



MANUFACTURING INDUSTRY TASMANIA

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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 an 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 Detailed manufacturing industry statistics for each State have been released progressively in a series of publications, *Manufacturing Industry, [State], 1998–99* (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.

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 *Manufacturing, Australia, 2000* (Cat. no. 8225.0), to be released in December 2000. Management unit data at the total manufacturing level are also included in *Business Operations and Industry Performance, Australia, Preliminary, 1998–99* (Cat. no. 8142.0).

Stevan R. Matheson
Regional Director, Tasmania

MAIN FEATURES

OVERVIEW

Turnover for the year 1998–99 by manufacturing establishments operating in Tasmania was \$5,278m, which resulted in an industry value added (IVA) for the year of \$1,720m. For turnover, this represents a 2.0% increase in current price terms from the \$5,174m recorded for 1997–98. These manufacturing establishments employed 20,200 persons at the end of June 1999 and paid \$737m in wages and salaries in 1998–99.

The percentage of Australian manufacturing employment in Tasmania at the end of June 1999 was 2.2%, which is the same percentage as reported at the end of June 1998. The Tasmanian industry subdivisions which made a significant contribution to national manufacturing employment at the end of June 1999 at the industry subdivision level were WOOD AND PAPER PRODUCT MANUFACTURING (5.7%) and FOOD, BEVERAGE AND TOBACCO MANUFACTURING (3.6%).

The percentage contribution by Tasmania to total Australian manufacturing turnover and IVA in 1998–99 was 2.4% and 2.5% respectively. For turnover, this represents the same percentage contribution as in 1997–98. The Tasmanian industry subdivision which made a significant contribution to national manufacturing turnover and IVA in 1998–99 at the industry subdivision level was WOOD AND PAPER PRODUCT MANUFACTURING (9.7% and 10.0% respectively). This industry subdivision also contributed 24.9% to total manufacturing IVA in Tasmania, which is the highest relative contribution, by far, of this industry subdivision to any State/Territory's total manufacturing IVA. The next highest contribution of this industry subdivision to any State/Territory's total manufacturing IVA was for Queensland (6.9%).

INDUSTRY VALUE ADDED

IVA for 1998–99 was \$1,720m. 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 Tasmania's total manufacturing IVA) were:

- FOOD, BEVERAGE AND TOBACCO MANUFACTURING (30.5%), where the industry group OTHER FOOD MANUFACTURING (ANZSIC Group 217 at 15.6%), FRUIT AND VEGETABLE PROCESSING (ANZSIC Group 213 at 5.0%) and DAIRY PRODUCT MANUFACTURING (ANZSIC Group 212 at 4.2%) were the most substantial.
- WOOD AND PAPER PRODUCT MANUFACTURING (24.9%), where the only industry group available for publication, LOG SAWMILLING AND TIMBER DRESSING (ANZSIC Group 231), contributed 11.0%.
- MACHINERY AND EQUIPMENT MANUFACTURING (12.2%).
- METAL PRODUCT MANUFACTURING (11.5%), where the industry class COPPER, SILVER, LEAD AND ZINC SMELTING, REFINING (ANZSIC Class 2723 at 4.0%) was the most substantial.

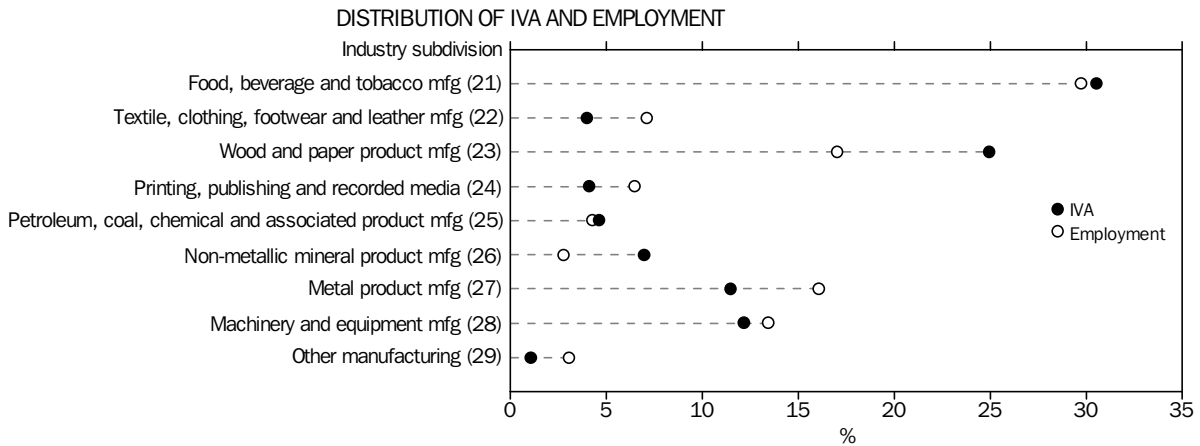
Industry groups making a notable contribution to industry value added and not included in the subdivisions listed above included CEMENT, LIME, PLASTER AND CONCRETE PRODUCT MANUFACTURING (ANZSIC Group 263 at 6.7%), PUBLISHING (ANZSIC Group 242 at 3.0%) and OTHER CHEMICAL PRODUCT MANUFACTURING (ANZSIC Group 254 at 2.9%).

The Tasmanian manufacturing industry subdivision in 1998–99 with the highest IVA per person employed was NON-METALLIC MINERAL PRODUCT MANUFACTURING at \$214,700 per person employed, followed by WOOD AND PAPER PRODUCT MANUFACTURING at \$124,600 per person employed, the same order as in 1997–98.

MAIN FEATURES *continued*

INDUSTRY VALUE ADDED

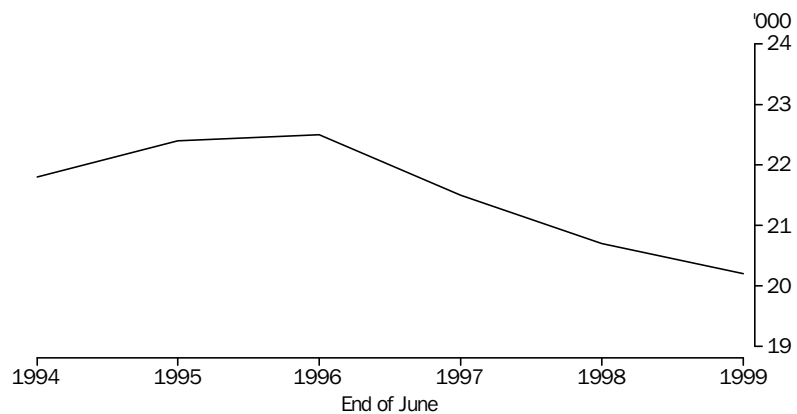
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EMPLOYMENT AND WAGES

The Tasmanian manufacturing industry employed 20,200 persons at the end of June 1999 and paid \$737m 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 1.4% on the \$35,000 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



Tasmanian manufacturing employment increased from June 1994 (21,800 persons) to June 1996 (22,500 persons). Since June 1996, employment in the Tasmanian manufacturing industry has decreased every year to June 1999 (20,200 persons). Employment fell by 500 persons or 2.5% between June 1998 (20,700 persons) and June 1999 (20,200 persons). Over the five years from June 1994 to June 1999, employment fell by 7.5% or 1,600 persons.

Between June 1998 and June 1999, employment decreased in four of the nine manufacturing industry subdivisions, remained steady in four and increased in the other

MAIN FEATURES *continued*

EMPLOYMENT AND WAGES *continued*

one. The industry subdivisions with the largest percentage decreases were OTHER MANUFACTURING (down 29.1%) and PRINTING, PUBLISHING AND RECORDED MEDIA (down 13.8%). The increase was recorded by FOOD, BEVERAGE AND TOBACCO MANUFACTURING (up 7.2%).

Average wages and salaries paid per person employed at the end of June rose in seven industry subdivisions and fell in the other two 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:

- WOOD AND PAPER PRODUCT MANUFACTURING (up 20.0%—\$37,200 to \$44,600), where all three industry groups recorded an increase.
- OTHER MANUFACTURING (up 16.3%—\$18,000 to \$20,900), where all three industry groups and 6 (out of 8) industry classes recorded an increase. The industry group to record the largest percentage increase was PREFABRICATED BUILDING MANUFACTURING (ANZSIC Group 291) (up 30.0%—\$21,400 to \$27,800). The most influential group was FURNITURE MANUFACTURING (ANZSIC Group 292) which increased by 13.1% (\$18,200 to \$20,600). This industry group accounted for 80.4% of employment and 79.1% of wages and salaries for the subdivision.
- PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (up 14.6%—\$35,200 to \$40,300) where three (out of four) industry groups and 12 (out of 18) industry classes recorded an increase. The industry group to record the largest percentage increase was PLASTIC PRODUCT MANUFACTURING (ANZSIC Group 256) (up 24.0%—\$24,400 to \$30,300).

The industry subdivision to record the largest percentage decrease between 1997–98 and 1998–99 in wages and salaries per person employed at the end of June was FOOD, BEVERAGE AND TOBACCO MANUFACTURING (down 7.5%—\$32,900 to \$30,400), where six (out of eight) industry groups and 9 (out of 20) industry classes recorded a decrease.

TURNOVER

Turnover rose, in current price terms, by \$104m to \$5,278m for 1998–99. This represents a 2.0% increase on the \$5,174m recorded for 1997–98.

Six of the nine manufacturing industry subdivisions recorded an increase in turnover between 1997–98 and 1998–99. FOOD, BEVERAGE AND TOBACCO MANUFACTURING remained the largest contributor to total manufacturing turnover in 1998–99, followed by WOOD AND PAPER PRODUCT MANUFACTURING and METAL PRODUCT MANUFACTURING. PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING and MACHINERY AND EQUIPMENT MANUFACTURING recorded the largest increases in percentage terms (up 12.6% and 12.2% respectively). MACHINERY AND EQUIPMENT MANUFACTURING also recorded the largest increase in dollar terms (up \$55.4m). The industry subdivisions to record a decrease in turnover were PRINTING, PUBLISHING AND RECORDED MEDIA (down 16.3%), OTHER MANUFACTURING (down 9.6%) and TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down 3.2%).

EXPORTS

For 1998–99, Tasmanian manufacturers directly exported \$1,570m of the goods that they produced. This represents a 0.7% decrease on the \$1,582m recorded for 1997–98. The percentage of total sales and transfers out of goods for sale produced that were exported has remained steady (32.0% for 1997–98 and 31.7% for 1998–99).

In 1998–99, Tasmania directly exported a higher percentage of goods than any other State. This has been the case every year since 1994–95.

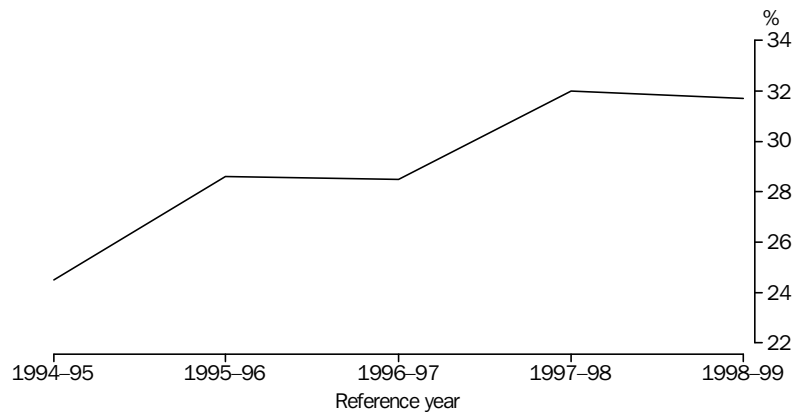
MAIN FEATURES *continued*

EXPORTS *continued*

Manufacturers' direct exports decreased in five out of the nine industry subdivisions between 1997–98 and 1998–99. The industry subdivisions to record the largest dollar decreases in direct exports were WOOD AND PAPER PRODUCT MANUFACTURING (down \$47m or 14.5%—from \$322m to \$276m) and METAL PRODUCT MANUFACTURING (down \$29m or 4.6%—from \$634m to \$605m). The largest dollar increase in direct exports was recorded by MACHINERY AND EQUIPMENT MANUFACTURING (up \$56m or 21.9%—from \$257m to \$313m).

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 from 24.5% for 1994–95 to 31.7% for 1998–99. This proportion was steady between 1995–96 (28.6%) and 1996–97 (28.5%), increased in 1997–98 (32.0%) and then remained steady in 1998–99 (31.7%).

EXPORTS AS A PROPORTION OF GOODS PRODUCED



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

Reference year	Employment at end of June(d)	Wages and salaries(e)(f)	Turnover(f)	Industry gross product(f)	Industry value added(f)	Wages and salaries to turnover(f)	Turnover per person employed (f)(g)	Industry value added per person employed (f)(h)
	'000	\$m	\$m	\$m	\$m	ratio	\$'000	\$'000
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
1998-99	6.0	182.7	1 610.8	..	525.0	0.11	268.0	87.4
1997-98	5.6	184.2	(i)1 608.2	(j)520.9	(j)536.4	0.11	286.8	95.7
1996-97	5.6	175.9	1 355.6	382.7	..	0.13	240.6	..
1995-96	5.7	(k)159.8	1 360.1	426.5	..	0.12	238.2	..
1994-95	5.7	162.1	1 303.6	..	..	0.12	227.7	..
1993-94	6.1	166.4	1 348.4	..	..	0.12	221.7	..
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
1998-99	1.4	43.0	184.8	..	68.7	0.23	128.6	47.8
1997-98	1.4	39.3	(i)190.9	(j)65.3	(j)68.6	0.21	139.4	50.1
1996-97	1.5	43.9	198.2	67.6	..	0.22	129.4	..
1995-96	1.8	(k)48.0	222.8	70.6	..	0.22	126.3	..
1994-95	1.9	46.1	209.7	..	..	0.22	112.1	..
1993-94	1.9	47.4	198.2	..	..	0.24	105.4	..
WOOD AND PAPER PRODUCT MANUFACTURING								
1998-99	3.4	153.7	1 187.6	..	429.0	0.13	345.1	124.6
1997-98	3.7	138.3	(i)1 175.9	(j)401.1	(j)413.4	0.12	316.5	111.3
1996-97	3.8	152.0	1 136.1	477.6	..	0.13	297.1	..
1995-96	4.0	(k)146.0	1 125.0	542.0	..	0.13	284.2	..
1994-95	4.1	143.4	1 114.0	..	..	0.13	271.9	..
1993-94	3.6	113.1	892.2	..	..	0.13	245.7	..
PRINTING, PUBLISHING AND RECORDED MEDIA								
1998-99	1.3	47.9	151.8	..	70.9	0.32	115.8	54.1
1997-98	1.5	51.9	(i)181.3	(j)70.4	(j)73.6	0.29	119.3	48.4
1996-97	1.6	54.6	179.9	83.5	..	0.30	112.5	..
1995-96	1.8	(k)56.8	166.9	87.2	..	0.34	91.2	..
1994-95	1.8	51.0	159.2	..	..	0.32	86.9	..
1993-94	1.8	50.2	143.3	..	..	0.35	81.4	..
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
1998-99	0.9	35.0	223.0	..	79.7	0.16	257.3	92.0
1997-98	0.9	31.2	(i)198.0	(j)66.4	(j)68.6	0.16	223.4	77.4
1996-97	0.8	26.7	168.9	49.8	..	0.16	216.2	..
1995-96	0.7	(k)31.1	214.6	56.6	..	0.14	297.5	..
1994-95	0.9	33.7	220.9	..	..	0.15	253.2	..
1993-94	0.9	27.7	210.0	..	..	0.13	237.3	..

.. 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)	Wages and salaries(e)(f)	Turnover(f)	Industry gross product(f)	Industry value added(f)	Wages and salaries to turnover(f)	Turnover per person employed (f)(g)	Industry value added per person employed (f)(h)
	'000	\$m	\$m	\$m	\$m	ratio	\$'000	\$'000
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
1998-99	0.6	23.1	250.4	..	120.4	0.09	446.6	214.7
1997-98	0.6	22.5	(i)225.6	(j)100.2	(j)102.2	0.10	380.6	172.4
1996-97	0.8	31.3	245.8	90.5	..	0.13	294.2	..
1995-96	0.9	(k)29.9	257.5	121.6	..	0.12	279.8	..
1994-95	1.0	30.3	250.1	..	..	0.12	257.1	..
1993-94	1.0	28.8	242.3	..	..	0.12	252.4	..
METAL PRODUCT MANUFACTURING								
1998-99	3.3	139.6	1 108.8	..	197.7	0.13	340.7	60.7
1997-98	3.4	139.6	(i)1 083.2	(j)224.0	(j)236.2	0.13	315.4	68.8
1996-97	3.3	143.3	1 008.5	183.7	..	0.14	301.5	..
1995-96	3.4	(k)112.4	1 022.9	339.7	..	0.11	299.9	..
1994-95	3.4	114.4	817.1	..	..	0.14	237.1	..
1993-94	3.4	132.5	795.2	..	..	0.17	235.5	..
MACHINERY AND EQUIPMENT MANUFACTURING								
1998-99	2.7	99.1	508.1	..	209.5	0.20	186.8	77.0
1997-98	2.7	103.2	(i)452.7	(j)211.3	(j)218.5	0.23	165.6	79.9
1996-97	3.1	98.8	377.0	136.4	..	0.26	121.9	..
1995-96	3.2	(k)94.7	384.1	141.3	..	0.25	121.8	..
1994-95	2.8	79.5	269.0	..	..	0.30	96.9	..
1993-94	2.5	65.6	233.0	..	..	0.28	93.4	..
OTHER MANUFACTURING								
1998-99	0.6	12.9	52.9	..	19.1	0.24	85.6	30.9
1997-98	0.9	15.7	(i)58.5	(j)21.6	(j)22.2	0.27	67.1	25.5
1996-97	0.8	15.8	61.9	21.0	..	0.25	74.4	..
1995-96	1.0	(k)17.3	60.7	24.4	..	0.28	60.3	..
1994-95	0.8	15.2	61.6	..	..	0.25	73.5	..
1993-94	0.8	13.4	54.2	..	..	0.25	69.6	..
TOTAL MANUFACTURING								
1998-99	20.2	736.9	5 278.3	..	1 720.0	0.14	261.0	85.1
1997-98	20.7	725.9	(i)5 174.3	(j)1 681.1	(j)1 739.8	0.14	249.6	83.9
1996-97	21.5	742.3	4 731.9	1 492.9	..	0.16	220.3	..
1995-96	22.5	(k)696.0	4 814.5	1 809.8	..	0.14	214.2	..
1994-95	22.4	675.6	4 405.3	..	..	0.15	196.4	..
1993-94	21.8	645.1	4 116.8	..	..	0.16	188.4	..

.. 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 ANZSIC code	Description	Employment at end of June (c) no.	Wages and salaries (d) \$m	Turnover \$m	Industry value added \$m	Turnover per person employed (e) \$'000	Industry value added per person employed (f) \$'000
FOOD, BEVERAGE AND TOBACCO MFG							
211	Meat and meat product mfg						
2111	Meat processing	762	np	np	np	np	np
2113	Bacon, ham and smallgood mfg	253	4.6	32.7	9.1	129.2	35.8
	Total(g)	np	np	np	np	np	np
212	Dairy product mfg						
2121	Milk and cream processing	221	8.5	107.5	19.8	486.5	89.7
	Total(g)	868	26.7	319.4	72.7	368.2	83.8
213	Fruit and vegetable processing	1 189	45.9	346.3	85.6	291.2	72.0
214	Oil and fat mfg	np	np	np	np	np	np
215	Flour mill and cereal food mfg						
2152	Cereal food and baking mix mfg	4	—	0.1	—	13.7	7.8
	Total(g)	np	np	np	np	np	np
216	Bakery product mfg	523	16.1	50.5	17.8	96.6	34.1
217	Other food mfg						
2173	Seafood processing	1 131	np	np	np	np	np
2179	Food mfg n.e.c.	57	0.7	3.6	**0.3	62.0	**5.9
	Total(g)	1 946	51.5	622.2	268.3	319.7	137.8
218	Beverage and malt mfg						
2182	Beer and malt mfg	215	7.3	64.6	20.9	300.5	97.3
2183	Wine mfg	50	0.4	2.1	0.7	41.4	13.6
	Total(g)	285	8.0	68.0	22.1	238.6	77.7
219	Tobacco product mfg	—	—	—	—	—	—
21	Total food, beverage and tobacco mfg	6 010	182.7	1 610.8	525.0	268.0	87.4
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG							
221	Textile fibre, yarn and woven fabric mfg						
2212	Synthetic fibre textile mfg	80	2.3	10.7	2.9	133.3	35.8
	Total(g)	409	np	np	np	np	np
222	Textile product mfg						
2221	Made-up textile product mfg	154	6.1	40.3	9.3	261.0	60.1
2222	Textile floor covering mfg	234	7.0	19.8	12.3	84.4	52.7
	Total(g)	438	14.4	63.4	23.2	144.9	53.1
223	Knitting mills						
2232	Cardigan and pullover mfg	39	np	np	np	np	np
	Total(g)	39	np	np	np	np	np

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

— nil or rounded to zero (including null cells)

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

(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) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(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.

(g) The total shown is that for all ANZSIC classes within this industry group. Data for other ANZSIC classes within the industry group are either not available for publication (due to confidentiality restrictions) or there are no units classified to those ANZSIC classes.

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

INDUSTRY CLASS ANZSIC code	Description	Employment at end of June (c) no.	Wages and salaries (d) \$m	Turnover \$m	Industry value added \$m	Turnover per person employed (e) \$'000	Industry value added per person employed (f) \$'000
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG cont.							
224	Clothing mfg						
2241	Men's and boys' wear mfg	**40	**0.9	**4.5	*0.8	**110.9	**18.8
2242	Women's and girls' wear mfg	14	0.2	0.4	0.1	28.8	10.3
2249	Clothing mfg n.e.c.	90	1.1	2.9	1.1	32.0	11.7
	<i>Total(g)</i>	145	*2.2	*7.8	2.0	53.7	13.5
225	Footwear mfg	np	np	np	np	np	np
226	Leather and leather product mfg	np	np	np	np	np	np
22	Total textile, clothing, footwear and leather mfg	1 437	43.0	184.8	68.7	128.6	47.8
WOOD AND PAPER PRODUCT MFG							
231	Log sawmilling and timber dressing						
2311	Log sawmilling	464	np	np	np	np	np
2312	Wood chipping	344	np	np	np	np	np
2313	Timber resawing and dressing	924	30.0	135.0	61.2	146.0	66.2
	<i>Total</i>	1 733	59.1	477.2	189.0	275.4	109.0
232	Other wood product mfg						
2323	Wooden structural component mfg	339	8.0	31.2	11.0	92.2	32.5
2329	Wood product mfg n.e.c.	55	0.7	3.5	1.2	63.9	22.5
	<i>Total(g)</i>	602	np	np	np	np	np
233	Paper and paper product mfg						
2331	Pulp, paper and paperboard mfg	986	np	np	np	np	np
	<i>Total(g)</i>	1 107	np	np	np	np	np
23	Total wood and paper product mfg	3 442	153.7	1 187.6	429.0	345.1	124.6
PRINTING, PUBLISHING AND RECORDED MEDIA							
241	Printing and services to printing						
2411	Paper stationery mfg	5	0.1	0.5	0.3	91.7	49.4
2412	Printing	441	14.2	49.0	17.5	111.1	39.7
2413	Services to printing	83	2.0	4.1	1.7	49.3	20.5
	<i>Total</i>	529	16.3	53.6	19.5	101.2	36.8
242	Publishing						
2421	Newspaper printing or publishing	748	30.7	96.3	51.0	128.7	68.1
2422	Other periodical publishing	19	0.5	1.0	0.3	52.0	13.0
2423	Book and other publishing	10	*0.2	*0.7	0.1	*69.0	12.2
	<i>Total</i>	778	31.5	98.0	51.4	126.1	66.0
243	Recorded media manufacturing and publishing	*4	*0.1	*0.2	**0.1	*55.1	*21.1
24	Total printing, publishing and recorded media	1 311	47.9	151.8	70.9	115.8	54.1

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

* estimate has a relative standard error of between 25% and 50% and should be used with caution

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

(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) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(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.

(g) The total shown is that for all ANZSIC classes within this industry group. Data for other ANZSIC classes within the industry group are either not available for publication (due to confidentiality restrictions) or there are no units classified to those ANZSIC classes.

INDUSTRY CLASS ANZSIC code	Description	Employment at end of June (c) no.	Wages and salaries (d) \$m	Turnover \$m	Industry value added \$m	Turnover per person employed (e) \$'000	Industry value added per person employed (f) \$'000
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG							
251	Petroleum refining	—	—	—	—	—	—
252	Petroleum and coal product mfg n.e.c.	—	—	—	—	—	—
253	Basic chemical mfg						
2535	Inorganic industrial chemical mfg n.e.c.	37	1.2	8.7	2.7	237.1	74.4
	Total(g)	np	np	np	np	np	np
254	Other chemical product mfg						
2542	Paint mfg	13	0.5	3.0	2.0	229.2	150.6
2543	Medicinal and pharmaceutical product mfg	211	11.3	87.7	41.2	415.6	195.4
2549	Chemical product mfg n.e.c.	9	0.2	0.1	-0.2	7.2	-20.3
	Total(g)	320	15.5	107.3	49.7	335.6	155.6
255	Rubber product mfg						
2559	Rubber product mfg n.e.c.	65	2.4	11.2	4.2	171.1	64.2
	Total(g)	np	np	np	np	np	np
256	Plastic product mfg						
2562	Plastic extruded product mfg	54	2.2	15.7	2.0	289.3	37.2
2563	Plastic bag and film mfg	3	—	0.4	0.1	139.8	28.2
2564	Plastic product rigid fibre reinforced mfg	160	*4.5	15.5	4.1	97.4	25.6
	Total(g)	305	9.2	45.6	9.8	149.5	32.1
25	Total petroleum, coal, chemical and associated product mfg	867	35.0	223.0	79.7	257.3	92.0
NON-METALLIC MINERAL PRODUCT MFG							
261	Glass and glass product mfg	*9	np	np	np	np	np
262	Ceramic mfg						
2629	Ceramic product mfg n.e.c.	12	0.1	0.3	0.2	27.2	13.2
	Total(g)	77	np	np	np	np	np
263	Cement, lime, plaster and concrete product mfg						
2633	Concrete slurry mfg	95	2.5	29.3	6.3	306.9	65.9
2635	Concrete product mfg n.e.c.	128	np	np	np	np	np
	Total(g)	436	19.9	239.1	115.3	548.1	264.3
264	Non-metallic mineral product mfg n.e.c.	*39	*0.9	*3.6	*1.4	*90.1	*35.6
26	Total non-metallic mineral product mfg	561	23.1	250.4	120.4	446.6	214.7
METAL PRODUCT MFG							
271	Iron and steel mfg	np	np	np	np	np	np
272	Basic non-ferrous metal mfg						
2723	Copper, silver, lead and zinc smelting, refining	np	39.9	425.3	68.4	np	np
	Total(g)	1 356	np	np	np	np	np

— nil or rounded to zero (including null cells)

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(d) Excludes the drawings of working proprietors.

(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.

(g) The total shown is that for all ANZSIC classes within this industry group. Data for other ANZSIC classes within the industry group are either not available for publication (due to confidentiality restrictions) or there are no units classified to those ANZSIC classes.

INDUSTRY CLASS ANZSIC code	Description	Employment at end of June (c) no.	Wages and salaries (d) \$m	Turnover \$m	Industry value added \$m	Turnover per person employed (e) \$'000	Industry value added per person employed (f) \$'000
METAL PRODUCT MFG cont.							
273	Non-ferrous basic metal product mfg	np	np	np	np	np	np
274	Structural metal product mfg						
2741	Structural steel fabricating	422	14.5	48.5	18.2	114.9	43.3
2742	Architectural aluminium product mfg	259	7.4	33.2	8.2	128.1	31.6
2749	Structural metal product mfg n.e.c.	18	0.2	0.8	0.4	44.9	19.5
	<i>Total</i>	699	22.1	82.5	26.8	118.0	38.3
275	Sheet metal product mfg	245	7.4	24.1	8.5	98.0	34.8
276	Fabricated metal product mfg						
2761	Hand tool and general hardware mfg	40	0.7	2.7	1.5	66.6	36.4
2769	Fabricated metal product mfg n.e.c.	417	9.7	39.8	14.5	95.5	34.8
	<i>Total(g)</i>	528	12.5	50.7	19.6	95.9	37.0
27	Total metal product mfg	3 255	139.6	1 108.8	197.7	340.7	60.7
MACHINERY AND EQUIPMENT MFG							
281	Motor vehicle and part mfg	575	23.0	64.8	32.4	112.6	56.3
282	Other transport equipment mfg						
2821	Shipbuilding	984	np	np	np	np	np
2822	Boatbuilding	99	2.2	5.7	2.7	57.8	27.3
2824	Aircraft mfg	7	0.4	1.0	0.5	136.8	66.4
	<i>Total(g)</i>	1 091	np	np	np	np	np
283	Photographic and scientific equipment mfg						
2832	Medical and surgical equipment mfg	55	1.1	3.1	1.7	56.8	31.5
	<i>Total(g)</i>	np	np	np	np	np	np
284	Electronic equipment mfg						
2841	Computer and business machine mfg	12	0.3	1.5	0.6	128.0	52.4
2849	Electronic equipment mfg n.e.c.	17	0.4	1.4	0.6	79.7	33.3
	<i>Total(g)</i>	29	0.7	2.9	1.2	99.4	41.1
285	Electrical equipment and appliance mfg						
2854	Electric light and sign mfg	38	*1.0	*2.9	1.2	75.1	31.5
2859	Electrical equipment mfg n.e.c.	162	6.8	27.3	12.1	168.7	75.1
	<i>Total(g)</i>	np	np	np	np	np	np
286	Industrial machinery and equipment mfg						
2861	Agricultural machinery mfg	22	0.5	1.2	0.6	52.4	28.7
2862	Mining and construction machinery mfg	370	np	np	np	np	np
2865	Lifting and material handling equipment mfg	156	5.0	20.4	9.1	131.0	58.7
	<i>Total(g)</i>	717	24.9	116.7	39.9	162.7	55.6
28	Total machinery and equipment mfg	2 720	99.1	508.1	209.5	186.8	77.0

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(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(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.

(g) The total shown is that for all ANZSIC classes within this industry group. Data for other ANZSIC classes within the industry group are either not available for publication (due to confidentiality restrictions) or there are no units classified to those ANZSIC classes.

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

INDUSTRY CLASS ANZSIC code	Description	Employment at end of June (c) no.	Wages and salaries (d) \$m	Turnover \$m	Industry value added \$m	Turnover per person employed (e) \$'000	Industry value added per person employed (f) \$'000
OTHER MANUFACTURING							
291	Prefabricated building mfg	49	1.4	8.9	3.0	183.1	61.7
292	Furniture mfg						
2921	Wooden furniture and upholstered seat mfg	439	8.9	31.9	11.6	72.7	26.4
	Total(g)	497	10.3	39.8	14.4	80.2	29.0
294	Miscellaneous mfg						
2941	Jewellery and silverware mfg	14	0.3	0.9	0.3	63.6	18.6
	Total(g)	73	1.3	4.2	1.7	57.6	23.0
29	Total other manufacturing	618	12.9	52.9	19.1	85.6	30.9
21-29	TOTAL MANUFACTURING	20 220	736.9	5 278.3	1 720.0	261.0	85.1

(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) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(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.

(g) The total shown is that for all ANZSIC classes within this industry group. Data for other ANZSIC classes within the industry group are either not available for publication (due to confidentiality restrictions) or there are no units classified to those ANZSIC classes.

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	109	1.8	1.6	0.9	19.0	1.2	2.5	0.5
5-9 persons	190	3.2	3.9	2.2	38.5	2.4	12.3	2.3
10-19 persons	334	5.6	6.0	3.3	51.7	3.2	10.9	2.1
20-49 persons	621	10.3	16.8	9.2	216.1	13.4	47.6	9.1
50-99 persons	836	13.9	24.1	13.2	224.9	14.0	44.2	8.4
<i>Total less than 100 persons</i>	<i>2 090</i>	<i>34.8</i>	<i>52.4</i>	<i>28.7</i>	<i>550.2</i>	<i>34.2</i>	<i>117.6</i>	<i>22.4</i>
100-199 persons	1 287	21.4	40.2	22.0	249.1	15.5	71.5	13.6
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	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>3 920</i>	<i>65.2</i>	<i>130.3</i>	<i>71.3</i>	<i>1 060.5</i>	<i>65.8</i>	<i>407.4</i>	<i>77.6</i>
Total	6 010	100.0	182.7	100.0	1 610.7	100.0	525.0	100.0
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
0-4 persons	70	4.9	0.8	2.0	3.6	2.0	1.3	1.9
5-9 persons	109	7.6	2.4	5.8	10.1	5.5	2.9	4.3
10-19 persons	np	np	np	np	np	np	np	np
20-49 persons	np	np	np	np	np	np	np	np
50-99 persons	np	np	np	np	np	np	np	np
<i>Total less than 100 persons</i>	<i>496</i>	<i>34.5</i>	<i>10.9</i>	<i>25.8</i>	<i>44.0</i>	<i>23.9</i>	<i>14.9</i>	<i>21.9</i>
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	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>941</i>	<i>65.5</i>	<i>31.3</i>	<i>74.2</i>	<i>139.6</i>	<i>76.1</i>	<i>53.1</i>	<i>78.1</i>
Total	1 437	100.0	42.2	100.0	183.6	100.0	68.0	100.0
WOOD AND PAPER PRODUCT MANUFACTURING								
0-4 persons	125	3.6	2.0	1.3	74.7	6.3	17.0	4.0
5-9 persons	178	5.2	4.2	2.7	23.4	2.0	7.9	1.8
10-19 persons	241	7.0	6.5	4.2	38.5	3.2	12.6	2.9
20-49 persons	305	8.9	8.9	5.8	42.1	3.5	16.8	3.9
50-99 persons	670	19.5	24.4	15.9	242.6	20.4	95.2	22.2
<i>Total less than 100 persons</i>	<i>1 519</i>	<i>44.1</i>	<i>46.1</i>	<i>30.0</i>	<i>421.3</i>	<i>35.5</i>	<i>149.4</i>	<i>34.8</i>
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	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>1 923</i>	<i>55.9</i>	<i>107.6</i>	<i>70.0</i>	<i>766.3</i>	<i>64.5</i>	<i>279.5</i>	<i>65.2</i>
Total	3 442	100.0	153.7	100.0	1 187.6	100.0	429.0	100.0

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) 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	70	5.3	1.7	3.6	6.5	4.3	2.3	3.2
5-9 persons	135	10.3	3.7	7.8	10.8	7.1	4.7	6.7
10-19 persons	110	8.4	3.5	7.4	8.4	5.5	3.3	4.6
20-49 persons	np	np	np	np	np	np	np	np
50-99 persons	np	np	np	np	np	np	np	np
<i>Total less than 100 persons</i>	659	50.3	19.3	40.3	60.9	40.1	21.8	30.8
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	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	652	49.7	28.6	59.7	90.9	59.9	49.1	69.2
Total	1 311	100.0	47.9	100.0	151.8	100.0	70.9	100.0

PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
0-4 persons	55	6.3	1.1	3.2	5.0	2.3	2.0	2.5
5-9 persons	90	10.4	2.9	8.3	17.2	7.7	4.3	5.4
10-19 persons	np	np	np	np	np	np	np	np
20-49 persons	np	np	np	np	np	np	np	np
50-99 persons	199	23.0	7.7	22.1	59.0	26.4	16.3	20.4
<i>Total less than 100 persons</i>	np	np	np	np	np	np	np	np
100-199 persons	np	np	np	np	np	np	np	np
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	np	np	np	np	np	np	np	np
Total	867	100.0	35.0	100.0	223.0	100.0	79.7	100.0

NON-METALLIC MINERAL PRODUCT MANUFACTURING								
0-4 persons	45	8.0	0.8	3.3	3.4	1.4	1.0	0.8
5-9 persons	32	5.7	0.6	2.5	2.8	1.1	1.1	0.9
10-19 persons	np	np	np	np	np	np	np	np
20-49 persons	np	np	np	np	np	np	np	np
50-99 persons	—	—	—	—	—	—	—	—
<i>Total less than 100 persons</i>	np	np	np	np	np	np	np	np
100-199 persons	np	np	np	np	np	np	np	np
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	np	np	np	np	np	np	np	np
Total	561	100.0	23.1	100.0	250.4	100.0	120.4	100.0

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) 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	151	4.6	3.4	2.6	12.5	1.2	4.3	2.4
5-9 persons	356	10.9	8.3	6.3	43.1	4.2	15.0	8.2
10-19 persons	410	12.6	11.7	8.9	40.2	3.9	14.6	8.0
20-49 persons	np	np	np	np	np	np	np	np
50-99 persons	np	np	np	np	np	np	np	np
<i>Total less than 100 persons</i>	np	np	np	np	np	np	np	np
100-199 persons	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	np	np	np	np	np	np	np	np
Total	3 255	100.0	130.6	100.0	1 026.5	100.0	183.1	100.0
MACHINERY AND EQUIPMENT MANUFACTURING								
0-4 persons	193	7.1	4.0	4.0	14.1	2.8	6.0	2.9
5-9 persons	135	5.0	3.7	3.7	13.2	2.6	4.9	2.4
10-19 persons	210	7.7	6.4	6.5	22.0	4.3	9.5	4.5
20-49 persons	267	9.8	7.8	7.9	33.7	6.6	11.2	5.4
50-99 persons	np	np	np	np	np	np	np	np
<i>Total less than 100 persons</i>	np	np	np	np	np	np	np	np
100-199 persons	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	np	np	np	np	np	np	np	np
Total	2 720	100.0	99.1	100.0	508.1	100.0	209.5	100.0
OTHER MANUFACTURING								
0-4 persons	187	30.3	3.0	23.3	14.2	26.8	4.8	25.0
5-9 persons	144	23.3	3.2	24.4	12.8	24.2	5.0	26.1
10-19 persons	np	np	np	np	np	np	np	np
20-49 persons	np	np	np	np	np	np	np	np
50-99 persons	—	—	—	—	—	—	—	—
<i>Total less than 100 persons</i>	618	100.0	12.9	100.0	52.9	100.0	19.1	100.0
100-199 persons	—	—	—	—	—	—	—	—
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	—	—	—	—	—	—	—	—
Total	618	100.0	12.9	100.0	52.9	100.0	19.1	100.0

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) 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	%
TOTAL MANUFACTURING								
0-4 persons	1 006	5.0	18.6	2.6	152.9	2.9	41.3	2.4
5-9 persons	1 369	6.8	32.9	4.5	171.9	3.3	58.2	3.4
10-19 persons	1 763	8.7	47.1	6.5	219.5	4.2	67.3	3.9
20-49 persons	2 485	12.3	76.0	10.5	512.6	9.9	149.3	8.8
50-99 persons	2 448	12.1	81.9	11.3	627.4	12.1	194.4	11.4
<i>Total less than 100 persons</i>	<i>9 072</i>	<i>44.9</i>	<i>256.5</i>	<i>35.3</i>	<i>1 684.4</i>	<i>32.4</i>	<i>510.4</i>	<i>29.9</i>
100-199 persons	2 730	13.5	101.3	13.9	678.9	13.1	272.1	16.0
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	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>11 148</i>	<i>55.1</i>	<i>470.6</i>	<i>64.7</i>	<i>3 510.3</i>	<i>67.6</i>	<i>1 194.2</i>	<i>70.1</i>
Total	20 220	100.0	727.1	100.0	5 194.7	100.0	1 704.6	100.0

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) 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), 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	299.7	np	np
22	Textile, clothing, footwear and leather mfg	np	np	np
23	Wood and paper product mfg	172.0	71.0	41.3
24	Printing, publishing and recorded media	np	0.2	np
25	Petroleum, coal, chemical and associated product mfg	np	np	np
26	Non-metallic mineral product mfg	np	1.2	np
27	Metal product mfg	np	np	np
28	Machinery and equipment mfg	60.2	3.7	6.2
29	Other manufacturing	48.9	np	np
21-29	<i>Total manufacturing</i>	966.8	211.4	21.9
50-99 PERSONS				
21	Food, beverage and tobacco mfg	218.7	54.9	25.1
22	Textile, clothing, footwear and leather mfg	np	np	np
23	Wood and paper product mfg	238.3	np	np
24	Printing, publishing and recorded media	np	np	np
25	Petroleum, coal, chemical and associated product mfg	58.3	np	np
26	Non-metallic mineral product mfg	—	—	—
27	Metal product mfg	np	np	np
28	Machinery and equipment mfg	np	np	np
29	Other manufacturing	—	—	—
21-29	<i>Total manufacturing</i>	614.2	246.6	40.1
100 OR MORE PERSONS				
21	Food, beverage and tobacco mfg	1 043.3	np	np
22	Textile, clothing, footwear and leather mfg	135.3	12.7	9.4
23	Wood and paper product mfg	746.0	np	np
24	Printing, publishing and recorded media	35.3	—	—
25	Petroleum, coal, chemical and associated product mfg	np	np	np
26	Non-metallic mineral product mfg	np	—	—
27	Metal product mfg	np	np	np
28	Machinery and equipment mfg	np	np	np
29	Other manufacturing	—	—	—
21-29	<i>Total manufacturing</i>	3 371.4	1 112.2	33.0
TOTAL				
21	Food, beverage and tobacco mfg	1 561.7	286.8	18.4
22	Textile, clothing, footwear and leather mfg	177.0	13.6	7.7
23	Wood and paper product mfg	1 156.3	275.5	23.8
24	Printing, publishing and recorded media	94.2	np	np
25	Petroleum, coal, chemical and associated product mfg	205.3	np	np
26	Non-metallic mineral product mfg	244.5	1.2	0.5
27	Metal product mfg	1 012.9	604.7	59.7
28	Machinery and equipment mfg	451.6	313.1	69.3
29	Other manufacturing	48.9	np	np
21-29	Total manufacturing	4 952.5	1 570.2	31.7

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	48.2	50.5	39.7	30.5
22	Textile, clothing, footwear and leather mfg	24.7	19.6	19.7	16.4
23	Wood and paper product mfg	57.8	44.3	33.8	35.5
24	Printing, publishing and recorded media	np	np	np	np
25	Petroleum, coal, chemical and associated product mfg	np	np	np	np
26	Non-metallic mineral product mfg	79.5	85.0	95.1	95.2
27	Metal product mfg	43.1	29.9	14.8	28.1
28	Machinery and equipment mfg	23.9	17.5	12.2	12.1
29	Other manufacturing	np	np	np	np
21-29	Total manufacturing	49.6	44.0	35.1	37.3
EXPORTS UP TO AND INCLUDING 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	np	np	np	np
22	Textile, clothing, footwear and leather mfg	75.3	80.4	80.3	83.6
23	Wood and paper product mfg	32.4	46.6	43.3	43.2
24	Printing, publishing and recorded media	np	np	np	np
25	Petroleum, coal, chemical and associated product mfg	8.7	5.7	5.7	4.4
26	Non-metallic mineral product mfg	20.5	15.0	4.9	4.8
27	Metal product mfg	5.6	2.9	1.5	4.4
28	Machinery and equipment mfg	27.5	30.7	18.3	22.2
29	Other manufacturing	np	np	np	np
21-29	Total manufacturing	26.9	28.9	27.5	35.1
EXPORTS MORE THAN 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	np	np	np	np
22	Textile, clothing, footwear and leather mfg	—	—	—	—
23	Wood and paper product mfg	9.8	9.1	22.8	21.3
24	Printing, publishing and recorded media	—	—	—	—
25	Petroleum, coal, chemical and associated product mfg	np	np	np	np
26	Non-metallic mineral product mfg	—	—	—	—
27	Metal product mfg	51.2	67.2	83.7	67.5
28	Machinery and equipment mfg	48.6	51.8	69.4	65.7
29	Other manufacturing	—	—	—	—
21-29	Total manufacturing	23.5	27.1	37.4	27.6

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) 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 Tasmania 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 in-scope 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 Tasmanian employment is an increase of 0.6% 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 surveys (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 Tasmanian manufacturing employment for 1997–98 was reduced by 0.8% and turnover by 0.4%. 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 on 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 0.3% to employment and 0.1% to turnover for Tasmania.

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) have been 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 have been 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 Tasmania presented in this publication are mainly 3% or less for industry subdivisions (see Technical Note 2) and 4% or less for industry classes.

4 Relative standard errors at the industry subdivision level for Tasmania 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

<i>INDUSTRY SUBDIVISION</i>		<i>Employment at end of June(a)</i>	<i>Wages and salaries(b)</i>	<i>Turnover</i>	<i>Industry value added</i>	<i>Amount exported by this business or its agent</i>
<i>ANZSIC code</i>	<i>Description</i>	%	%	%	%	%
21	Food, beverage and tobacco mfg	2.5	1.7	1.7	1.3	4.9
22	Textile, clothing, footwear and leather mfg	1.9	1.4	1.7	0.6	—
23	Wood and paper product mfg	1.5	0.8	0.3	0.4	—
24	Printing, publishing and recorded media	3.6	2.7	2.5	2.3	10.8
25	Petroleum, coal, chemical and associated product mfg	3.5	3.4	1.5	1.3	0.2
26	Non-metallic mineral product mfg	3.5	3.4	0.9	0.8	4.9
27	Metal product mfg	1.8	1.0	0.4	1.1	0.1
28	Machinery and equipment mfg	0.8	0.6	0.5	0.5	—
29	Other manufacturing	4.3	4.8	4.0	8.7	2.0
21–29	Total manufacturing	0.9	0.6	0.5	0.4	0.9

— nil or rounded to zero (including null cells)

(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	<p>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.</p>
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)	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. The relationship between IVA estimates and IGP estimates is: <table border="0" style="margin-left: 40px;"> <tr><td></td><td>IVA</td></tr> <tr><td>plus</td><td>Intellectual property royalty expenses</td></tr> <tr><td>less</td><td>Intellectual property royalty income</td></tr> <tr><td>less</td><td>Computer software expenses not capitalised by the business</td></tr> <tr><td>less</td><td>Selected indirect taxes (For manufacturing industries, the main types are fringe benefits tax, payroll tax, land rates and land taxes.)</td></tr> <tr><td>equals</td><td>IGP</td></tr> </table>		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
	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												
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 <i>continued</i>	<p>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:</p> <ul style="list-style-type: none">21 Food, beverage and tobacco mfg22 Textile, clothing, footwear and leather mfg23 Wood and paper product mfg24 Printing, publishing and recorded media25 Petroleum, coal, chemical and associated product mfg26 Non-metallic mineral product mfg27 Metal product mfg28 Machinery and equipment mfg29 Other manufacturing										
Industry value added (IVA)	<p>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.</p> <p>The derivation of IVA is as follows:</p> <table><tr><td></td><td>Turnover (new standards)</td></tr><tr><td>plus</td><td>Closing inventories</td></tr><tr><td>less</td><td>Opening inventories</td></tr><tr><td>less</td><td>Intermediate input expenses (for details, see the entry for operating expenses)</td></tr><tr><td>equals</td><td>IVA</td></tr></table> <p>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).</p>		Turnover (new standards)	plus	Closing inventories	less	Opening inventories	less	Intermediate input expenses (for details, see the entry for operating expenses)	equals	IVA
	Turnover (new standards)										
plus	Closing inventories										
less	Opening inventories										
less	Intermediate input expenses (for details, see the entry for operating expenses)										
equals	IVA										
Industry value added (IVA) per person employed	<p>IVA of manufacturing establishments which operated during the year ended 30 June divided by employment at the end of June in the same year.</p>										
Intermediate inputs	<p>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:</p> <table><tr><td></td><td>Intermediate input expenses (for details, see the entry for operating expenses)</td></tr><tr><td>plus</td><td>Opening inventories</td></tr><tr><td>less</td><td>Closing inventories</td></tr></table>		Intermediate input expenses (for details, see the entry for operating expenses)	plus	Opening inventories	less	Closing inventories				
	Intermediate input expenses (for details, see the entry for operating expenses)										
plus	Opening inventories										
less	Closing inventories										
Location	<p>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.</p>										
Management unit	<p>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</p>										

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	<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>
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	<p>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.</p>
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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