



1996–97

8221.6

MANUFACTURING INDUSTRY

TASMANIA

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- For further information about these and related statistics, contact John Ridley on Sydney 02 9268 4541, or any ABS office shown on the back cover of this publication.

NOTES

ANNUAL MANUFACTURING INDUSTRY COLLECTION

The 1996–97 collection was a census of manufacturing businesses. It is the first census of the manufacturing sector since 1993–94. All manufacturing businesses were requested to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported. Samples of businesses provided additional information related to detailed structural and performance data, environmental protection expenditure and the value of sales for commodities produced.

ABOUT THIS ISSUE

Data in this publication have been adjusted for all known deficiencies in the number of businesses recorded on the Australian Bureau of Statistics (ABS) business register. The nature of these various adjustments and the reasons for making them are described in paragraphs 10–12 of the Explanatory Notes. Because of these adjustments, comparison of data in this publication with data previously published should be undertaken with caution. Other adjusted data for earlier periods are available on request.

This publication presents data relating to the operations of both manufacturing establishments and manufacturing locations. Details on employment, wages and salaries, turnover, Industry Gross Product (IGP) and direct exports are presented as appropriate. This publication also contains a table showing industry subdivision data by statistical division and a map displaying the boundaries of each Tasmanian statistical division.

DATA TO BE RELEASED IN OTHER PUBLICATIONS

Detailed manufacturing industry statistics have been produced for each State and were released progressively in a series of publications *Manufacturing Industry, [State], 1996–97* (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. For 1996–97, all of these publications contain a table showing industry subdivision data by statistical division.

Commodity data will be released in *Manufacturing Production, Commodities Produced, Australia, 1996–97* (Cat. no. 8365.0), to be released in December 1998.

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, 1998* (Cat. no. 8225.0), to be released in December 1998.

SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASIC	Australian Standard Industrial Classification
IGP	Industry Gross Product
mfg	manufacturing
n.e.c.	not elsewhere classified
n.p.	not available for publication but included in totals where applicable
..	not applicable
—	nil or rounded to zero

Denis W. Rogers
Regional Director

MAIN FEATURES

OVERVIEW

Turnover for the year 1996–97 by manufacturing establishments operating in Tasmania was \$4,745m, which resulted in an Industry Gross Product (IGP) for the year of \$1,607m. These establishments employed 21,600 persons at the end of June 1997 and paid \$744m in wages and salaries in 1996–97.

The percentage of Australian manufacturing employment in Tasmania at the end of June 1997 was 2.3%, a decrease of 0.1 percentage points on that reported at the end of June 1996. The Tasmanian industry subdivisions which made a significant contribution to national manufacturing employment at the end of June 1997 at the industry subdivision level were Wood and paper product manufacturing (6.3%) and Food, beverage and tobacco manufacturing (3.4%).

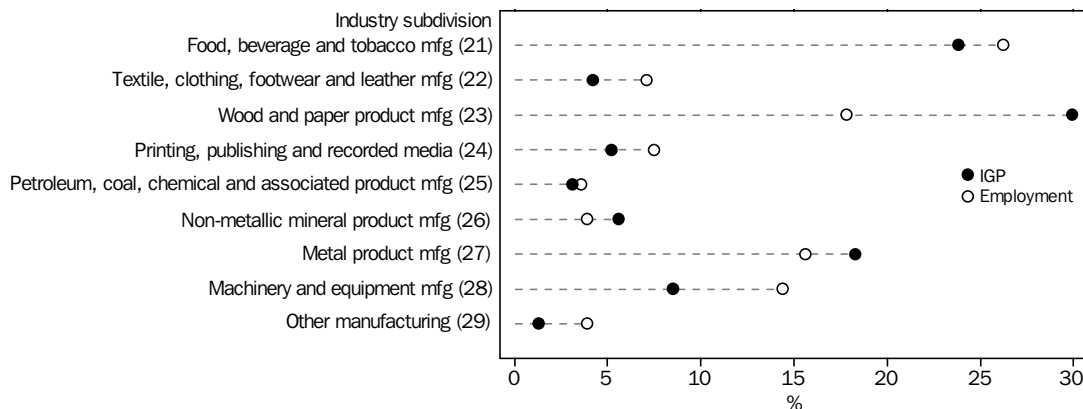
The percentage contribution by Tasmania to total Australian manufacturing turnover and IGP in 1996–97 was 2.3% and 2.5% (respectively). This represents a decrease of 0.1 percentage points for turnover and 0.4 percentage points for IGP on the contribution reported in 1995–96. The Tasmanian industry subdivision which made a significant contribution to national manufacturing turnover and IGP in 1996–97 at the industry subdivision level was Wood and paper product manufacturing (9.9% and 12.1% respectively).

INDUSTRY GROSS PRODUCT

IGP (see the Glossary for its definition) is very similar to the national accounting measure gross product at factor cost, which is the official statistical measure of production. IGP for 1996–97 was \$1,607m. This represents a 11.3% decrease, in current price terms, on the \$1,811m recorded for 1995–96, but a 31.2% increase, in current price terms, on the \$1,225m recorded for 1992–93.

IGP per person employed at the end of June closely followed this trend, with a 7.4% decrease (to \$74,500) for 1996–97 from the \$80,400 recorded for 1995–96, but a 37.6% increase over the \$54,100 recorded for 1992–93.

DISTRIBUTION OF IGP AND EMPLOYMENT



Total manufacturing IGP decreased by 11.3%, in current price terms, between 1995–96 and 1996–97. All industry subdivisions recorded a decrease. Tasmania was the only State where all industry subdivisions recorded such a decrease between 1995–96 and 1996–97.

MAIN FEATURES *continued*

INDUSTRY GROSS PRODUCT *continued*

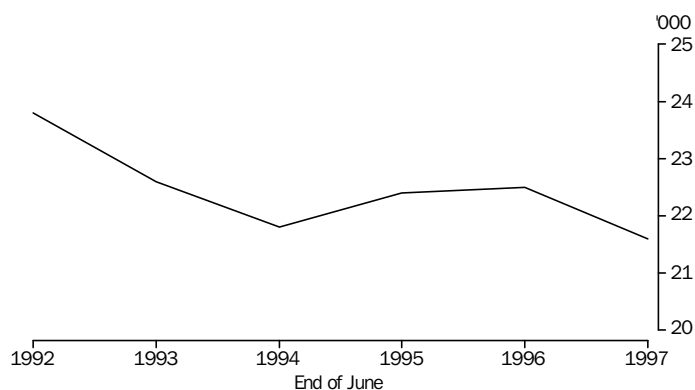
The industry subdivision to record the largest percentage decrease in IGP between 1995–96 and 1996–97 was Non-metallic mineral product manufacturing (down 25.4%—\$122m to \$91m). The industry subdivision which recorded the largest dollar decrease was Wood and paper product manufacturing (down \$63m — \$542m to \$480m), followed by Metal product manufacturing (down \$46m — \$340m to \$294m) and Food, beverage and tobacco manufacturing (down \$44m — \$427m to \$383m). Machinery and equipment manufacturing recorded the smallest percentage decrease (down 3.2% — \$141m to \$137m).

Between 1992–93 and 1996–97, eight industry subdivisions recorded an increase, in current price terms, in IGP. The largest increase in percentage terms was recorded by Machinery and equipment manufacturing (up 131.8% — \$59m to \$137m), while the largest increase in dollar terms was recorded by Wood and paper product manufacturing (up \$126m — \$354m to \$480m). Petroleum, coal, chemical and associated product manufacturing was the only industry subdivision to record a decrease, in current price terms, in IGP between 1992–93 and 1996–97 (down 32.0% — \$73m to \$50m).

EMPLOYMENT AND WAGES

The Tasmanian manufacturing industry employed 21,600 persons at the end of June 1997 and paid \$744m in wages and salaries in 1996–97. This represents an average of \$34,500 paid in annual wages and salaries per person employed at the end of June 1997.

EMPLOYMENT



Employment in the Tasmanian manufacturing industry decreased by 4.2% between June 1996 (22,500 persons) and June 1997 (21,600 persons) and fell by 9.5% over the five years from June 1992 (23,800 persons) to June 1997. Between June 1996 and June 1997, employment decreased in six of the nine manufacturing industry subdivisions, remained steady in two subdivisions and increased in the other subdivision. The industry subdivision with the largest percentage decrease was Other manufacturing (down 16.8%), followed by Textile, clothing, footwear and leather manufacturing (down 13.1%) and Printing, publishing and recorded media (down 12.3%). Petroleum, coal, chemical and associated product manufacturing was the only industry subdivision to record an increase (up 8.6%).

MAIN FEATURES *continued*

EMPLOYMENT AND WAGES *continued*

Average wages and salaries paid per person employed at the end of June rose in eight of the nine manufacturing industry subdivisions between 1995–96 and 1996–97. Metal product manufacturing recorded the largest percentage increase in average wages and salaries paid (up 29.6%), as a result of the industry subdivision recording the largest increase in total wages and salaries paid (up 27.6%) and employment remaining steady. The only decrease in average wages and salaries paid was recorded by Petroleum, coal, chemical and associated product manufacturing (down 20.8%). Whilst this was the only industry subdivision to record an increase in employment (up 8.6%), it recorded the largest decrease in total wages and salaries paid (down 14.0%).

The industry subdivisions to record the largest percentage increases between 1995–96 and 1996–97 in wages and salaries paid per person employed were:

- Metal product manufacturing (up 29.6%—\$32,900 to \$42,700), where all industry groups recorded an increase.
- Non-metallic mineral product manufacturing (up 14.8%—\$32,500 to \$37,300), even though three (out of four) industry groups recorded a decrease. The main influence on the subdivision result was Cement, lime, plaster and concrete product manufacturing (ANZSIC Group 263) (which contributed 61% of the employment in this subdivision) (up 32.5% — \$30,700 to \$40,600).

The industry subdivision to record the decrease between 1995–96 and 1996–97 in wages and salaries paid per person employed at the end of June was:

- Petroleum, coal, chemical and associated product manufacturing (down 20.8% — \$43,100 to \$34,100), where three (out of four) industry groups with data classified to them recorded a decrease.

TURNOVER

Turnover decreased, in current price terms, by \$75m to \$4,745m for 1996–97. This represents a 1.5% decrease from the \$4,819m recorded for 1995–96 and is the first annual decrease, in current price terms, since 1991–92.

Six of the nine manufacturing industry subdivisions recorded a decrease in turnover between 1995–96 and 1996–97. Food, beverage and tobacco manufacturing and Wood and paper product manufacturing remain the largest contributors to total Tasmanian manufacturing turnover. The largest decreases between 1995–96 and 1996–97 in both percentage and dollar terms were recorded by Petroleum, coal, chemical and associated product manufacturing (down 21.1% — \$215m to \$169m) and Textile, clothing, footwear and leather manufacturing (down 11.0% — \$223m to \$198m). The largest percentage increase was recorded by Printing, publishing and recorded media (up 8.1%).

The industry group with the largest percentage increase between 1995–96 and 1996–97 was:

- Fabricated metal product manufacturing (ANZSIC Group 276) (up 84.1% or \$33m).

MAIN FEATURES *continued*

TURNOVER *continued*

The industry groups with the largest dollar increases between 1995–96 and 1996–97 were:

- Fabricated metal product manufacturing (ANZSIC Group 276) (up \$33m or 84.1%);
- Log sawmilling and timber dressing (ANZSIC Group 231) (up \$26m or 6.1%); and
- Publishing (ANZSIC Group 242) (up \$15m or 16.0%).

EXPORTS

For 1996–97, Tasmanian manufacturers directly exported \$1,287m of the goods that they produced. This represents a 0.9% decrease on the \$1,299m recorded for 1995–96. The percentage of the total sales and transfers out of goods produced that were exported has also marginally decreased (from 28.6% for 1995–96 to 28.5% for 1996–97).

Between 1995–96 and 1996–97, manufacturers' direct exports decreased in five industry subdivisions, remained steady in one industry subdivision and increased in the other three. Metal product manufacturing subdivision's decrease of 15.2% or \$99m (from \$651m for 1995–96 to \$552m for 1996–97) was, by far, the most significant contributor to the overall decrease. Even with this decrease, Metal product manufacturing manufacturers directly exported 56.0% of total sales and transfers out of goods produced.

REGIONAL ACTIVITY

As in previous census years, manufacturing activity in Tasmania in 1996–97 was primarily shared between the three largest statistical divisions. These were Greater Hobart (36.9% of all locations at 30 June 1997, 37.2% of employment at the end of June 1997 and 36.2% of turnover for 1996–97), Northern (32.7% of locations, 32.9% of employment and 30.1% of turnover) and Mersey-Lyell (23.6% of locations, 26.6% of employment and 30.1% of turnover).

For those industries for which comparisons can be made after taking into account confidentiality of data, Greater Hobart Statistical Division was the leading contributor to the Tasmanian manufacturing industry for four out of seven industry subdivisions. The exceptions were in Food, beverage and tobacco manufacturing, where Mersey-Lyell Statistical Division (2,036 persons employed at the end of June 1997 and turnover for 1996–97 of \$555m) was the leading contributor, Wood and paper product manufacturing, where Mersey-Lyell Statistical Division (1,117 persons employed and turnover of \$418m) and Northern Statistical Division (1,543 persons employed and turnover of \$326m) were the leading contributors, and Metal product manufacturing, where Northern Statistical Division (1,677 persons employed and turnover of \$533m) was the leading contributor. The industries for which no such comparisons can be made are Non-metallic mineral product manufacturing and Other manufacturing.

Food, beverage and tobacco manufacturing was the largest manufacturing industry in Greater Hobart Statistical Division (24.4% of employment at the end of June 1997 and 25.4% of 1996–97 turnover), Southern Statistical Division (50.8% of employment and 50.2% of turnover) and Mersey-Lyell Statistical Division (36.1% of employment and 39.1% of turnover). Metal product manufacturing was the largest manufacturing industry in Northern Statistical Division (24.1% of employment and 37.4% of turnover).

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

INDUSTRY SUBDIVISION			Employment at end of June(c)	Wages and salaries(d)(e)	Turnover(e)	Industry gross product(e)	Ratio of wages and salaries to turnover(e)	Turnover per person employed(e)(f)
ANZSIC code	Description		'000	\$m	\$m	\$m	ratio	\$'000
21	Food, beverage and tobacco mfg	1996-97	5.7	176.2	1 358.6	383.3	0.13	240.4
		1995-96	5.7	(g)159.9	1 361.1	426.8	0.12	238.1
		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
		1992-93	6.0	148.0	1 226.8	333.0	0.12	205.3
		1991-92	6.1	154.0	1 179.2	..	0.13	193.2
22	Textile, clothing, footwear and leather mfg	1996-97	1.5	44.0	198.4	67.7	0.22	129.1
		1995-96	1.8	(g)48.0	223.0	70.7	0.22	126.1
		1994-95	1.9	46.1	209.7	..	0.22	112.0
		1993-94	1.9	47.4	198.2	..	0.24	105.4
		1992-93	1.8	42.6	185.8	57.5	0.23	101.3
		1991-92	1.8	39.8	178.7	..	0.22	98.5
23	Wood and paper product mfg	1996-97	3.9	152.5	1 140.3	479.9	0.13	296.2
		1995-96	4.0	(g)146.3	1 126.1	542.4	0.13	283.5
		1994-95	4.1	143.4	1 114.0	..	0.13	271.8
		1993-94	3.6	113.1	892.2	..	0.13	245.7
		1992-93	4.5	174.2	961.8	353.5	0.18	211.8
		1991-92	5.1	208.9	978.3	..	0.21	190.2
24	Printing, publishing and recorded media	1996-97	1.6	54.8	180.7	83.9	0.30	112.3
		1995-96	1.8	(g)56.9	167.2	87.3	0.34	91.1
		1994-95	1.8	51.0	159.2	..	0.32	86.9
		1993-94	1.8	50.2	143.3	..	0.35	81.4
		1992-93	1.6	42.5	125.5	64.8	0.34	80.1
		1991-92	1.8	43.1	130.1	..	0.33	73.7
25	Petroleum, coal, chemical and associated product mfg	1996-97	0.8	26.8	169.5	49.8	0.16	216.0
		1995-96	0.7	(g)31.2	214.9	56.7	0.15	297.1
		1994-95	0.9	33.7	220.9	..	0.15	253.1
		1993-94	0.9	27.7	210.0	..	0.13	237.3
		1992-93	0.9	30.5	227.7	73.2	0.13	254.4
		1991-92	0.9	32.2	212.5	..	0.15	234.4
26	Non-metallic mineral product mfg	1996-97	0.8	31.3	246.0	90.7	0.13	293.1
		1995-96	0.9	(g)30.0	258.0	121.6	0.12	279.8
		1994-95	1.0	30.3	250.1	..	0.12	257.0
		1993-94	1.0	28.8	242.3	..	0.12	252.4
		1992-93	0.8	25.9	193.7	66.4	0.13	230.6
		1991-92	0.9	27.0	163.0	..	0.17	181.4

(a) See paragraph 5 of the Explanatory Notes.

(b) For factors affecting comparability of data over the time periods shown, see paragraphs 13-17 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

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

(f) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

(g) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

INDUSTRY SUBDIVISION			Employment at end of June(c)	Wages and salaries(d)(e)	Turnover(e)	Industry gross product(e)	Ratio of wages and salaries to turnover(e)	Turnover per person employed(e)(f)
ANZSIC code	Description		'000	\$m	\$m	\$m	ratio	\$'000
27	Metal product mfg	1996-97	3.4	143.7	1 010.9	293.9	0.14	300.2
		1995-96	3.4	(g)112.6	1 023.6	340.0	0.11	299.4
		1994-95	3.4	114.4	817.1	..	0.14	237.1
		1993-94	3.4	132.5	795.2	..	0.17	235.5
		1992-93	4.2	150.8	839.1	197.2	0.18	201.8
		1991-92	4.5	149.5	825.7	..	0.18	184.2
28	Machinery and equipment mfg	1996-97	3.1	99.0	378.0	136.9	0.26	121.7
		1995-96	3.2	(g)94.9	384.7	141.5	0.25	121.7
		1994-95	2.8	79.5	269.0	..	0.30	96.9
		1993-94	2.5	65.6	233.0	..	0.28	93.4
		1992-93	2.0	47.5	177.9	59.1	0.27	89.1
		1991-92	1.9	48.4	206.0	..	0.23	111.2
29	Other manufacturing	1996-97	0.8	15.9	62.5	21.2	0.25	74.3
		1995-96	1.0	(g)17.3	60.9	24.4	0.28	60.2
		1994-95	0.8	15.2	61.6	..	0.25	73.5
		1993-94	0.8	13.4	54.2	..	0.25	69.6
		1992-93	0.8	15.5	58.2	19.9	0.27	71.6
		1991-92	0.9	17.4	62.0	..	0.28	70.5
21-29 Total manufacturing		1996-97	21.6	744.3	4 744.8	1 607.2	0.16	219.8
		1995-96	22.5	(g)697.0	4 819.4	1 811.5	0.14	213.9
		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
		1992-93	22.6	677.4	3 996.5	1 224.6	0.17	176.7
		1991-92	23.8	720.2	3 935.4	..	0.18	165.1

(a) See paragraph 5 of the Explanatory Notes.

(b) For factors affecting comparability of data over the time periods shown, see paragraphs 13-17 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

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

(f) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

(g) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Turnover	Industry gross product	Turnover per person employed(d)	Industry gross product per person employed(e)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
FOOD, BEVERAGE AND TOBACCO MFG							
Meat and meat product mfg							
2111	Meat processing	785	22.0	117.8	36.8	150.1	46.9
211	Total(f)	1 172	30.2	178.2	47.5	152.0	40.5
Dairy product mfg							
2129	Dairy product mfg n.e.c.	587	17.2	220.3	56.7	375.1	96.5
212	Total(f)	705	21.6	274.4	66.6	389.4	94.6
213	Fruit and vegetable processing	1 232	43.7	332.0	91.9	269.4	74.6
214	Oil and fat mfg	—	—	—	—	—	—
215	Flour mill and cereal food mfg	26	n.p.	n.p.	n.p.	n.p.	n.p.
Bakery product mfg							
2161	Bread mfg	370	12.2	45.0	15.2	121.6	41.2
216	Total(f)	645	n.p.	n.p.	n.p.	n.p.	n.p.
Other food mfg							
2173	Seafood processing	813	17.5	179.1	45.3	220.4	55.8
217	Total(f)	1 660	52.1	402.7	114.6	242.5	69.0
Beverage and malt mfg							
2181	Soft drink, cordial and syrup mfg	14	n.p.	n.p.	n.p.	n.p.	n.p.
2182	Beer and malt mfg	171	n.p.	n.p.	n.p.	n.p.	n.p.
218	Total(f)	211	8.4	88.1	37.4	418.6	177.8
219	Tobacco product mfg	—	—	—	—	—	—
21	Total food, beverage and tobacco mfg	5 651	176.2	1 358.6	383.3	240.4	67.8
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG							
Textile fibre, yarn and woven fabric mfg							
2213	Cotton textile mfg	305	9.3	34.7	10.0	113.8	32.7
221	Total(f)	639	19.5	64.0	19.8	100.2	31.0
Textile product mfg							
2221	Made-up textile product mfg	177	n.p.	n.p.	n.p.	n.p.	n.p.
2229	Textile product mfg n.e.c.	11	n.p.	n.p.	n.p.	n.p.	n.p.
222	Total(f)	431	13.3	75.6	24.5	175.2	56.9
223	Knitting mills	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
224	Clothing mfg	56	1.0	2.5	1.0	44.6	18.1
225	Footwear mfg	335	n.p.	n.p.	n.p.	n.p.	n.p.
226	Leather and leather product mfg	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
22	Total textile, clothing, footwear and leather mfg	1 537	44.0	198.4	67.7	129.1	44.1

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

(f) 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		Employment at end of June(b)	Wages and salaries(c)	Turnover	Industry gross product	Turnover per person employed(d)	Industry gross product per person employed(e)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
WOOD AND PAPER PRODUCT MFG							
Log sawmilling and timber dressing							
2311	Log sawmilling	557	13.8	57.5	26.3	103.3	47.3
2312	Wood chipping	369	15.3	280.5	96.6	760.5	262.0
2313	Timber resawing and dressing	791	25.8	109.4	46.7	138.3	59.0
231	<i>Total</i>	1 717	54.9	447.5	169.6	260.6	98.8
Other wood product mfg							
2323	Wooden structural component mfg	360	7.6	29.1	9.5	80.8	26.5
2329	Wood product mfg n.e.c.	67	1.0	4.9	1.9	72.8	27.8
232	<i>Total(f)</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Paper and paper product mfg							
2331	Pulp, paper and paperboard mfg	1 373	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
233	<i>Total(f)</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
23	Total wood and paper product mfg	3 850	152.5	1 140.3	479.9	296.2	124.6
PRINTING, PUBLISHING AND RECORDED MEDIA							
Printing and services to printing							
2412	Printing	589	16.8	66.5	25.2	113.0	42.9
241	<i>Total(f)</i>	712	19.7	75.2	30.1	105.6	42.3
Publishing							
2421	Newspaper printing or publishing	852	34.1	103.1	52.6	121.0	61.7
2422	Other periodical publishing	31	0.6	1.5	0.6	46.7	20.0
2423	Book and other publishing	14	0.4	1.0	0.6	71.2	40.3
242	<i>Total</i>	897	35.1	105.5	53.7	117.7	59.9
243	Recorded media manufacturing and publishing	—	—	—	—	—	—
24	Total printing, publishing and recorded media	1 609	54.8	180.7	83.9	112.3	52.1
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG							
251	Petroleum refining	—	—	—	—	—	—
252	Petroleum and coal product mfg n.e.c.	—	—	—	—	—	—
Basic chemical mfg							
2532	Industrial gas mfg	<i>n.p.</i>	2.5	7.1	3.3	<i>n.p.</i>	<i>n.p.</i>
2533	Synthetic resin mfg	<i>n.p.</i>	0.9	1.4	0.7	<i>n.p.</i>	<i>n.p.</i>
253	<i>Total(f)</i>	163	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Other chemical product mfg							
2545	Soap and other detergent mfg	18	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
254	<i>Total(f)</i>	285	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
255	Rubber product mfg	50	1.5	8.8	3.3	177.8	66.7

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

(f) 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		Employment at end of June(b)	Wages and salaries(c)	Turnover	Industry gross product	Turnover per person employed(d)	Industry gross product per person employed(e)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
Plastic product mfg							
2562	Plastic extruded product mfg	76	2.0	13.6	3.1	177.8	40.8
2564	Plastic product, rigid fibre reinforced, mfg	133	n.p.	n.p.	n.p.	n.p.	n.p.
2566	Plastic injection moulded product mfg	39	1.0	4.5	1.7	116.8	44.1
256	<i>Total(f)</i>	287	7.6	37.6	10.6	130.8	36.8
25	Total petroleum, coal, chemical and associated product mfg	785	26.8	169.5	49.8	216.0	63.5
NON-METALLIC MINERAL PRODUCT MFG							
261	Glass and glass product mfg	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Ceramic mfg							
2621	Clay brick mfg	69	1.7	7.8	4.0	112.4	57.9
2629	Ceramic product mfg n.e.c.	22	0.2	0.7	0.3	30.0	15.6
262	<i>Total(f)</i>	91	1.9	8.4	4.4	92.8	47.8
Cement, lime, plaster and concrete product mfg							
2633	Concrete slurry mfg	114	3.8	38.4	6.1	335.8	53.0
2635	Concrete product mfg n.e.c.	143	n.p.	n.p.	n.p.	n.p.	n.p.
263	<i>Total(f)</i>	515	20.9	209.4	84.9	406.3	164.8
264	Non-metallic mineral product mfg n.e.c.	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
26	Total non-metallic mineral product mfg	839	31.3	246.0	90.7	293.1	108.0
METAL PRODUCT MFG							
271	Iron and steel mfg	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Basic non-ferrous metal mfg							
2723	Copper, silver, lead and zinc smelting, refining	n.p.	35.6	362.3	117.1	n.p.	n.p.
272	<i>Total(f)</i>	1 356	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
273	Non-ferrous basic metal product mfg	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Structural metal product mfg							
2741	Structural steel fabricating	367	12.5	50.4	16.4	137.3	44.8
2742	Architectural aluminium product mfg	227	5.8	27.1	6.9	119.6	30.6
2749	Structural metal product mfg n.e.c.	16	0.3	1.1	0.5	69.9	29.2
274	<i>Total</i>	610	18.6	78.7	23.8	129.0	39.1
275	Sheet metal product mfg	236	7.1	33.2	10.7	140.9	45.3
Fabricated metal product mfg							
2761	Hand tool and general hardware mfg	44	1.4	4.8	2.6	108.9	60.3
2762	Spring and wire product mfg	17	0.4	1.3	0.6	79.9	38.4
2769	Fabricated metal product mfg n.e.c.	557	15.9	60.2	22.0	108.1	39.6
276	<i>Total(f)</i>	686	19.1	71.7	27.8	104.5	40.6
27	Total metal product mfg	3 367	143.7	1 010.9	293.9	300.2	87.3

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

(f) 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		Employment at end of June(b)	Wages and salaries(c)	Turnover	Industry gross product	Turnover per person employed(d)	Industry gross product per person employed(e)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
MACHINERY AND EQUIPMENT MFG							
Motor vehicle and part mfg							
2812	Motor vehicle body mfg	61	n.p.	n.p.	n.p.	n.p.	n.p.
2819	Automotive component mfg n.e.c.	690	n.p.	n.p.	n.p.	n.p.	n.p.
281	<i>Total(f)</i>	751	34.7	87.4	40.4	116.3	53.8
Other transport equipment mfg							
2821	Shipbuilding	1 040	n.p.	n.p.	n.p.	n.p.	n.p.
2822	Boatbuilding	129	3.3	10.7	3.6	83.3	28.3
2824	Aircraft mfg	5	0.3	0.5	0.2	95.9	37.4
282	<i>Total(f)</i>	1 173	n.p.	n.p.	n.p.	n.p.	n.p.
Photographic and scientific equipment mfg							
2831	Photographic and optical good mfg	11	0.2	1.4	0.5	135.5	42.8
2832	Medical and surgical equipment mfg	54	1.0	2.7	1.3	49.5	24.1
2839	Professional and scientific equipment mfg n.e.c.	6	0.1	0.5	0.2	71.1	27.6
283	<i>Total</i>	71	1.4	4.6	1.9	64.4	27.3
Electronic equipment mfg							
2849	Electronic equipment mfg n.e.c.	12	n.p.	n.p.	n.p.	n.p.	n.p.
284	<i>Total(f)</i>	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Electrical equipment and appliance mfg							
2854	Electric light and sign mfg	54	0.9	3.6	1.7	67.5	31.9
2859	Electrical equipment mfg n.e.c.	171	5.9	21.3	7.1	124.5	41.6
285	<i>Total(f)</i>	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Industrial machinery and equipment mfg							
2862	Mining and construction machinery mfg	378	n.p.	n.p.	n.p.	n.p.	n.p.
2865	Lifting and material handling equipment mfg	214	7.7	25.6	10.5	119.5	48.9
2866	Pump and compressor mfg	n.p.	0.3	0.6	0.3	n.p.	n.p.
2867	Commercial space heating and cooling equipment mfg	n.p.	0.1	0.9	0.1	n.p.	n.p.
2869	Industrial machinery and equipment mfg n.e.c.	114	n.p.	n.p.	n.p.	n.p.	n.p.
286	<i>Total(f)</i>	816	26.8	122.7	43.3	150.3	53.1
28	Total machinery and equipment mfg	3 107	99.0	378.0	136.9	121.7	44.1
OTHER MANUFACTURING							
291	Prefabricated building mfg	42	0.8	6.6	1.7	156.8	40.7
Furniture mfg							
2921	Wooden furniture and upholstered seat mfg	444	9.3	34.3	11.5	77.3	26.0
2922	Sheet metal furniture mfg	15	0.5	2.2	0.6	144.0	38.8
292	<i>Total(f)</i>	723	13.9	52.1	17.9	72.1	24.8
Miscellaneous manufacturing							
2941	Jewellery and silverware mfg	12	0.2	0.5	0.2	41.5	17.4
2942	Toy and sporting good mfg	19	0.2	1.0	0.3	50.7	16.2
2949	Manufacturing n.e.c.	45	0.8	2.3	1.0	50.6	23.2
294	<i>Total</i>	76	1.2	3.7	1.6	49.2	20.5
29	Total other manufacturing	841	15.9	62.5	21.2	74.3	25.2
21–29	TOTAL MANUFACTURING	21 585	744.3	4 744.8	1 607.2	219.8	74.5

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

(f) 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.

3

MANUFACTURING ESTABLISHMENTS(a), Percentage Change(b) in Industry Gross Product

INDUSTRY SUBDIVISION		1992-93 TO 1996-97.....			
ANZSIC Code	Description	1992-93 to 1995-96	1995-96 to 1996-97	Percentage movement	Change in IGP per person employed(c)
21	Food, beverage and tobacco mfg	28.2	-10.2	15.1	21.7
22	Textile, clothing, footwear and leather mfg	22.9	-4.2	17.7	40.6
23	Wood and paper product mfg	53.4	-11.5	35.7	60.1
24	Printing, publishing and recorded media	34.7	-3.9	29.4	26.1
25	Petroleum, coal, chemical and associated product mfg	-22.5	-12.2	-32.0	-22.4
26	Non-metallic mineral product mfg	83.2	-25.4	36.6	36.7
27	Metal product mfg	72.4	-13.6	49.0	84.1
28	Machinery and equipment mfg	139.6	-3.2	131.8	49.1
29	Other manufacturing	23.1	-13.2	6.8	3.2
21-29	Total manufacturing	47.9	-11.3	31.2	37.6

(a) See paragraph 5 of the Explanatory Notes.

(b) Percentage changes are calculated using current price data and, therefore, do not discount the impact of price changes. For factors affecting comparability of data over the time periods shown, see paragraphs 13-17 of the Explanatory Notes.

(c) Based on employment at the end of June of the reference year. Includes working proprietors.

4

MANUFACTURING ESTABLISHMENTS(a), Summary of Operations—Employment size

Employment size group(e)	Employment at end of June(b).....		Wages and salaries(c)(d).....		Turnover(d).....		Industry gross product(d).....	
	no.	%	\$m	%	\$m	%	\$m	%
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
0-4 persons	98	1.7	2.1	1.2	19.8	1.5	4.9	1.3
5-9 persons	211	3.7	4.0	2.3	33.8	2.5	4.8	1.3
10-19 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
20-49 persons	606	10.7	15.9	9.2	216.0	16.1	49.5	13.1
50-99 persons	795	14.1	19.3	11.3	211.0	15.8	67.0	17.6
<i>Total less than 100 persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
100-199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	1 771	31.3	61.9	36.1	429.8	32.1	129.3	34.1
500-999 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Total	5 651	100.0	171.6	100.0	1 339.5	100.0	379.3	100.0
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
0-4 persons	69	4.5	0.9	2.0	3.3	1.7	1.3	2.0
5-9 persons	92	6.0	1.5	3.5	7.8	4.0	3.3	4.8
10-19 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
20-49 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	<i>418</i>	<i>27.2</i>	<i>8.4</i>	<i>19.3</i>	<i>39.2</i>	<i>19.9</i>	<i>13.2</i>	<i>19.7</i>
100-199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>1 119</i>	<i>72.8</i>	<i>35.1</i>	<i>80.7</i>	<i>157.8</i>	<i>80.1</i>	<i>54.0</i>	<i>80.3</i>
Total	1 537	100.0	43.5	100.0	197.0	100.0	67.2	100.0
WOOD AND PAPER PRODUCT MANUFACTURING								
0-4 persons	207	5.4	3.3	2.1	15.3	1.3	4.9	1.0
5-9 persons	278	7.2	6.4	4.2	25.5	2.2	9.4	2.0
10-19 persons	228	5.9	6.4	4.2	74.3	6.5	17.1	3.6
20-49 persons	505	13.1	12.9	8.5	85.6	7.5	24.2	5.1
50-99 persons	431	11.2	16.0	10.5	214.7	18.8	90.7	18.9
<i>Total less than 100 persons</i>	<i>1 649</i>	<i>42.8</i>	<i>45.1</i>	<i>29.6</i>	<i>415.4</i>	<i>36.5</i>	<i>146.4</i>	<i>30.5</i>
100-199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>2 201</i>	<i>57.2</i>	<i>107.2</i>	<i>70.4</i>	<i>724.0</i>	<i>63.5</i>	<i>333.1</i>	<i>69.5</i>
Total	3 850	100.0	152.3	100.0	1 139.4	100.0	479.6	100.0

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997. See paragraph 19 of the Explanatory Notes.

(e) See paragraph 18 of the Explanatory Notes.

4

MANUFACTURING ESTABLISHMENTS(a), Summary of Operations—Employment size *continued*

Employment size group(e)	Employment at end of June(b).....		Wages and salaries(c)(d).....		Turnover(d).....		Industry gross product(d).....	
	no.	%	\$m	%	\$m	%	\$m	%
PRINTING, PUBLISHING AND RECORDED MEDIA								
0-4 persons	101	6.3	2.0	3.6	8.4	4.7	3.5	4.2
5-9 persons	157	9.8	4.2	7.6	13.5	7.5	6.3	7.5
10-19 persons	150	9.3	3.3	6.1	10.1	5.6	5.1	6.1
20-49 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	<i>919</i>	<i>57.1</i>	<i>24.4</i>	<i>44.6</i>	<i>89.0</i>	<i>49.3</i>	<i>35.5</i>	<i>42.3</i>
100-199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>690</i>	<i>42.9</i>	<i>30.4</i>	<i>55.4</i>	<i>91.7</i>	<i>50.7</i>	<i>48.4</i>	<i>57.7</i>
Total	1 609	100.0	54.8	100.0	180.7	100.0	83.9	100.0
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
0-4 persons	54	6.9	1.2	4.6	8.5	5.0	2.2	4.4
5-9 persons	67	8.5	2.3	8.7	10.0	5.9	2.8	5.7
10-19 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
20-49 persons	247	31.5	8.2	30.5	46.0	27.2	15.4	30.9
50-99 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
100-199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Total	785	100.0	26.8	100.0	169.5	100.0	49.8	100.0
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
0-4 persons	63	7.5	0.7	2.3	3.8	1.6	1.3	1.4
5-9 persons	46	5.5	0.8	2.6	4.6	1.9	1.5	1.7
10-19 persons	99	11.8	3.5	11.3	34.1	13.9	5.4	6.0
20-49 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
100-199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Total	839	100.0	31.3	100.0	246.0	100.0	90.7	100.0

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997. See paragraph 19 of the Explanatory Notes.

(e) See paragraph 18 of the Explanatory Notes.

4

MANUFACTURING ESTABLISHMENTS(a), Summary of Operations—Employment size *continued*

Employment size group(e)	Employment at end of June(b).....		Wages and salaries(c)(d).....		Turnover(d).....		Industry gross product(d).....	
	no.	%	\$m	%	\$m	%	\$m	%
METAL PRODUCT MANUFACTURING								
0–4 persons	235	7.0	5.0	3.5	24.8	2.5	9.4	3.2
5–9 persons	325	9.7	7.5	5.3	32.6	3.2	11.5	4.0
10–19 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
20–49 persons	469	13.9	15.1	10.6	57.0	5.7	18.5	6.4
50–99 persons	185	5.5	7.5	5.3	34.5	3.4	11.0	3.8
<i>Total less than 100 persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
100–199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200–499 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500–999 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Total	3 367	100.0	142.5	100.0	1 005.2	100.0	291.6	100.0
MACHINERY AND EQUIPMENT MANUFACTURING								
0–4 persons	179	5.8	3.0	3.0	11.6	3.1	4.6	3.3
5–9 persons	250	8.0	6.1	6.2	20.2	5.3	6.5	4.7
10–19 persons	260	8.4	5.5	5.6	21.6	5.7	8.1	5.9
20–49 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50–99 persons	—	—	—	—	—	—	—	—
<i>Total less than 100 persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
100–199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200–499 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500–999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total 100 or more persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Total	3 107	100.0	99.0	100.0	378.0	100.0	136.9	100.0
OTHER MANUFACTURING								
0–4 persons	193	22.9	2.8	18.8	12.6	21.2	4.4	21.9
5–9 persons	80	9.5	1.7	11.3	7.4	12.5	2.7	13.3
10–19 persons	148	17.6	3.5	23.5	16.8	28.2	5.1	25.2
20–49 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50–99 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
100–199 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200–499 persons	—	—	—	—	—	—	—	—
500–999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Total	841	100.0	15.1	100.0	59.5	100.0	20.2	100.0

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996–97 but were not operating at 30 June 1997. See paragraph 19 of the Explanatory Notes.

(e) See paragraph 18 of the Explanatory Notes.

4

MANUFACTURING ESTABLISHMENTS(a), Summary of Operations—Employment size *continued*

Employment size group(e)	Employment at end of June(b).....		Wages and salaries(c)(d).....		Turnover(d).....		Industry gross product(d).....	
	no.	%	\$m	%	\$m	%	\$m	%
TOTAL MANUFACTURING								
0–4 persons	1 199	5.6	21.1	2.9	108.1	2.3	36.5	2.3
5–9 persons	1 506	7.0	34.5	4.7	155.5	3.3	48.8	3.1
10–19 persons	1 699	7.9	45.1	6.1	303.0	6.4	80.1	5.0
20–49 persons	2 677	12.4	73.8	10.0	493.3	10.5	140.0	8.8
50–99 persons	2 162	10.0	64.9	8.8	577.5	12.2	203.1	12.7
<i>Total less than 100 persons</i>	<i>9 244</i>	<i>42.8</i>	<i>239.4</i>	<i>32.5</i>	<i>1 637.3</i>	<i>34.7</i>	<i>508.6</i>	<i>31.8</i>
100–199 persons	3 592	16.6	126.0	17.1	659.7	14.0	224.2	14.0
200–499 persons	5 085	23.6	214.7	29.1	1 186.6	25.2	450.2	28.2
500–999 persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total 100 or more persons</i>	<i>12 341</i>	<i>57.2</i>	<i>497.4</i>	<i>67.5</i>	<i>3 077.4</i>	<i>65.3</i>	<i>1 090.7</i>	<i>68.2</i>
Total	21 585	100.0	736.8	100.0	4 714.7	100.0	1 599.2	100.0

(a) See paragraph 5 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

(d) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996–97 but were not operating at 30 June 1997. See paragraph 19 of the Explanatory Notes.

(e) See paragraph 18 of the Explanatory Notes.

INDUSTRY SUBDIVISION		<i>Sales and transfers out of goods produced by this establishment</i>	<i>Amount exported by this business or its agent</i>	<i>Exports as a proportion of sales of goods produced</i>
ANZSIC code	Description	\$m	\$m	%
0–49 PERSONS				
21	Food, beverage and tobacco mfg	n.p.	n.p.	n.p.
22	Textile, clothing, footwear and leather mfg	n.p.	n.p.	n.p.
23	Wood and paper product mfg	196.3	33.8	17.2
24	Printing, publishing and recorded media	n.p.	n.p.	n.p.
25	Petroleum, coal, chemical and associated product mfg	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	n.p.	n.p.	n.p.
27	Metal product mfg	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	n.p.	n.p.	n.p.
29	Other manufacturing	n.p.	n.p.	n.p.
21–29	<i>Total manufacturing</i>	977.3	147.4	15.1
50–99 PERSONS				
21	Food, beverage and tobacco mfg	203.0	34.0	16.8
22	Textile, clothing, footwear and leather mfg	n.p.	n.p.	n.p.
23	Wood and paper product mfg	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	n.p.	n.p.	n.p.
25	Petroleum, coal, chemical and associated product mfg	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	n.p.	n.p.	n.p.
27	Metal product mfg	34.1	—	—
28	Machinery and equipment mfg	—	—	—
29	Other manufacturing	n.p.	n.p.	n.p.
21–29	<i>Total manufacturing</i>	564.0	226.4	40.1
100 OR MORE PERSONS				
21	Food, beverage and tobacco mfg	n.p.	n.p.	n.p.
22	Textile, clothing, footwear and leather mfg	n.p.	n.p.	n.p.
23	Wood and paper product mfg	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	31.4	—	—
25	Petroleum, coal, chemical and associated product mfg	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	n.p.	n.p.	n.p.
27	Metal product mfg	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	n.p.	n.p.	n.p.
29	Other manufacturing	n.p.	n.p.	n.p.
21–29	<i>Total manufacturing</i>	2 980.1	913.0	30.6
TOTAL				
21	Food, beverage and tobacco mfg	1 299.1	266.2	20.5
22	Textile, clothing, footwear and leather mfg	n.p.	n.p.	n.p.
23	Wood and paper product mfg	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	112.2	1.4	1.2
25	Petroleum, coal, chemical and associated product mfg	163.0	32.7	20.1
26	Non-metallic mineral product mfg	n.p.	n.p.	n.p.
27	Metal product mfg	984.9	551.8	56.0
28	Machinery and equipment mfg	345.2	172.5	50.0
29	Other manufacturing	n.p.	n.p.	n.p.
21–29	Total manufacturing	4 521.3	1 286.8	28.5

(a) See paragraph 5 of the Explanatory Notes.

(b) See paragraphs 21–23 of the Explanatory Notes.

(c) This table excludes those manufacturing establishments which operated during 1996–97 but were not operating at 30 June 1997. See paragraph 19 of the Explanatory Notes.

INDUSTRY SUBDIVISION		Employment at end of June(c)	Wages and salaries(d)	Turnover	Industry gross product
ANZSIC code	Description	%	%	%	%
ESTABLISHMENTS THAT DO NOT EXPORT					
21	Food, beverage and tobacco mfg	62.9	65.9	52.4	46.6
22	Textile, clothing, footwear and leather mfg	n.p.	n.p.	n.p.	n.p.
23	Wood and paper product mfg	n.p.	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	87.3	87.6	81.2	88.5
25	Petroleum, coal, chemical and associated product mfg	62.5	66.5	72.8	71.5
26	Non-metallic mineral product mfg	n.p.	n.p.	n.p.	n.p.
27	Metal product mfg	45.3	31.4	19.6	21.3
28	Machinery and equipment mfg	23.7	16.8	15.8	16.0
29	Other manufacturing	n.p.	n.p.	n.p.	n.p.
21–29	Total manufacturing	53.3	48.0	40.6	39.2
ESTABLISHMENTS WITH EXPORTS UP TO AND INCLUDING 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	n.p.	n.p.	n.p.	n.p.
22	Textile, clothing, footwear and leather mfg	69.7	71.7	77.7	79.8
23	Wood and paper product mfg	43.9	51.2	49.5	54.3
24	Printing, publishing and recorded media	12.7	12.4	18.8	11.5
25	Petroleum, coal, chemical and associated product mfg	n.p.	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	n.p.	n.p.	n.p.	n.p.
27	Metal product mfg	n.p.	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	n.p.	n.p.	n.p.	n.p.
29	Other manufacturing	n.p.	n.p.	n.p.	n.p.
21–29	Total manufacturing	26.8	28.8	28.3	33.8
ESTABLISHMENTS WITH EXPORTS OF MORE THAN 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	n.p.	n.p.	n.p.	n.p.
22	Textile, clothing, footwear and leather mfg	n.p.	n.p.	n.p.	n.p.
23	Wood and paper product mfg	n.p.	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	—	—	—	—
25	Petroleum, coal, chemical and associated product mfg	n.p.	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	—	—	—	—
27	Metal product mfg	n.p.	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	n.p.	n.p.	n.p.	n.p.
29	Other manufacturing	—	—	—	—
21–29	Total manufacturing	19.8	23.3	31.0	27.0

(a) See paragraph 5 of the Explanatory Notes.

(b) See paragraphs 21–23 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

INDUSTRY SUBDIVISION		Locations at 30 June	Employment at end of June(c)	Wages and salaries(d)	Turnover
ANZSIC code	Description	no.	no.	\$m	\$m
GREATER HOBART STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	49	1 920	62.4	434.8
22	Textile, clothing, footwear and leather mfg	26	546	16.2	109.3
23	Wood and paper product mfg	53	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	49	817	29.6	90.7
25	Petroleum, coal, chemical and associated product mfg	24	293	9.1	61.9
26	Non-metallic mineral product mfg	17	314	13.3	66.8
27	Metal product mfg	72	1 201	52.0	433.5
28	Machinery and equipment mfg	68	1 490	36.7	166.0
29	Other manufacturing	42	n.p.	n.p.	n.p.
21–29	Total manufacturing	400	7 866	264.3	1 710.8
SOUTHERN STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	19	346	8.9	84.7
22	Textile, clothing, footwear and leather mfg	2	n.p.	n.p.	n.p.
23	Wood and paper product mfg	17	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	3	17	0.3	0.9
25	Petroleum, coal, chemical and associated product mfg	4	32	0.8	4.2
26	Non-metallic mineral product mfg	6	19	0.2	0.6
27	Metal product mfg	7	27	0.5	2.1
28	Machinery and equipment mfg	9	32	0.6	2.1
29	Other manufacturing	7	12	0.2	0.8
21–29	Total manufacturing	74	681	17.9	168.7
NORTHERN STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	40	1 277	38.2	283.1
22	Textile, clothing, footwear and leather mfg	18	n.p.	n.p.	n.p.
23	Wood and paper product mfg	71	1 543	48.3	325.9
24	Printing, publishing and recorded media	25	465	14.8	60.9
25	Petroleum, coal, chemical and associated product mfg	15	262	9.7	49.6
26	Non-metallic mineral product mfg	18	193	n.p.	n.p.
27	Metal product mfg	66	1 677	78.8	533.2
28	Machinery and equipment mfg	55	873	38.1	96.2
29	Other manufacturing	46	n.p.	n.p.	n.p.
21–29	Total manufacturing	354	6 967	250.0	1 424.5
MERSEY-LYELL STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	41	2 036	64.3	555.0
22	Textile, clothing, footwear and leather mfg	10	534	n.p.	n.p.
23	Wood and paper product mfg	46	1 117	55.6	418.3
24	Printing, publishing and recorded media	20	289	9.6	26.6
25	Petroleum, coal, chemical and associated product mfg	16	208	7.0	47.5
26	Non-metallic mineral product mfg	13	313	n.p.	n.p.
27	Metal product mfg	51	419	11.9	48.8
28	Machinery and equipment mfg	35	640	22.0	104.7
29	Other manufacturing	24	80	1.4	6.5
21–29	Total manufacturing	256	5 636	200.8	1 420.8

(a) See paragraph 8 of the Explanatory Notes.

(b) Figures in this table differ to those in the other tables. See paragraphs 24–27 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors. Includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

INDUSTRY SUBDIVISION		Locations at 30 June	Employment at end of June(c)	Wages and salaries(d)	Turnover
ANZSIC code	Description	no.	no.	\$m	\$m
TASMANIA EXCLUDING GREATER HOBART STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	100	3 659	111.4	922.8
22	Textile, clothing, footwear and leather mfg	30	965	27.4	89.6
23	Wood and paper product mfg	134	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	48	771	24.7	88.3
25	Petroleum, coal, chemical and associated product mfg	35	502	17.5	101.3
26	Non-metallic mineral product mfg	37	525	18.1	178.4
27	Metal product mfg	124	2 123	91.2	584.1
28	Machinery and equipment mfg	99	1 545	60.7	203.0
29	Other manufacturing	77	n.p.	n.p.	n.p.
21–29	Total manufacturing	684	13 284	468.7	3 014.0
TASMANIA					
21	Food, beverage and tobacco mfg	149	5 579	173.8	1 357.5
22	Textile, clothing, footwear and leather mfg	56	1 511	43.6	198.9
23	Wood and paper product mfg	187	3 776	148.4	1 136.1
24	Printing, publishing and recorded media	97	1 588	54.3	179.1
25	Petroleum, coal, chemical and associated product mfg	59	795	26.7	163.2
26	Non-metallic mineral product mfg	54	839	31.4	245.1
27	Metal product mfg	196	3 324	143.1	1 017.6
28	Machinery and equipment mfg	167	3 035	97.4	369.1
29	Other manufacturing	119	703	14.3	58.2
21–29	TOTAL MANUFACTURING	1 084	21 150	733.0	4 724.8

(a) See paragraph 8 of the Explanatory Notes.

(b) Figures in this table differ to those in the other tables. See paragraphs 24–27 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors. Includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents final statistics for Tasmania compiled from a census of manufacturing establishments for 1996–97, 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 census.

2 The manufacturing collection is conducted on an annual basis. For the 1996–97 collection, all manufacturing businesses were requested to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported. Data on IGP 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 four years.

3 All data in this publication, with the exception of IGP estimates, have been compiled from the full census population. Estimates of IGP were compiled using data from this census population and a sample of approximately 7,000 establishments nationally 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. (These commodity data will be released in the publication *Manufacturing Production, Commodities Produced, Australia, 1996–97* (Cat. no. 8365.0).) A sample of approximately 5,300 manufacturing management units nationally was asked the detailed information required to derive operating profit before tax. A separate sample of 5,000 manufacturing management units nationally was asked for information related to waste management and environmental protection. Information from this sample will be published in *Environment Protection Expenditure, Australia, 1995–96 and 1996–97* (Cat. no. 4603.0). Selected data from the census and sample populations as well as data from other collections will be included in the compendium publication *Manufacturing, Australia, 1998* (Cat. no. 8225.0).

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

SCOPE AND COVERAGE

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 and which are excluded.

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 1996–97 manufacturing collection, 'significant' was defined as \$7.3 million or more.

EXPLANATORY NOTES *continued*

SCOPE AND COVERAGE *continued*

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 with the Australian Taxation Office. Though a substantial number, these businesses would contribute only marginally to aggregate data were they to be included. In addition, the ABS attempts to obtain data for those businesses which ceased operation during the year, but it is not possible to obtain data for all of them.

STANDARD UNITS

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

RELIABILITY OF ESTIMATES

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

DATA ADJUSTED

10 As was done for the 1993–94 to 1995–96 (inclusive) issues of this publication, data have been adjusted to allow for lags in processing new businesses to the ABS business register, and the omission of some businesses from the business register. First, adjustments have been made to allow for new businesses which had commenced operations but for which details had not been processed 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. Second, adjustments have been made for businesses which had been in existence for several years, but, for various reasons, were not previously added to the ABS business register. In this issue of this publication, a further set of adjustments have been made to allow for omissions not previously identified. In respect of this further set of adjustments, actual data have been collected for 1996–97 and adjustment factors have been applied for each year back to 1991–92. For more information on these various adjustments, please refer to the *Information Paper: Improvements to ABS Economic Statistics, 1997* (Cat. no. 1357.0).

11 The majority of businesses affected by these lags and omissions, and to which both types of adjustments apply, are small in size. The effect of these adjustments on 1996–97 turnover for Tasmania is an increase of 1.0% while the effect on employment is an increase of 2.3%. Most industries were affected to a similar degree. The exceptions are Other manufacturing (for which the adjustment for turnover is 2.7%) and Wood and paper product manufacturing (for which the adjustment for employment is 4.7%).

12 At the same time as these adjustments have been applied to the time series statistics in this publication, some revisions have been made to the underlying data previously published, as a result of further processing and/or additional information becoming available.

COMPARABILITY WITH PREVIOUS STATISTICS

13 Commencing with the 1993–94 manufacturing collection, manufacturers not employing staff at 30 June of the reference year (such as sole proprietorships or family partnerships) which had registered as group employers with the Australian Taxation Office are included in the manufacturing collection. Data in respect of these 'non-employers' were excluded from the scope of the manufacturing collection for the 1988–89 to 1992–93 (inclusive) reference years. However, the inclusion of these types of businesses has only had a marginal affect on statistical aggregates.

COMPARABILITY WITH PREVIOUS STATISTICS *continued*

14 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.

15 As explained above, about 7,000 establishments included in the 1996–97 collection were asked to supply value of sales for commodities produced. A similar sampling procedure was followed for the 1993–94 to 1995–96 (inclusive) collections. The availability of this fine level commodity/activity data for these units has enabled ABS survey processing staff to better identify those establishments which were actually in the scope of the manufacturing collection and those which should not be included in the manufacturing collection, because (for example) they were actually wholesalers or retailers. These fine level commodity/activity data have also enabled an objective industry code to be determined for the responding units in the samples, compared to the more subjective industry coding which occurred for all units in each of the 1990–91 to 1992–93 (inclusive) manufacturing collections. The industry code for the units not responding or not included in any of these commodity samples has continued to be a subjectively determined code.

16 For the 1996–97 collection, provision expenses for employee entitlements are included in wages and salaries, as was the case prior to 1995–96. For the 1995–96 collection, these provision expenses were excluded from wages and salaries.

17 Data in this publication have been subjected to various adjustments (see paragraphs 10–12). As a result, they are not on a comparable basis to previously published data. Comparable data for earlier periods are available from the ABS. A charge is made for providing such information.

18 The two smallest employment size categories used in table 4 in this publication have been changed to accord with standard ABS size ranges. That is, the categories now used are 0–4 and 5–9 persons employed instead of the 0–3 and 4–9 persons employed previously used. However, as the 1996–97 collection is a census, it may be possible (depending on confidentiality constraints) to, on request, construct data on the previous basis. From the 1997–98 collection onwards, the sample design used will only deliver reliable data in accordance with the standard ABS size ranges.

EMPLOYMENT SIZE DATA

19 Summary of operations data at the industry subdivision level classified by employment size are presented in table 4. Similarly, exports of goods produced data at the industry subdivision level classified by broad employment size are presented in table 5. The statistics in these two tables relate only to those manufacturing establishments operating at 30 June 1997. As such, the figures presented may differ slightly 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 1996–97.

20 The two smallest employment size categories used in table 4 in this publication have been changed. See paragraph 18 for details.

EXPORTS BY MANUFACTURERS

21 All establishments included in the manufacturing census 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 5 are derived by applying the percentage of exports reported for each exporting unit and then aggregating that figure. The data in table 5 exclude those manufacturing establishments which operated during 1996–97 but were not operating at 30 June 1997.

22 The statistics presented in table 5 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 5 and 6 only include exports directly undertaken by the manufacturer or by its agent.

23 The data in table 5 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 5 and 6. 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 5 and 6 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.

STATISTICAL DIVISION DATA

24 The location data presented in table 7 are based on additional data collected in the 1996–97 census. The extra data requested were the activity carried out at the location, the number of persons employed and the address of the location.

25 Employment data shown in this table are based on reported employment, but in the case of wages and salaries and turnover data they do not reflect reported data in all cases. This is because in those circumstances where an establishment operates at more than one location or where small multi-establishment management units have been 'collapsed' for reporting purposes into single establishment management units (see paragraph 14), the data have been synthesised to derive location-level wages and salaries and turnover data. (However, it should be noted that most establishments operate at only the one location.) The location-level synthesised data were derived by using the location data collected on activity and employment, and then pro-rating wages and salaries and turnover based on the reported employment.

EXPLANATORY NOTES *continued*

STATISTICAL DIVISION DATA *continued*

26 As indicated in paragraph 5, a manufacturing establishment covers all activities of the establishment, including any non-manufacturing activities. In table 7, the non-manufacturing locations of manufacturing establishments have been excluded. For this reason, the State industry subdivision totals (for location data) in table 7 may be less than those shown in the other tables (for establishment data). However, it is also possible for the State industry subdivision totals in table 7 to be greater than those shown in the other tables, as a result of individual locations of establishments being allocated a different industry classification to that of the 'parent' establishment. Differences between the data in table 7 and in the other tables may also occur because of the existence of multi-establishment management units which have been 'collapsed' (as explained in paragraph 14). In these circumstances, it is also possible that at least one of the locations of these units may be situated in a State or Territory other than the principal State or Territory of the 'parent' establishment.

27 A map displaying the boundaries of each statistical division in Tasmania can be found on page 35 of this publication. The statistical division structure is based on the *Australian Standard Geographical Classification (ASGC)* (Cat. no. 1216.0), 1996 edition.

USE OF ANZSIC

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

ACKNOWLEDGMENT

29 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

30 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.

RELATED PUBLICATIONS

31 A series of publications *Manufacturing Industry, [State], 1996–97* (Cat. nos 8221.1–8221.6) have been produced for each State and were released progressively. The publication for New South Wales (Cat. no. 8221.1) also contains selected data for the Australian Capital Territory. For 1996–97, all of these publications contain a table showing industry subdivision data by statistical division.

EXPLANATORY NOTES *continued*

RELATED PUBLICATIONS *continued*

- 32** Users may also wish to refer to the following publications:
- *Australian Standard Geographical Classification (ASGC)* (Cat. no. 1216.0), 1996 edition—Annual publication
 - *Business Operations and Industry Performance, Australia, 1996–97* (Cat. no. 8140.0), to be released in January 1999—Annual publication
 - *Business Operations and Industry Performance, Australia, Preliminary, 1996–97* (Cat. no. 8142.0), released on 29 May 1998—Annual publication
 - *Environment Protection Expenditure, Australia, 1995–96 and 1996–97* (Cat. no. 4603.0), to be released in March 1999—Annual publication
 - *Indexes of Industrial Production, Australia* (Cat. no. 8125.0)—Quarterly publication (Discontinued with release of December quarter 1997 issue)
 - *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
 - *Labour Force, Australia* (Cat. no. 6203.0)—Monthly publication
 - *Manufacturing, Australia, 1998* (Cat. no. 8225.0), to be released in December 1998—Annual publication
 - *Manufacturing Industry, Australia, Preliminary, 1997–98* (Cat. no. 8201.0), to be released in March 1999—Annual publication
 - *Manufacturing Production, Commodities Produced, Australia, 1996–97* (Cat. no. 8365.0), to be released in December 1998—Annual publication

BACK DATA AND UNPUBLISHED STATISTICS

33 A range of manufacturing industry statistics publications is available for previous years. As well, a considerable amount of data from the annual manufacturing collection exists in unpublished form. More detailed information to satisfy individual user requirements may be available on request. In general, unpublished data consist of finer industry dissections of the published data. A charge is made for providing such information. The Information Paper (Cat. no. 8205.0) referred to in paragraphs 30 and 32 provides more details.

34 In particular, constant price estimates of gross product at factor cost on an ANZSIC basis are available back to 1984–85. However, constant price estimates on a true ANZSIC basis are only available from 1989–90. Nevertheless, an exercise has been undertaken to convert estimates for earlier years onto an ANZSIC basis using the relationships that applied between ASIC and ANZSIC in the years 1990–91 and 1991–92. These estimates are available at both the Australian and State and Territory levels back to 1984–85. It should be noted that the relationships that applied in 1990–91 and 1991–92 are less likely to apply the earlier the reference year. Also, annual constant price estimates of gross product at factor cost for the period 1989–90 to 1996–97 (inclusive) by ANZSIC class are available as unpublished data. All of these data can be purchased from the ABS in Canberra by contacting Paul Curran on 02 6252 6801.

EXPLANATORY NOTES *continued*

ROUNDING

35 Where figures have been rounded, discrepancies may occur between totals and the sums of the component items. Due to data being adjusted for lags in processing new businesses to the ABS business register (see paragraph 10), this 'rounding rule' also applies to employment counts and to counts of locations (in table 7).

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

TECHNICAL NOTE DATA RELIABILITY

SAMPLE ERROR

The 1996–97 manufacturing collection comprised a census component and a sample component. All manufacturing establishments were requested to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported. A sample of approximately 7,000 manufacturing establishments nationally were asked to provide additional structural and performance data.

As the data items listed above were collected from the full 1996–97 census population, they are not subject to sampling variability. Estimates of IGP on the other hand were compiled using data from both the census and sample components. As such, IGP data are subject to sampling variability; that is, they may differ from the figures that would have been produced if all the components of IGP had been obtained from all manufacturers in the census population.

However, as turnover and purchases (two of the major components in calculating IGP) are collected from the census population, the variability due to sampling, especially at the industry subdivision level, is minimal.

All data for 1991–92 and 1993–94 as contained in this publication were obtained from a census and, as such, are not subject to sampling variability.

All data for 1992–93, 1994–95 and 1995–96 as contained in this publication were obtained from samples of manufacturers and are, therefore, subject to sampling variability. For further information, see these issues of this publication.

NON-SAMPLE ERROR

The imprecision due to sampling variability 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.

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. In addition, the ABS has undertaken a program of upgrading the business register. This upgrade has resulted in improvements in the quality of the statistical series whose population frames are drawn from the register.

G L O S S A R Y

ABS	Australian Bureau of Statistics
Amount of goods produced by this establishment (or for it on commission) that are exported by this business 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 for sale, that are exported (or are intended for export) outside Australia by the business or its agent.
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASIC	Australian Standard Industrial Classification
Capital work done for own use	The value of work done by the employees or proprietors of an establishment for the business' own use, or for rental or lease. This item includes the capitalised value of the cost of the materials and the wages and salaries involved.
Change in stocks	The value of total closing stocks minus total opening stocks.
Closing stocks	The value of all stocks of finished goods, work-in-progress, raw materials, fuels, containers and packaging as at the end of the reference period.
Employment at end of June	The number of working proprietors, working partners, permanent, part-time, temporary and casual employees, and managerial and executive employees working for an establishment during the last pay period ending in June each year. Employees absent on paid or prepaid leave are included, as are employees on workers' compensation who continue to be paid through the payroll system. Non-salaried directors, self-employed persons such as consultants, contractors and persons paid solely by commission without a retainer, and volunteer workers are excluded.
Enterprise group	A unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the <i>Corporations Legislation Amendment Act 1991</i>). These may be legal entities such as trusts and partnerships as well as companies. Majority ownership is not required for control to be exercised.
Establishment	The establishment is the smallest accounting unit of a business, within a State or Territory, controlling its productive activities and maintaining a specified range of detailed data enabling value added to be calculated. In general, an establishment covers all operations at a physical location, but may consist of a group of locations provided they are within the same State or Territory. The majority of establishments operate at one location only.
Establishments that do not export	Establishments that reported no exports (either by their business 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 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 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 of goods produced (Table 5)	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 or its agent. In table 5, 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.
Income from services	Income received from service activities. This income includes: repair, maintenance and service income and fees; income from work done on a commission basis; delivery and/or installation charges separately invoiced to customers; advertising income; and management fees/charges from related and unrelated businesses. Excluded are rent, leasing and hiring income, interest income and royalties income.
Industry class	Within ANZSIC, there is a structure comprising four levels ranging from industry division (broadest level) to the industry class (finest level). At the industry class level, the activities are narrowly defined and recognised by a four-digit code, e.g. industry class 2331 for Pulp, paper and paperboard manufacturing. Usually, an activity is primarily confined to one class. However, some activities may be primary to more than one class.
Industry gross product (IGP)	<p>IGP is very similar to the national accounting measure gross product at factor cost which is the official statistical measure of production. IGP for an industry is a measure of the value which is added by the industry's production processes to the raw materials and services which are input to those processes. Another way of describing IGP is the value of an industry's output minus the value of intermediate inputs.</p> <p>The formula used to calculate IGP is as follows—definitions of the relevant component items also appear in this Glossary.</p> <div style="margin-left: 40px;"> <p>Calculation of IGP = Turnover + Change in stocks – Purchases, transfers in and selected expenses = Establishment value added – Fringe benefits tax – Payroll tax – Other operating expenses = Industry Gross Product</p> </div>
Industry gross product (IGP) per person employed	IGP of manufacturing establishments which operated during the year ended 30 June divided by employment at the end of June in the same year.
Industry group	This is the intermediate level within the manufacturing industry division of ANZSIC and is recognised by a three-digit code, e.g. industry group 233 for Paper and paper product manufacturing. It gives more detail than the industry subdivision and is created in a way that groups like industry classes together.



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

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

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

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

Management unit The management unit is the highest-level unit within a business, having regard to industry homogeneity, for which accounts are maintained; in nearly all cases, it coincides with the legal entity owning the business (that is, company, partnership, trust, sole operator, etc.). In the case of large diversified businesses, however, there may be more than one management unit, each coinciding with a 'division' or 'line of business'. A division or line of business is recognised where separate and comprehensive accounts are compiled for it.

Manufacturing establishment An establishment predominantly engaged in manufacturing activities. The data collected for such establishments cover all activities of the establishment (including non-manufacturing activities). Conversely, there are some establishments predominantly engaged in non-manufacturing activities which also undertake limited manufacturing activities and which are excluded.

Manufacturing location A location predominantly engaged in manufacturing activities.

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 stocks The value of all stocks of finished goods, work-in-progress, raw materials, fuels, containers and packaging as at the beginning of the reference period.

Other operating expenses Includes operating expenses such as management fees and charges paid to related and unrelated businesses, office supplies and printing costs, rates, telephone and postage charges, travelling and entertainment expenses, accounting and legal expenses, advertising costs and land tax. Excludes income and sales taxes, and extraordinary expenses.



Own account capital work	The value of work done by the employees or proprietors of an establishment for the business' own use, or for rental or lease. This item includes the capitalised value of the cost of the materials and the wages and salaries involved.
Purchases	Purchase of materials, components, containers, packaging, fuels, electricity and water, and of finished goods for resale. The purchase of parts and fuel for motor vehicles is excluded.
Purchases, transfers in and selected expenses	Purchase of materials, components, containers, packaging, fuels, electricity and water, and of finished 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, plus commission expenses (including sales commission expenses), repair and maintenance expenses, freight and cartage expenses, motor vehicle running expenses, and rent, leasing and hiring expenses. Transfers in are valued, for statistical purposes, at prices commensurate with the prices which would have been paid if the establishments concerned had been under separate ownership, i.e. at commercial selling price.
Reference period	Businesses are asked to report data for the financial year ended 30 June. However, if a business has a different financial year, it is asked to report for the 12-month period which ends between 1 October of the previous year and 30 September of the current year. This period is then used as a substitute for the financial year ended 30 June. For example, for the 1996–97 collection, a business may have reported data for the year ended 31 December 1996.
Sales and transfers out of goods produced by the establishment	Includes sales of goods produced by the establishment (or for it on commission), sales or transfers to related businesses, progress payments billed for long-term contracts, and delivery and/or installation charges not separately invoiced to customers. Also included are goods transferred out to other establishments of the same business for sale. Transfers out are valued, for statistical purposes, at prices commensurate with the prices which would have been paid if the establishments concerned had been under separate ownership, i.e. at commercial selling price. Excluded are export freight charges, sales of fixed tangible assets, and sales tax, excise and duties received (on behalf of the Government).
Service income	Income received from service activities. This income includes: repair, maintenance and service income and fees; income from work done on a commission basis; delivery and/or installation charges separately invoiced to customers; advertising income; and management fees/charges from related and unrelated businesses. Excluded are rent, leasing and hiring income, interest income and royalties income.
Statistical division	A general purpose spatial unit and is the largest and most stable spatial unit within each State and Territory in the Main Structure of the Australian Standard Geographical Classification. The map on page 35 indicates the statistical division boundaries for Tasmania.



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

Note: Transfers to other establishments of the same business referred to in the definition of turnover are valued, for statistical purposes, at prices commensurate with the prices which would have been received if the establishments concerned had been under separate ownership, 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.

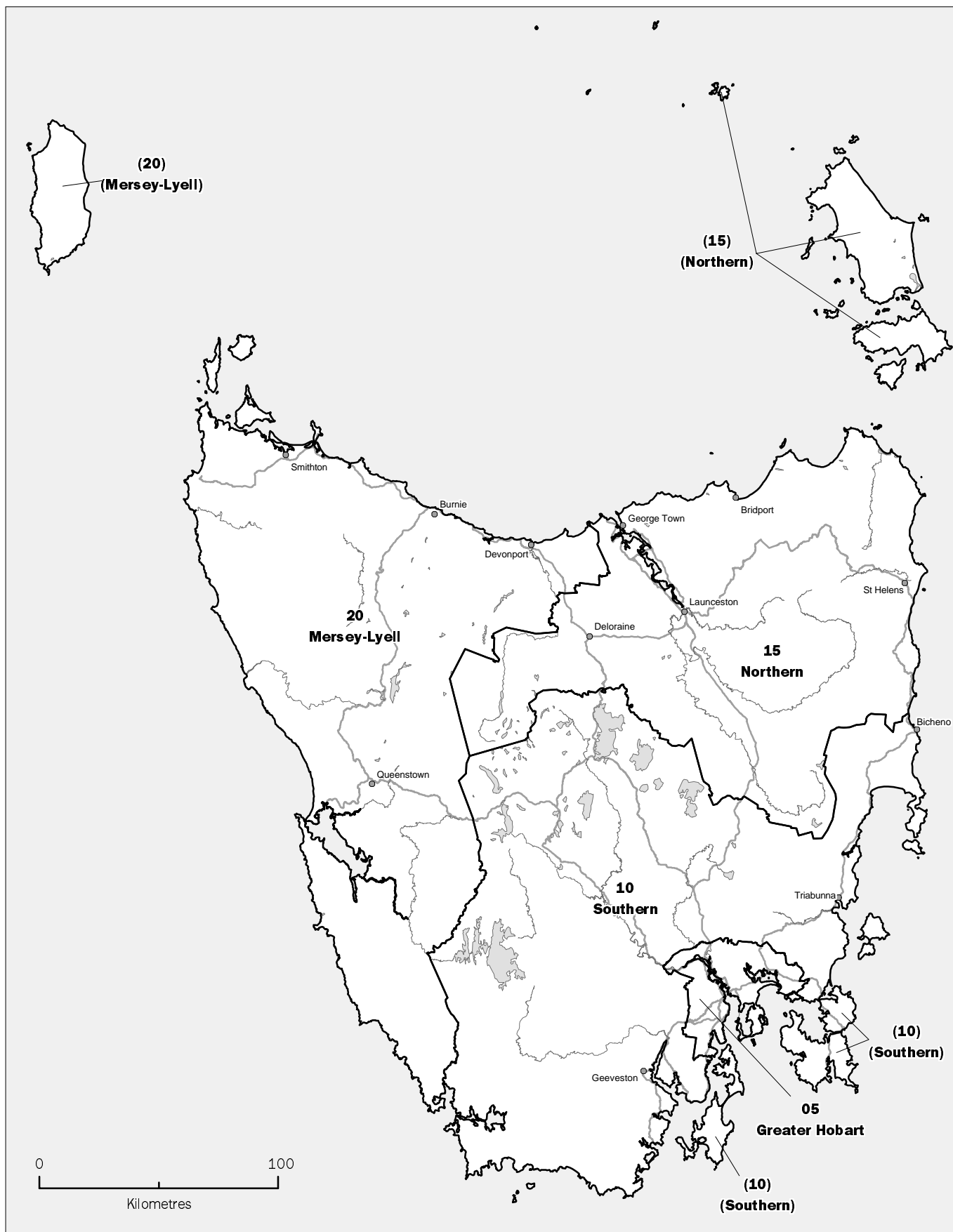
Value added Turnover, plus the increase (or less the decrease) in the value of stocks, less purchases, transfers in and selected expenses.

Wages and salaries The gross wages and salaries (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, provisions 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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