS business register has been introduced for the 1998–99 manufacturing survey. The result is that a large number of businesses were removed from the business register and, therefore, from the population for the 1998–99 manufacturing survey. This process will now also be ongoing, but the number of businesses removed in future years will be relatively small.

13 The use of GE information to delete businesses from the ABS business register has also impacted on previous years' data. Estimates for the previous three manufacturing collections (covering 1995–96 to 1997–98 inclusive) have been adjusted in such a way as to phase in the impact over this time. The impact on survey results has been to reduce estimates slightly. For example, total South Australian manufacturing employment for 1997–98 was reduced by 1.3% and turnover by 1.4%. For periods before 1995–96, the impact is estimated to have been negligible. The impacts of the ongoing process are also expected to be negligible.

COMPARABILITY WITH PREVIOUS STATISTICS

14 Commencing with estimates for 1997–98, the definition of turnover has changed in line with new international standards for measuring economic variables. The composition of turnover estimates under the new standards is as follows:

Turnover (as previously defined)
plus Income from intellectual property royalties
equals Turnover (new standards)

15 Conceptually, some further differences exist between turnover on the old and new bases (particularly in relation to own account production of computer software, own account mineral exploration, and own account production of literary, entertainment or artistic originals). However, as these activities are relatively unimportant for manufacturing industries, no attempt has been made to measure them.

EXPLANATORY NOTES *continued*

COMPARABILITY WITH PREVIOUS STATISTICS *continued*

16 Commencing with estimates for 1997–98, under new international standards, contribution to gross domestic product (GDP) by manufacturing industries will be measured by the variable 'Industry value added' (IVA). Estimates for IVA measure the value added by an industry to the intermediate inputs used by that industry. Previously, the corresponding contribution to GDP was measured by the variable 'Industry gross product' (IGP). It should also be noted that IVA is not the same variable as 'Value added' which was published for manufacturing establishments until 1992–93.

17 Composition of IVA estimates and their relationship to IGP estimates are:

	Turnover (new standards)
plus	Closing inventories
less	Opening inventories
less	Intermediate input expenses (see the operating expenses entry in the Glossary)
equals	IVA
	IVA
plus	Intellectual property royalty expenses
less	Intellectual property royalty income
less	Computer software expenses not capitalised by the business
less	Selected indirect taxes (For manufacturing industries, the main types are fringe benefits tax, payroll tax, land rates and land taxes.)
equals	IGP

18 Commencing with the 1994–95 manufacturing collection, multi-establishment management units have been 'collapsed' for reporting purposes into single establishment management units, unless they had significant activity in more than one industry and/or State or Territory. The effect of this process is that most manufacturing businesses which previously reported for more than one establishment were asked to combine operations by those establishments into a single reporting unit. The effect of this on manufacturing statistics as contained in this publication has been minimal.

19 For the 1995–96 collection only, provision expenses for employee entitlements were excluded from wages and salaries. For all other years, these provision expenses are included in wages and salaries.

20 Periodic collections of the Retail and Wholesale Divisions of ANZSIC, conducted for the 1998–99 reference year, identified a number of businesses which were predominantly manufacturers. A small number of these cases were determined to be significant in some manufacturing industries and have therefore been added into the manufacturing collection for 1998–99. The effect of these additional units on published aggregates have been calculated as adding 0.6% to employment and 0.9% to turnover for South Australia.

EMPLOYMENT SIZE DATA

21 Summary of operations data at the industry subdivision level classified by the employment size of individual manufacturing establishments (see the Glossary for its definition) are presented in table 3. Similarly, exports of goods produced data at the industry subdivision level classified by the broad employment size of individual manufacturing establishments are presented in table 4. The statistics in these two tables relate only to those manufacturing establishments operating at 30 June 1999. As such, the figures presented represent a slightly different population from 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 1998–99.

EXPLANATORY NOTES *continued*

EXPORTS BY MANUFACTURERS

22 All establishments included in the manufacturing collection were asked whether they exported and, if so, what percentage of their sales of goods produced plus transfers out of goods produced by the establishment for sale were exported by their business or an agent on their behalf. The data presented in table 4 are derived by applying the percentage of exports reported for each exporting unit and then aggregating that figure. The data in table 4 exclude those manufacturing establishments which operated during 1998–99 but were not operating at 30 June 1999.

23 The statistics presented in table 4 for the value of exports by manufacturers or their agents are not intended to be the same as the value of exports classified by manufacturing industry of origin as published by the ABS in international trade statistics. These latter statistics are intended to measure total exports regardless of which business or organisation does the exporting (and to identify the probable industry from which the goods originated), whereas the statistics in tables 4 and 5 only include exports directly undertaken by the manufacturer or by its agent.

24 The data in table 4 showing exports by manufacturers or their agents can be expected to show a much lower value than the exports data from the international trade series. The main reason is that for many exports of goods manufactured in Australia, the actual exporting activity is undertaken by a business other than the manufacturer. Also, the value of goods produced on a commission or fee basis for non-manufacturing businesses and which are then exported is not included in the data in tables 4 and 5. Examples of relevant commission work are the 'slaughtering fee' charged by an abattoir for processing livestock owned by a meat exporter and the 'tolling fee' charged by an aluminium smelter to process ores owned by other (e.g. mining) businesses. Also excluded from tables 4 and 5 are any exports by manufacturers of goods which were not produced by that manufacturer. These and other goods exported (e.g. re-exports) are included in the international trade data. Finally, differences in valuation of exports arise because the value of exports in the international trade series would include the value to the manufacturer plus profit margins for the exporter and for any intermediaries between the manufacturer and the exporter.

REGIONAL DATA

25 Current investigations carried out by the ABS have shown that it is possible to produce some regional or sub-State estimates in survey collection years. The ABS proposes to make sub-State data available later this year, after the release of the *Manufacturing Industry, [State], 1998–99* publication series. For further information about the availability of sub-State data, please contact John Ridley on Sydney 02 9268 4541.

26 Sub-State data in census years will continue to be published in the *Manufacturing Industry, [State]* series or will be available as unpublished data.

ACKNOWLEDGMENT

27 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

INFORMATION PAPER

28 The *Information Paper: Availability of Statistics Related to Manufacturing* (Cat. no. 8205.0) outlines the vast amount of published and unpublished data available from the annual manufacturing industry collection, as well as data from other ABS collections.

EXPLANATORY NOTES *continued*

RELATED PUBLICATIONS

29 A series of publications *Manufacturing Industry, [State], 1998–99* (Cat. nos 8221.1–8221.6) will be produced for each State. The publication for New South Wales (Cat. no. 8221.1) also contains selected data for the Australian Capital Territory. These publications are being released progressively.

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

- *Business Operations and Industry Performance, Australia, 1998–99* (Cat. no. 8140.0), to be released in December 2000—Annual publication
- *Business Operations and Industry Performance, Australia, Preliminary, 1998–99* (Cat. no. 8142.0), released on 12 May 2000—Annual publication
- *Environment Protection Expenditure, Australia, 1995–96 and 1996–97* (Cat. no. 4603.0), released on 2 July 1999—Biennial publication
- *Information Paper: Availability of Statistics Related to Manufacturing, 1996* (Cat. no. 8205.0), released on 21 March 1996—Irregular publication
- *Information Paper: Availability of Statistics Related to Manufacturing, 1997* (Cat. no. 8205.0), released on 16 January 1998—Irregular publication
- *Information Paper: Improvements to ABS Economic Statistics, 1997* (Cat. no. 1357.0), released on 22 August 1997—Irregular publication
- *Inventories and Sales, Selected Industries, Australia* (Cat. no. 5629.0)—Quarterly publication
- *Labour Force, Australia* (Cat. no. 6203.0)—Monthly publication
- *Manufacturing, Australia, 2000* (Cat. no. 8225.0), to be released in December 2000—Annual publication
- *Manufacturing Industry, Australia, Preliminary, 1999–2000* (Cat. no. 8201.0), to be released in March 2001—Annual publication

BACK DATA AND UNPUBLISHED STATISTICS

31 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. In general, unpublished data consist of finer industry dissections of the published data. Other more detailed data may also be available. A charge is made for providing unpublished information. The information paper (Cat. no. 8205.0) referred to in paragraphs 28 and 30 also provides more details.

ROUNDING

32 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 (see paragraph 10), this 'rounding rule' also applies to employment counts.

33 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.

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATO	Australian Taxation Office
f.o.b.	free on board
GDP	gross domestic product
GE	group employer
IGP	industry gross product
IVA	industry value added
mfg	manufacturing
n.e.c.	not elsewhere classified

TECHNICAL NOTE 1 DATA RELIABILITY

SAMPLE ERROR

1 The 1998–99 manufacturing survey was designed primarily to deliver industry class estimates for Australia and States for the data items employment, wages and salaries, turnover and IVA. For the two Territories, the sample was designed to deliver industry subdivision data only.

2 All 1998–99 (and 1994–95, 1995–96 and 1997–98) data contained in this publication have been obtained from samples of manufacturers. As such, these data are 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. The measure of the likely difference as used by the ABS 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 2 chances in 3 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.

3 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 1998–99 employment, wages and salaries, turnover and IVA data for South Australia presented in this publication are mainly 3% or less for industry subdivisions (see Technical Note 2) and 4% or less for most industry classes.

4 Relative standard errors at the industry subdivision level for South Australia for selected data items representing the full range of data contained in this publication are shown in Technical Note 2. Detailed relative standard errors can be made available on request.

NON SAMPLE ERROR

5 The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of inadequacies in available sources from which the population frame was compiled, imperfections in reporting by providers, errors made in collection such as in recording and coding data, and errors made in processing data. Inaccuracies of this kind are referred to collectively as non-sampling error and they may occur in any enumeration, whether it be a full census or a sample.

6 While it is not possible to quantify non-sampling error, every effort is made to reduce it to a minimum. Collection forms are designed to be easy to complete and assist businesses to report accurately. Efficient and effective operating procedures and systems are used to compile the statistics.

TECHNICAL NOTE 2 STANDARD ERRORS

SELECTED DATA ITEMS

INDUSTRY SUBDIVISION		Employment at end of June(a)	Wages and salaries(b)	Turnover	Industry value added	Amount exported by this business or its agent
ANZSIC code	Description	%	%	%	%	%
21	Food, beverage and tobacco mfg	1.6	1.2	0.8	1.0	2.7
22	Textile, clothing, footwear and leather mfg	2.1	1.2	0.8	1.3	0.4
23	Wood and paper product mfg	2.9	2.3	1.4	1.6	1.9
24	Printing, publishing and recorded media	4.6	4.0	2.9	3.1	6.3
25	Petroleum, coal, chemical and associated product mfg	2.6	2.0	1.1	1.3	2.6
26	Non-metallic mineral product mfg	3.2	1.9	1.5	1.8	2.6
27	Metal product mfg	2.8	2.1	1.5	2.2	1.1
28	Machinery and equipment mfg	1.1	0.8	0.6	0.6	1.2
29	Other manufacturing	4.5	3.8	4.2	4.3	3.5
21-29	Total manufacturing	0.8	0.6	0.4	0.5	0.9

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

GLOSSARY

ABS	Australian Bureau of Statistics
Amount exported by this business unit or its agent	This represents the sales value of goods produced by an establishment (or for it on commission), including the value of manufactured goods transferred to other establishments of the business unit for sale, that are exported (or are intended for export) outside Australia by the business unit or by its agent.
ANZSIC	Australian and New Zealand Standard Industrial Classification
Capitalised work done for own use	<p>Capitalised work done by the employees or proprietors of an establishment for use by the business unit or for rental or lease to other businesses. The main types of work are manufacturing, constructing, installing or repairing assets and development of computer software. This work is valued at the capitalised costs of the materials and the wages and salaries involved.</p> <p>Conceptually, this item should also include own account mineral exploration and own account production of literary, entertainment or artistic originals. However, these activities are relatively unimportant for manufacturers and have not been measured for manufacturing industries.</p>
Change in inventories	The value of total closing inventories minus total opening inventories.
Closing inventories	The value of all inventories of finished goods, work-in-progress, raw materials, fuels, containers and packaging as at the end of the reference period.
Commission manufacturing	<p>Significant amounts of manufacturing are undertaken on a commission basis by one manufacturer on behalf of another manufacturer or by a manufacturer on behalf of a non-manufacturer. Typically, a commission manufacturing transaction will involve a client commissioning the production of goods by a producing establishment from materials provided by the client. Ownership of those materials remains with the client. Similarly, the goods made from those materials are owned by the client.</p> <p>For the purposes of the estimates in this publication, the producing establishment reports the commission fee as service income along with wages and salaries and any other expenses incurred.</p> <p>If the client is a manufacturing establishment, then in addition to data for their own manufacturing operations, the client reports the sales and stocks of the commissioned goods, the cost of the materials provided to the producing establishment, the commission fee paid and the value of any other intermediate inputs related to the commission transaction. If the client is not a manufacturing establishment, no data are reported by the client.</p>
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 ending 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 <i>Corporations Legislation Amendment Act 1991</i>). 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

GLOSSARY *continued*

Establishment <i>continued</i>	detailed data i.e. the data needed to compile turnover, opening and closing inventories, purchases and transfers in, motor vehicle running expenses, freight and cartage expenses, commission expenses, rent, leasing and hiring expenses, and repair and maintenance expenses. In general, an establishment covers all operations at a physical location, but may consist of groups of locations provided they are within the same State or Territory. The majority of establishments operate at one location only.
Establishments that do not export	Establishments that reported no exports (either by their business unit or for them by an agent) of goods that they produced.
Establishments with exports of more than 50% of sales	Establishments that reported exports (either by their business unit or for them by an agent) of more than 50% of sales and transfers out of goods for sale that they produced.
Establishments with exports up to and including 50% of sales	Establishments that reported exports (either by their business unit or for them by an agent) of up to and including 50% of sales and transfers out of goods for sale that they produced.
Exports as a proportion of sales and transfers out of goods produced (table 4)	For an individual establishment, this represents the percentage of the total sales and transfers out of goods for sale produced by the establishment (or for it on commission) which are exported (or are intended for export) outside Australia by the business unit or by its agent. In table 4, the ratio is calculated by dividing the total value of goods exported by the total value of sales and transfers out of goods for sale produced by all establishments, not just the aggregated value for those units which exported.
Funding by Federal, State or Local Governments for operational costs	Funding by Federal, State or Local Governments for operational costs (e.g. wages and salaries, rent). Included are bounties, subsidies, export grants and apprenticeship schemes.
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 gross product (IGP)	<p>For periods prior to 1997–98, estimates of IGP represented the measure of the contribution by manufacturing industries to gross domestic product (GDP). However, commencing with estimates for 1997–98 following introduction of new international standards for measuring economic variables, IGP has been replaced by the variable industry value added (IVA) for the purpose of measuring industry contribution to GDP.</p> <p>The relationship between IVA estimates and IGP estimates is:</p> <div style="margin-left: 40px;"> IVA plus Intellectual property royalty expenses less Intellectual property royalty income less Computer software expenses not capitalised by the business less Selected indirect taxes (For manufacturing industries, the main types are fringe benefits tax, payroll tax, land rates and land taxes.) equals IGP </div>
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

GLOSSARY *continued*

Industry subdivision *continued*

WOOD AND PAPER PRODUCT MANUFACTURING. Industry subdivisions are built up from industry groups which, in turn, are built up from industry classes. The following list 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

Industry value added (IVA)

IVA represents the value added by an industry to the intermediate inputs used by the industry. Commencing with estimates for 1997–98, IVA has replaced industry gross product (IGP) as the measure of the contribution by manufacturing industries to gross domestic product. See the entry for industry gross product for an explanation of the differences between IVA and IGP.

The derivation of IVA is as follows:

	Turnover (new standards)
plus	Closing inventories
less	Opening inventories
less	Intermediate input expenses (for details, see the entry for operating expenses)
equals	IVA

However, it should be noted that IVA is not a measure of operating profits before tax. Wages, salaries and most other labour costs are not taken into account in its calculation and nor are most insurance premiums, interest expenses or depreciation and a number of lesser expenses (see the entry for operating expenses for further detail).

Industry value added (IVA) per person employed

IVA of manufacturing establishments which operated during the year ended 30 June divided by employment at the end of June in the same year.

Intermediate inputs

Intermediate inputs consist of materials and certain services which are used up in the production process. Definitions of relevant component items are also included in this Glossary. It is calculated as:

	Intermediate input expenses (for details, see the entry for operating expenses)
plus	Opening inventories
less	Closing inventories

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.

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

GLOSSARY *continued*

Management unit <i>continued</i>	'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 management unit	A management unit predominantly engaged in manufacturing activities. The data collected for such management units cover all activities of the management unit (including in respect of non-manufacturing activities). Conversely, there are some management units predominantly engaged in non-manufacturing activities which have establishments engaged in manufacturing activities and which are excluded.
Opening inventories	The value of all inventories of finished goods, work-in-progress, raw materials, fuels, containers and packaging as at the beginning of the reference period.
Operating expenses	<p>For the purposes of calculating economic and accounting variables for manufacturing industries, operating expenses incurred by businesses are divided into several categories. However, some expenses are excluded entirely from all such calculations. These expenses are extraordinary expenses, capitalised expenses, income tax and other direct taxes, sales taxes and excise payable to Governments, capital repayments or losses on asset sales, dividends, donations or foreign exchange losses.</p> <p>Remaining expenses are categorised as follows:</p> <p><i>Intermediate input expenses</i></p> <p>Intermediate input expenses cover the major expenses incurred by manufacturers in producing and distributing goods and services produced (except labour costs), namely:</p> <ul style="list-style-type: none"> ■ purchases and transfers in of materials, components, containers and packaging materials, electricity, fuels and water, and purchases of goods for resale ■ motor vehicle running expenses, freight and cartage expenses, repair and maintenance expenses ■ rent, leasing and hiring expenses (except for finance lease payments) ■ contract, subcontract and commission expenses <p>Also included in the calculation of intermediate inputs are advertising expenses, audit and other accounting expenses, bank fees and charges (except interest), cleaning expenses, environmental protection expenses, intellectual property royalty expenses, legal fees, management fees, paper, printing and stationery expenses, postal and telecommunication expenses, staff training expenses, and travelling, accommodation and entertainment expenses.</p> <p>Excluded from this category are selected labour costs and other operating expenses as defined below:</p> <p><i>Selected labour costs</i></p> <p>Wages and salaries including provision expenses for employee entitlements</p> <p>Employer contributions to superannuation funds</p> <p>Workers' compensation costs</p> <p>Payroll tax and Fringe benefits tax</p> <p><i>Other operating expenses</i></p> <p>This group of expenses is not included in the calculation of the above economic variables but is included in the calculation of the accounting variable operating profit before tax. Included in this group of expenses are bad and doubtful debts,</p>

GLOSSARY *continued*

Operating expenses <i>continued</i>	computer software expenses not capitalised by businesses, depreciation and amortisation, insurance premiums (except workers' compensation and compulsory third party motor vehicle insurance premiums), interest expenses, land rates and taxes, mineral/petroleum expenses not capitalised by businesses, and natural resource royalties expenses.
Own account capital work	Capitalised work done by the employees or proprietors of an establishment for use by the business unit or for rental or lease to other businesses. The main types of work are manufacturing, constructing, installing or repairing assets and development of computer software. This work is valued at the capitalised costs of the materials and the wages and salaries involved. Conceptually, this item should also include own account mineral exploration and own account production of literary, entertainment or artistic originals. However, these activities are relatively unimportant for manufacturers and have not been measured for manufacturing industries.
Purchases	Purchases of materials, components, containers and packaging materials, electricity, fuels and water, and of goods for resale. The purchase of parts and fuel for motor vehicles is excluded.
Purchases and transfers in	Purchases of materials, components, containers and packaging materials, electricity, fuels 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 for sale or resale. 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. The purchase of parts and fuel for motor vehicles is excluded.
Reference period	Businesses are asked to report data for the financial year ended 30 June. However, if a business has a different financial year, it is asked to report for the 12-month period which ends between 1 October of the previous year and 30 September of the current year. This period is then used as a substitute for the financial year ended 30 June. For example, for the 1998–99 collection, a business may have reported data for the year ended 31 December 1998.
Sales and transfers out of goods	Includes sales of goods whether or not produced by the business and sales of goods produced for the business on a commission basis (see the entry for commission manufacturing). Also includes transfers of goods to other establishments of the same business or to related businesses and installation and delivery charges not separately invoiced to customers. Progress payments relating to long term contracts are included if they are billed in the period. Sales are valued net of discounts given and exclusive of excise, sales tax and duties receivable on behalf of the Government. Exports are valued f.o.b. (export freight charges are excluded). Transfers to other establishments of the same business are valued, for statistical purposes, at commercial value (i.e. the value which would have applied had the establishments concerned been under separate ownership).
Sales and transfers out of goods produced (table 4)	Sales as defined in sales and transfers out of goods, plus transfers out of goods produced by this establishment for sale. Transfers to other establishments of the same business are valued, for statistical purposes, at commercial value (i.e. the value which would have applied had the establishments concerned been under separate ownership).
Service income	Income received from service activities. Included are income from work done or sales made on a commission basis, income from repair, maintenance or servicing, installation and delivery charges separately invoiced to customers, advertising income and management fees/charges received from related or unrelated

GLOSSARY *continued*

Service income *continued* businesses. Service income is valued net of discounts given. For periods commencing with 1997–98, under new international standards, income from intellectual property royalties and rent, leasing and hiring income (except from finance leases) have also been classified as service income. Rent, leasing and hiring income is income derived from the ownership of land, buildings, vehicles, machinery or equipment, excluding any income from finance leases.

For further explanation on the treatment of commission manufacturing activities, see the entry for commission manufacturing.

Turnover Turnover comprises sales (exclusive of excise and sales tax) of goods whether or not produced by the establishment and transfers of goods to other establishments of the same business, plus service income, funding by Federal, State or Local Governments for operational costs, and own account capital work. Definitions of the various component items appear in this Glossary.

Excluded from turnover are interest income, income from natural resource royalties, funding by Federal, State or Local Governments for specific capital items, dividends, and receipts from the sale of fixed tangible assets.

There are some conceptual differences between turnover as estimated in this publication and turnover as defined by the new international standards. These differences are explained as part of the definition of the component item own account capital work. Full compliance with the new standards would make very little difference to estimates of turnover.

Note (a): The above definition of turnover is used in calculating the variable industry value added. A slightly different definition of turnover was used prior to 1997–98 to calculate the now superseded variable industry gross product. This earlier definition excluded income from intellectual property royalties and the value of computer software developed in-house for use by the business or for rental or lease to other businesses.

Note (b): 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, i.e. 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.

Wages and salaries The gross wages and salaries (including capitalised 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. For the 1995–96 collection only, provision expenses for employee entitlements (e.g. provisions for annual leave and leave bonus, long service leave, sick leave, and severance, termination and redundancy payments) are excluded. 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.

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2822140007989
ISSN 1036-2770

RRP \$20.00