



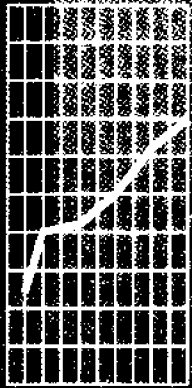
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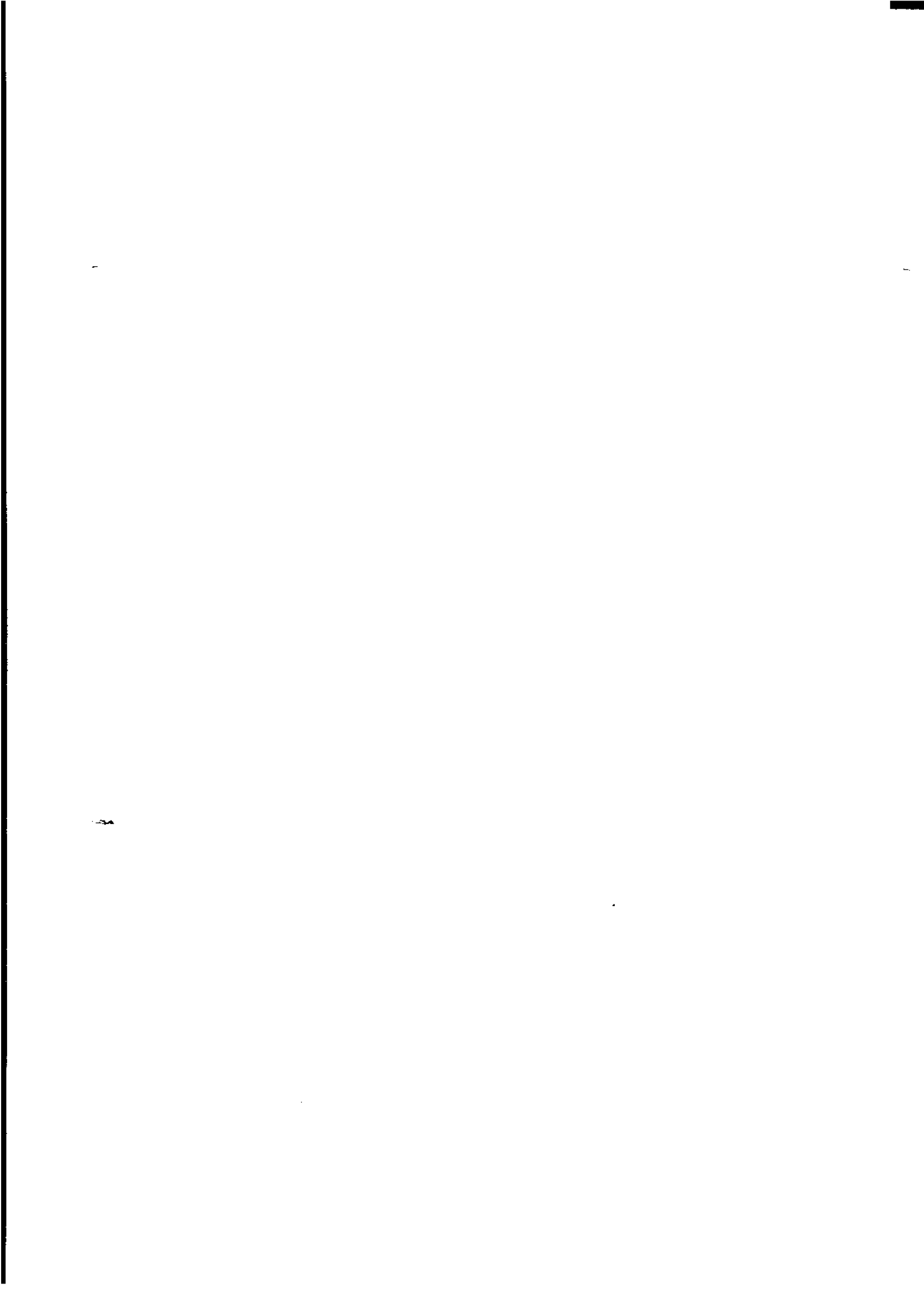
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Manufacturing Industry

Tasmania

Statistics





**MANUFACTURING INDUSTRY
TASMANIA
1993-94**

**Denis W. Rogers
Regional Director
Tasmania**

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INQUIRIES

- *for further information about statistics in this publication and the availability of related unpublished statistics, contact John Ridley on Sydney (02) 9268 4541 or any other ABS office.*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

INTRODUCTION

ABOUT THIS ISSUE

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

The 1993-94 manufacturing census sought information on employment, wages and salaries and turnover for all manufacturing establishments. In addition to data for these items, this publication contains (in table 4) data on gross product at factor cost (average 1989-90 prices).

As part of the 1993-94 manufacturing collection, a sample of approximately 18,000 establishments was asked to supply additional information on commodities produced and sold. Commodities information from this sample will be published in *Manufacturing Production, Australia: Principal Commodities Produced, 1993-94* (8365.0), to be released early in 1997.

Australian and New Zealand
Standard Industrial Classification
(ANZSIC)

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

Data as contained in
this publication

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

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

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

UNPUBLISHED DATA

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

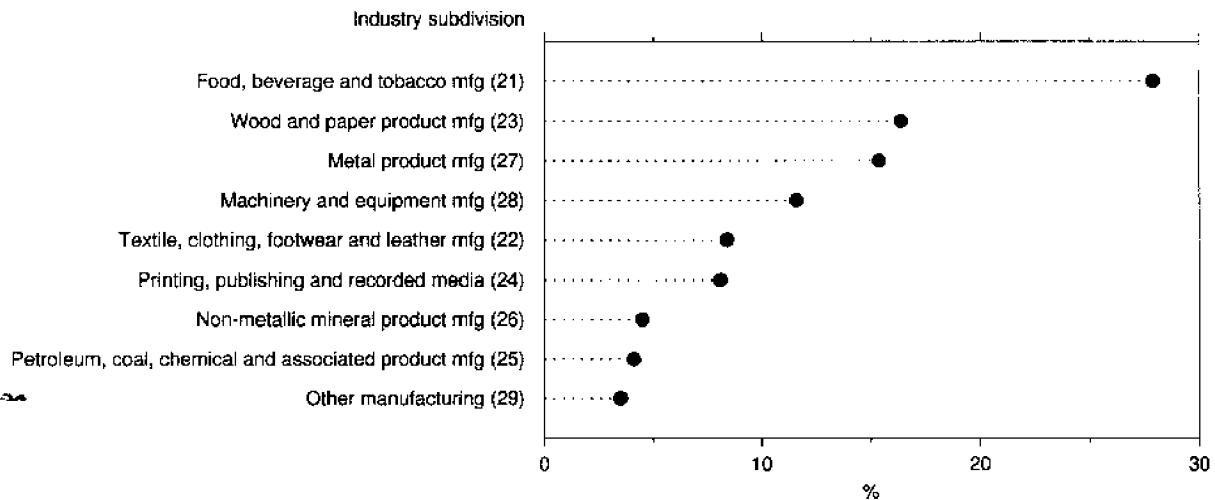
SUMMARY OF FINDINGS

Overview Turnover for the year 1993–94 by manufacturing establishments operating in Tasmania was \$4,103m. This represents a 2.5% increase, in current price terms, from the \$4,005m turnover recorded for the year 1992–93. In constant price terms (1989–90 prices), manufacturing gross product at factor cost increased by 2.4% in 1993–94 from 1992–93. Manufacturing employment at the end of June 1994 was 21,600, 4.4% lower than 12 months earlier. The last year that Tasmania recorded an annual increase in manufacturing employment was in the 12 months to June 1989.

MANUFACTURING ESTABLISHMENT DATA

Employment (Tables 1 and 3) The 1993–94 manufacturing census recorded 21,600 persons employed at the end of June 1994. Food, beverage and tobacco manufacturing (27.9%), Wood and paper product manufacturing (16.4%) and Metal product manufacturing (15.4%) were once again the major contributors to employment at the end of June 1994. Other manufacturing (3.5%) remains the smallest contributor, followed by Petroleum, coal, chemical and associated product manufacturing (4.1%) and Non-metallic mineral product manufacturing (4.5%).

DISTRIBUTION OF EMPLOYMENT BY INDUSTRY SUBDIVISION, TAS, JUNE 1994



Manufacturing employment decreased by 4.4% between June 1993 and June 1994. Four of the nine industry subdivisions recorded decreases in the level of employment over this period. Wood and paper product manufacturing (down 20.7% from 4,500 persons to 3,500 persons) and Metal product manufacturing (down 19.0% from 4,100 persons to 3,300 persons) recorded the largest percentage decreases. Employment was unchanged for Food, beverage and tobacco manufacturing (at 6,000 persons) and Petroleum, coal, chemical and associated product manufacturing (at 900 persons). The remaining three industry subdivisions recorded an increase in employment. These were Machinery and equipment manufacturing (up 23.0% from 2,000 persons to 2,500 persons), Non-metallic mineral product manufacturing (up 14.0% from 800 persons to 1,000 persons) and Printing, publishing and recorded media (up 12.1% from 1,600 persons to 1,800 persons).

The percentage contribution by Tasmania to total Australian manufacturing employment at the end of June 1994 was 2.4%. This represents a decrease of 0.1 percentage points on the total contribution reported at the end of June 1993. The percentage contribution to total manufacturing employment by the other States and Territories at the end of June 1994 was: New South Wales 33.7%, Victoria 31.4%, Queensland 15.2%, South Australia 9.5%, Western Australia 7.2%, the Australian Capital Territory 0.5% and the Northern Territory 0.3%.

The Tasmanian industry subdivisions which made a relatively significant contribution to total Australian manufacturing employment at the end of June 1994 for that industry subdivision were Wood and paper product manufacturing (5.8%) and Food, beverage and tobacco manufacturing (3.7%).

*Longer term trends
(June 1990 to June 1994)*

Employment in the Tasmanian manufacturing industry decreased by 5,400 persons (down 20.1% from 27,000 persons to 21,600 persons) over the period June 1990 to June 1994. Six of the nine industry subdivisions recorded decreases over this period, with Wood and paper product manufacturing (down 42.5% from 6,200 persons to 3,500 persons), Other manufacturing (down 39.9% from 1,200 persons to 700 persons), Metal product manufacturing (down 31.3% from 4,800 persons to 3,300 persons) and Petroleum, coal, chemical and associated product manufacturing (down 30.6% from 1,300 persons to 900 persons) recording the largest percentage decreases. Although fluctuating over the period, employment in Printing publishing and recorded media (at 1,800 persons) was the same at both June 1990 and June 1994. The two remaining industry subdivisions recorded an increase in employment. These were Machinery and equipment manufacturing (up 10.1% from 2,300 persons to 2,500 persons) and Non-metallic mineral product manufacturing (up 9.5% from 900 persons to 1,000 persons).

Between June 1990 and June 1994, the decrease in employment in Tasmania was the second largest in percentage terms amongst the States and Territories. The largest decrease in both absolute and percentage terms was recorded by Victoria, where employment decreased by 72,600 persons (down 20.3% from 358,700 persons to 286,000 persons). Other large percentage decreases were recorded by South Australia (down 15.0% from 101,400 persons to 86,200 persons) and New South Wales (down 13.6% from 354,900 persons to 306,800 persons). The other decreases were recorded by the Northern Territory (down 8.8% from 3,200 persons to 2,900 persons) and Western Australia (down 8.1% from 71,200 persons to 65,400 persons). Employment in Queensland remained unchanged at 138,500 persons. During this period, the only increase in employment amongst the States and Territories was recorded by the Australian Capital Territory (up 7.5% from 3,900 persons to 4,200 persons).

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

Turnover
(Tables 1 and 3)

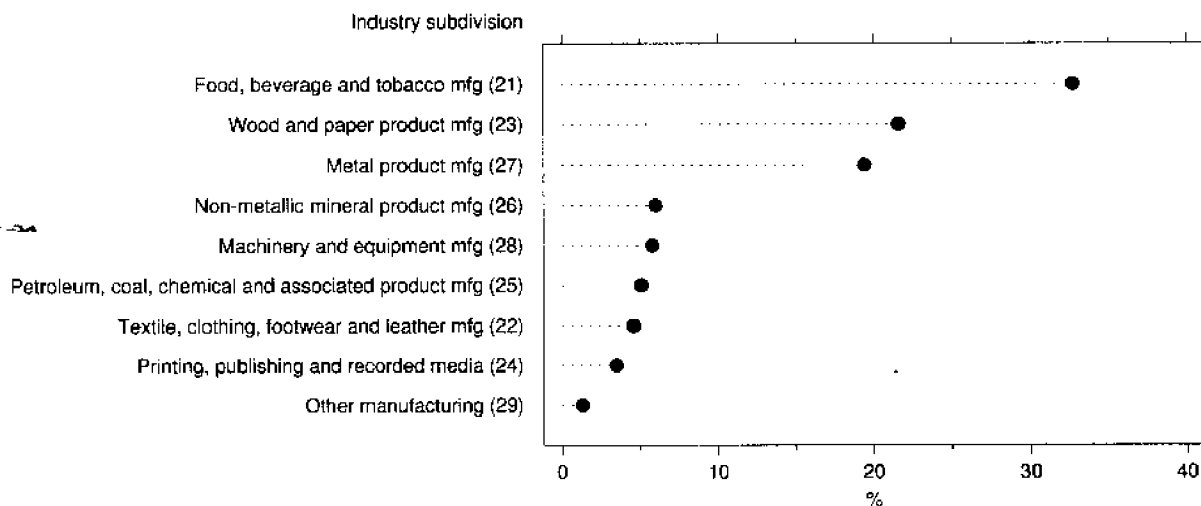
Turnover for the year 1993–94 by manufacturing establishments operating in Tasmania was \$4,103.2m. This represents a 2.5% increase, in current price terms, from \$4,005.0m turnover recorded for the year 1992–93. Food, beverage and tobacco manufacturing remains the subdivision with the largest contribution to turnover in the manufacturing industry.

The industry subdivisions contributing the largest proportions to total turnover and the most notable industry groups (of those available for publication) within those as a percentage of total turnover were:

- Food, beverage and tobacco manufacturing (32.7%), where the industry groups Other food manufacturing (ANZSIC group 217 at 9.0%), Meat and meat product manufacturing (ANZSIC group 211 at 5.2%) and Dairy product manufacturing (ANZSIC group 212 at 4.9%) were the most substantial.
- Wood and paper product manufacturing (21.6%), where the industry group Log sawmilling and timber dressing (ANZSIC group 231 at 8.4%) was the most substantial.
- Metal product manufacturing (19.4%), where the data for the most significant industry groups are not available for publication.

Industry groups available for publication and making a notable contribution to total turnover and not included in the subdivisions listed above included Cement, lime, plaster and concrete product manufacturing (ANZSIC group 263 at 4.4%), Textile fibre, yarn and woven fabric manufacturing (ANZSIC group 221 at 2.2%) and Motor vehicle and part manufacturing (ANZSIC group 281 at 2.2%).

DISTRIBUTION OF TURNOVER BY INDUSTRY SUBDIVISION, TAS, 1993–94



The percentage contribution by Tasmania to total Australian manufacturing turnover in 1993–94 was 2.2%. This represents a decrease of 0.1 percentage points on the contribution reported in 1992–93. The percentage contribution to turnover by the other States and Territories in 1993–94 was: New South Wales 34.1%, Victoria 32.0%, Queensland 14.4%, South Australia 9.1%, Western Australia 7.5%, the Northern Territory 0.4% and the Australian Capital Territory 0.3%.

The Tasmanian industry subdivision which made a relatively significant contribution to total Australian manufacturing turnover in 1993–94 for that industry subdivision was Wood and paper product manufacturing (8.3%).

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

Turnover for the manufacturing industry in Tasmania decreased, in current price terms, by 1.1% over the period 1989-90 to 1993-94. Four industry subdivisions recorded decreases and five recorded increases. The largest percentage decreases, in current price terms, were recorded in Other manufacturing (down 35.1% from \$83.5m to \$54.2m) and Wood and paper product manufacturing (down 21.6% from \$1,130.6m to \$886.6m). The largest percentage increases, in current price terms, were recorded in Non-metallic mineral product manufacturing (up 55.7% from \$156.8m to \$244.2m), Machinery and equipment manufacturing (up 22.9% from \$192.8m to \$236.9m), Printing, publishing and recorded media (up 20.6% from \$119.3m to \$143.8m) and Food, beverage and tobacco manufacturing (up 19.5% from \$1,123.4m to \$1,342.3m).

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

Ratio of wages and salaries
to turnover (Tables 1 and 3)

In 1993-94, the ratio of wages and salaries to turnover for Tasmania's manufacturing industry was 0.16; that is, on average, 16 cents in wages and salaries is paid for each \$1.00 of turnover. This ratio is a decrease from the ratio of 0.17 measured in both 1989-90 and 1992-93.

The wages and salaries to turnover ratio decreased in five of the nine industry subdivisions between 1989-90 and 1993-94, with the largest falls being recorded in Wood and paper product manufacturing (down from 0.16 to 0.13), Petroleum, coal, chemical and associated product manufacturing (down from 0.16 to 0.13), Other manufacturing (down from 0.28 to 0.25) and Non-metallic mineral product manufacturing (down from 0.14 to 0.12). The increases were recorded by Textile, clothing, footwear and leather manufacturing (up from 0.22 to 0.24) and Printing, publishing and recorded media (up from 0.33 to 0.35). The ratio was unchanged in Metal product manufacturing (at 0.17) and Machinery and equipment manufacturing (at 0.28).

Of the industries available for publication, the largest ratios of wages and salaries to turnover in 1993-94 were recorded in Electric light and sign manufacturing (ANZSIC class 2854) (0.45), Medical and surgical equipment manufacturing (ANZSIC class 2832) (0.43) and Industrial machinery and equipment manufacturing n.e.c. (ANZSIC class 2869) (0.40). Of the industries available for publication, the smallest ratios of wages and salaries to turnover were recorded in Flour mill product manufacturing (ANZSIC class 2151) (0.04), Concrete slurry manufacturing (ANZSIC class 2633) (0.08) and Seafood processing (ANZSIC class 2173) (0.09).

Turnover per person employed
(Tables 1 and 3)

Turnover per person employed for total manufacturing in 1993-94 was \$190,400, which is 7.2% higher than the figure recorded 12 months earlier. The subdivisions to record the highest values for this ratio were Non-metallic mineral product manufacturing (\$252,300) and Wood and paper product manufacturing (\$250,100). Other manufacturing recorded the lowest value for this ratio (\$72,700). Various factors affect the magnitude of turnover per person employed. In general, industries which are labour intensive will record lower values of turnover per person employed than will those industries which are capital intensive. This ratio may also be influenced by commodity prices.

Gross product at factor cost
(average 1989–90 prices)
(Table 4)

Constant price estimates of gross product at factor cost are the most accurate measure of the relative growth or decline of the manufacturing industry, as they discount the impact of price changes. In constant price terms, manufacturing gross product at factor cost in Tasmania increased by 2.4% from \$1,321.1m in 1992–93 to \$1,352.4m in 1993–94.

Six of the nine industry subdivisions recorded an increase in constant price estimates of gross product at factor cost over the period 1992–93 to 1993–94. The largest percentage increase was recorded by Non-metallic mineral product manufacturing (up 26.7%), followed by Machinery and equipment manufacturing (up 19.4%) and Printing, publishing and recorded media (up 11.0%). The subdivisions that recorded a decrease were Wood and paper product manufacturing (down 12.4%), Other manufacturing (down 11.1%) and Petroleum, coal, chemical and associated product manufacturing (down 7.0%).

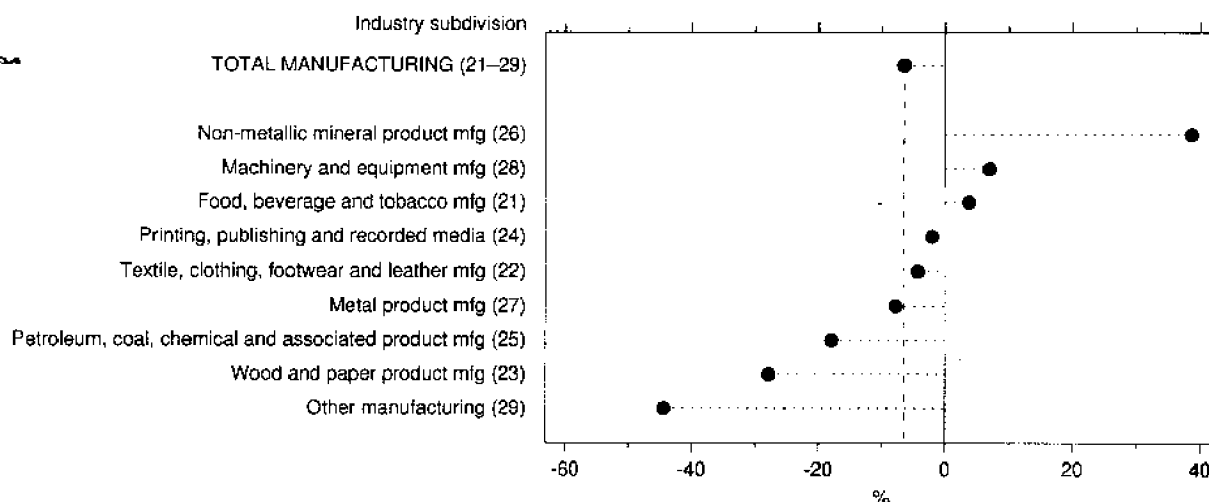
Longer term trends
(1989–90 to 1993–94)

Over the period 1989–90 to 1993–94, manufacturing gross product at factor cost in constant price terms decreased by 6.5%. Six industry subdivisions recorded a decrease with the other three recording increases.

The largest percentage decreases were recorded by Other manufacturing (down 44.4%), Wood and paper product manufacturing (down 27.8%) and Petroleum, coal, chemical and associated product manufacturing (down 17.9%). The largest percentage increase was recorded by Non-metallic mineral product manufacturing (up 38.6%).

Over the period 1989–90 to 1993–94, there was an increase in gross product per person employed of 16.9%. Seven of the industry subdivisions recorded increases over this five year period. The largest percentage increases were recorded by Metal product manufacturing (up 34.2%), Non-metallic mineral product manufacturing (up 26.6%) and Wood and paper product manufacturing (up 25.6%). The decreases were recorded by Other manufacturing (down 7.5%) and Machinery and equipment manufacturing (down 2.8%).

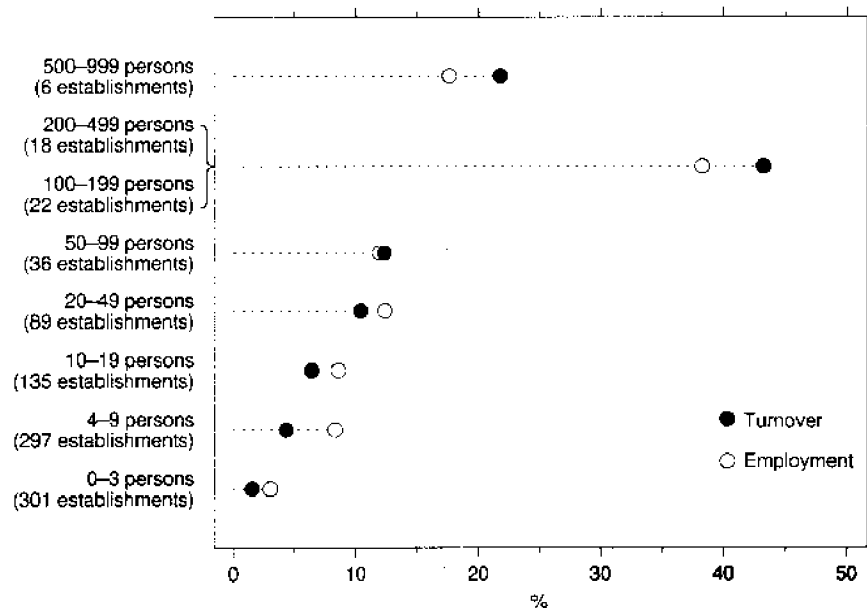
PERCENTAGE CHANGE IN GROSS PRODUCT AT FACTOR COST (AVERAGE 1989–90 PRICES) BY INDUSTRY SUBDIVISION, TAS, 1989–90 TO 1993–94



Employment size (Table 5)

Of the 904 manufacturing establishments operating in Tasmania at 30 June 1994, 46 were large establishments (employing 100 or more persons). While making up only 5.1% of all establishments, they accounted for 55.8% of employment at the end of June 1994 and 65.0% of manufacturing turnover for 1993-94. Although establishments employing 0-19 persons comprised 81.1% of manufacturing establishments in Tasmania at 30 June 1994, they accounted for only 19.9% of employment and 12.2% of turnover. There were 6 manufacturing establishments employing 500 to 999 persons at the end of June 1994. They employed 17.6% of all persons working in the manufacturing industry in Tasmania and contributed 21.8% of all manufacturing turnover.

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



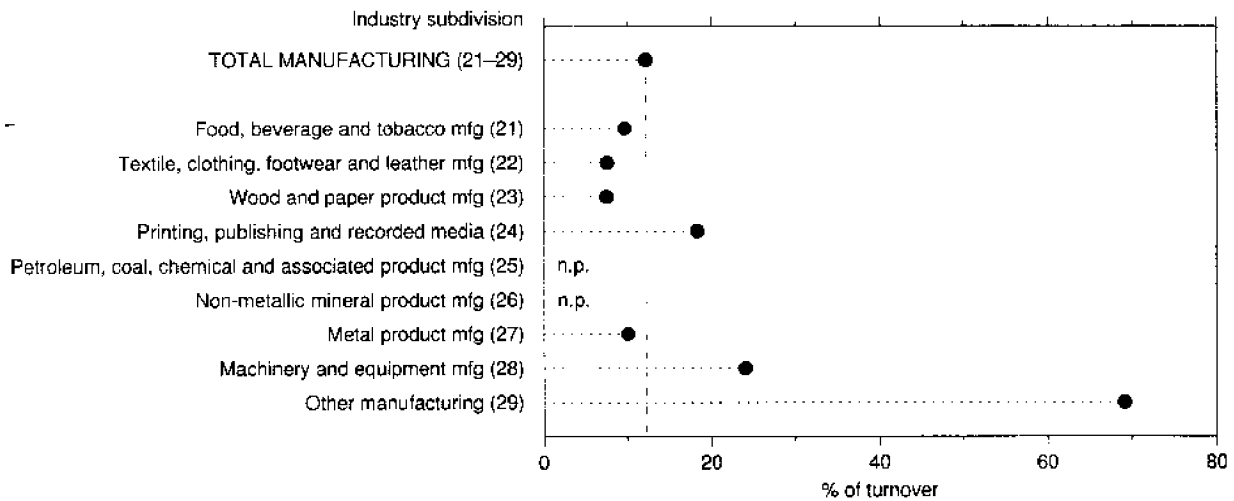
For 1993-94, the percentage distribution of turnover by employment size for the manufacturing industry was:

0-19 persons	—	12.2%
20-99 persons	—	22.7%
100 or more persons	—	65.0%

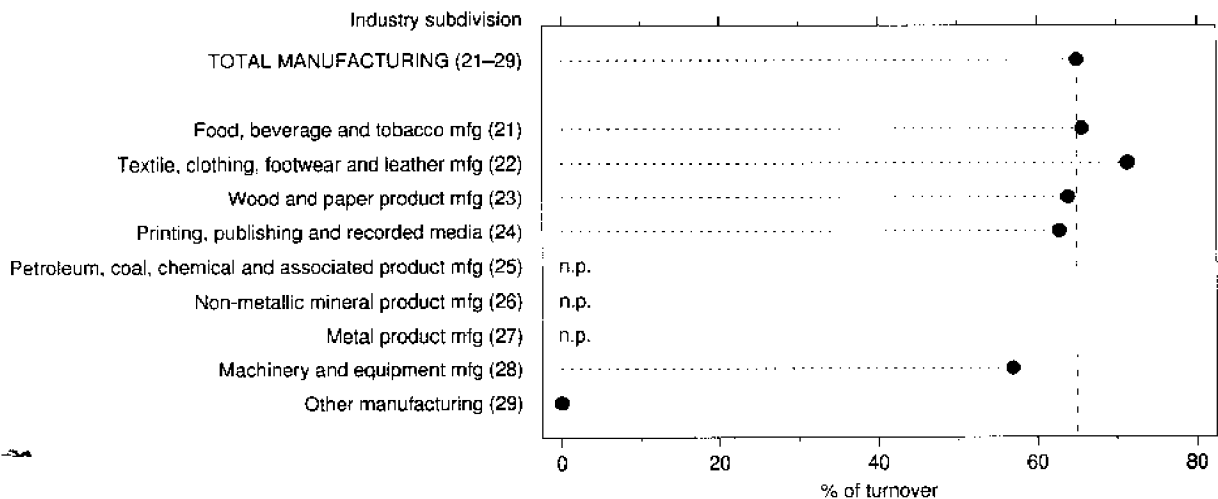
For five of the six industry subdivisions available for publication, more than 50% of turnover was contributed by large establishments (employing 100 or more persons). Of these, the industry where large establishments contributed most to turnover was Textile, clothing, footwear and leather manufacturing (71.4%). Small establishments (employing 0-19 persons) made a relatively significant contribution to turnover for Other manufacturing (69.1%).

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

0-19 PERSONS

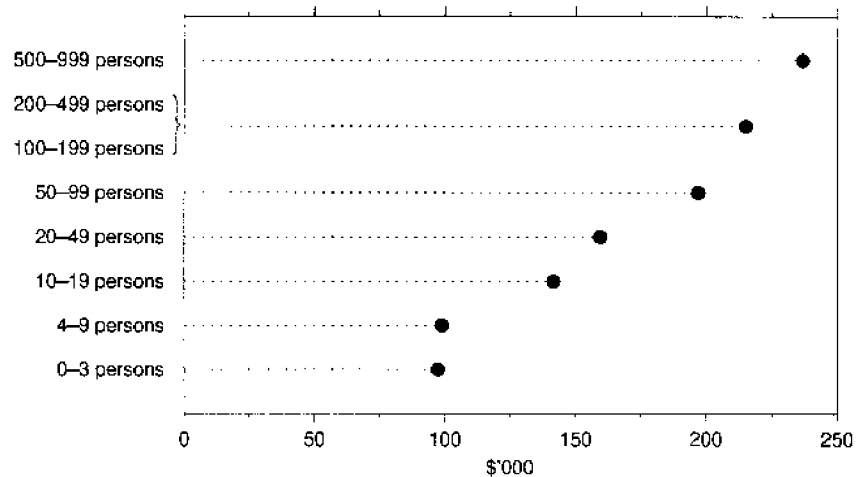


100 OR MORE PERSONS



Small establishments (employing 0-19 persons) displayed a much lower ratio of turnover per person employed at the end of June 1994 (\$117,200) than establishments in the larger size categories. Large establishments (employing 100 or more persons) recorded an average turnover per person employed of \$221,900, with establishments employing between 500 and 999 persons having a ratio of \$236,700. It should be remembered that the data include all manufacturing industries and that different patterns may emerge through analysis of individual industries.

TURNOVER PER PERSON EMPLOYED BY EMPLOYMENT SIZE, TAS, 1993-94



MANUFACTURING LOCATION DATA

Regional manufacturing activity (Table 6)

As in previous years, manufacturing activity in Tasmania in 1993-94 was primarily shared between the three largest statistical divisions. Greater Hobart (38.7% of all locations in the State, 35.6% of State employment and 35.3% of State turnover), Northern (31.0% of locations, 32.3% of employment and 30.2% of turnover) and Mersey-Lyell (24.5% of locations, 28.1% of employment and 30.4% of turnover) were the dominant statistical divisions.

For the industries available for publication, activity within the manufacturing industry subdivisions was reasonably spread between the three dominant statistical divisions. In only one instance does one statistical division contribute more than 50% of State turnover for a subdivision. (Greater Hobart Statistical Division accounts for 55.9% of turnover in the Printing, publishing and recorded media subdivision.) Greater Hobart Statistical Division was also the largest contributor to State turnover in the Textile, clothing, footwear and leather manufacturing, Machinery and equipment manufacturing and Other manufacturing subdivisions. Mersey-Lyell Statistical Division was the largest contributor in Food, beverage and tobacco manufacturing, Wood and paper product manufacturing and Petroleum, coal, chemical and associated product manufacturing subdivisions. Northern Statistical Division was the most significant contributor to State turnover in the Metal product manufacturing subdivision.

Within the statistical divisions, Food, beverage and tobacco manufacturing dominated in Southern Statistical Division (57.1% of turnover) and Mersey-Lyell Statistical Division (47.3%) and was also the major contributor in Greater Hobart Statistical Division (26.6%). Metal product manufacturing was the largest contributor to turnover in Northern Statistical Division (31.6%).

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

Industry subdivision			Establish- ments at 30 June ³	Employ- ment at end of June ⁴	Wages and salaries ^{5,6}	Turnover ⁶	Ratio of wages and salaries to turnover ⁶	Turnover per person employed ^{6,7}
ANZSIC code	Description		No.	'000	\$m	\$m	Ratio	\$'000
21	Food, beverage and tobacco mfg	1993-94	131	6.0	165.4	1 342.3	0.12	223.0
		1992-93	129	6.0	148.8	1 234.0	0.12	205.9
		1991-92	135	6.1	154.5	1 182.5	0.13	193.0
		1990-91	137	6.2	150.5	1 178.8	0.13	190.9
		1989-90	138	6.6	149.1	1 123.4	0.13	170.8
22	Textile, clothing, footwear and leather mfg	1993-94	52	1.8	45.5	189.4	0.24	104.2
		1992-93	41	1.9	42.9	187.1	0.23	100.8
		1991-92	40	1.8	40.2	180.5	0.22	98.8
		1990-91	46	1.8	38.8	186.0	0.21	101.9
		1989-90	37	1.9	41.6	184.9	0.22	96.4
23	Wood and paper product mfg	1993-94	146	3.5	111.8	886.6	0.13	250.1
		1992-93	163	4.5	172.8	953.8	0.18	213.3
		1991-92	166	5.1	207.5	970.5	0.21	192.1
		1990-91	183	5.6	193.4	1 117.2	0.17	199.1
		1989-90	195	6.2	179.3	1 130.6	0.16	183.3
24	Printing, publishing and recorded media	1993-94	80	1.8	50.4	143.8	0.35	81.9
		1992-93	67	1.6	42.7	126.2	0.34	80.5
		1991-92	79	1.8	43.1	130.2	0.33	73.9
		1990-91	68	1.7	43.0	126.4	0.34	72.9
		1989-90	73	1.8	39.8	119.3	0.33	66.2
25	Petroleum, coal, chemical and associated product mfg	1993-94	51	0.9	27.8	209.3	0.13	237.0
		1992-93	46	0.9	30.4	227.0	0.13	253.3
		1991-92	52	0.9	32.3	214.1	0.15	234.8
		1990-91	41	0.9	44.2	238.0	0.19	255.1
		1989-90	51	1.3	39.7	246.0	0.16	193.4
26	Non-metallic mineral product mfg	1993-94	55	1.0	29.2	244.2	0.12	252.3
		1992-93	48	0.8	26.2	195.1	0.13	229.8
		1991-92	55	0.9	27.1	163.2	0.17	181.3
		1990-91	43	0.9	25.7	154.8	0.17	175.7
		1989-90	50	0.9	21.4	156.8	0.14	177.4
27	Metal product mfg	1993-94	139	3.3	132.7	796.6	0.17	240.4
		1992-93	142	4.1	150.0	834.6	0.18	204.0
		1991-92	144	4.4	148.6	821.7	0.18	187.3
		1990-91	153	4.7	154.6	902.4	0.17	193.9
		1989-90	156	4.8	153.8	912.8	0.17	189.3

For footnotes see end of table.

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

Industry subdivision			Establish- ments at 30 June ³	Employ- ment at end of June ⁴	Wages and salaries ^{5,6}	Turnover ⁶	Ratio of wages and salaries to turnover ⁶	Turnover per person employed ^{6,7}
ANZSIC code	Description		No.	'000	\$m	\$m	Ratio	\$'000
28	Machinery and equipment mfg	1993-94	141	2.5	66.8	236.9	0.28	94.6
		1992-93	136	2.0	48.7	188.9	0.26	92.8
		1991-92	144	1.8	48.5	206.7	0.23	112.0
		1990-91	152	2.3	55.9	202.6	0.28	87.7
		1989-90	150	2.3	53.8	192.8	0.28	84.7
29	Other manufacturing	1993-94	109	0.7	13.4	54.2	0.25	72.7
		1992-93	98	0.8	15.5	58.2	0.27	74.0
		1991-92	106	0.9	17.6	62.3	0.28	72.5
		1990-91	108	1.0	20.7	67.8	0.31	67.1
		1989-90	121	1.2	23.2	83.5	0.28	67.4
21-29	Total manufacturing	1993-94	904	21.6	643.0	4 103.2	0.16	190.4
		1992-93	870	22.5	678.1	4 005.0	0.17	177.6
		1991-92	920	23.7	719.5	3 931.8	0.18	166.1
		1990-91	931	25.1	726.9	4 173.9	0.17	166.1
		1989-90	970	27.0	701.6	4 150.1	0.17	153.9

¹ See paragraph 7 of the Explanatory Notes.

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

³ See paragraphs 4 to 10 of the Explanatory Notes.

⁴ Includes working proprietors.

⁵ Excludes the drawings of working proprietors.

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

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

Industry class		Establish- ments at 30 June ²	Industry class		Establish- ments at 30 June ²
ANZSIC code	Description	No.	ANZSIC code	Description	No.
FOOD, BEVERAGE AND TOBACCO MFG			Textile product mfg		
	Meat and meat product mfg		2221	Made-up textile product mfg	18
2111	Meat processing	9	2222	Textile floor covering mfg	2
2112	Poultry processing	2	2223	Rope, cordage and twine mfg	2
2113	Bacon, ham and smallgood mfg	8	2229	Textile product mfg n.e.c.	4
211	<i>Total</i>	19	222	<i>Total</i>	27
	Dairy product mfg		Knitting mills		
2121	Milk and cream processing	2	2231	Hosiery mfg	—
2122	Ice cream mfg	1	2232	Cardigan and pullover mfg	1
2129	Dairy product mfg n.e.c.	9	2239	Knitting mill product mfg n.e.c.	—
212	<i>Total</i>	12	223	<i>Total</i>	1
213	<i>Fruit and vegetable processing</i>	10	Clothing mfg		
214	<i>Oil and fat mfg</i>	—	2241	Men's and boys' wear mfg	2
	Flour mill and cereal food mfg		2242	Women's and girls' wear mfg	1
2151	Flour mill product mfg	3	2243	Sleepwear, underwear and infant clothing mfg	3
2152	Cereal food and baking mix mfg	1	2249	Clothing mfg n.e.c.	3
215	<i>Total</i>	4	224	<i>Total</i>	9
	Bakery product mfg		225	<i>Footwear mfg</i>	3
2161	Bread mfg	23	Leather and leather product mfg		
2162	Cake and pastry mfg	15	2261	Leather tanning and fur dressing	5
2163	Biscuit mfg	—	2262	Leather and leather substitute product mfg	—
216	<i>Total</i>	38	226	<i>Total</i>	5
	Other food mfg		22	Total textile, clothing, footwear and leather mfg	52
2171	Sugar mfg	—	WOOD AND PAPER PRODUCT MFG		
2172	Confectionery mfg	6	Log sawmilling and timber dressing		
2173	Seafood processing	18	2311	Log sawmilling	52
2174	Prepared animal and bird feed mfg	5	2312	Wood chipping	5
2179	Food mfg n.e.c.	6	2313	Timber resawing and dressing	13
217	<i>Total</i>	36	231	<i>Total</i>	70
	Beverage and malt mfg		Other wood product mfg		
2181	Soft drink, cordial and syrup mfg	4	2321	Plywood and veneer mfg	1
2182	Beer and malt mfg	4	2322	Fabricated wood mfg	1
2183	Wine mfg	3	2323	Wooden structural component mfg	44
2184	Spirit mfg	—	2329	Wood product mfg n.e.c.	24
218	<i>Total</i>	11	232	<i>Total</i>	69
219	<i>Tobacco product mfg</i>	—	Paper and paper product mfg		
21	Total food, beverage and tobacco mfg	131	2331	Pulp, paper and paperboard mfg	3
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG			2332	Solid paperboard container mfg	—
Textile fibre, yarn and woven fabric mfg			2333	Corrugated paperboard container mfg	1
2211	Wool scouring	—	2334	Paper bag and sack mfg	1
2212	Synthetic fibre textile mfg	3	2339	Paper product mfg n.e.c.	1
2213	Cotton textile mfg	1	233	<i>Total</i>	6
2214	Wool textile mfg	2	23	Total wood and paper product mfg	146
2215	Textile finishing	1			
221	<i>Total</i>	7			

For footnotes see end of table.

Industry class		Establishments at 30 June ²	Industry class		Establishments at 30 June ²
ANZSIC code	Description	No.	ANZSIC code	Description	No.
	PRINTING, PUBLISHING AND RECORDED MEDIA			Plastic product mfg	
	Printing and services to printing		2561	Plastic blow moulded product mfg	2
2411	Paper stationery mfg	5	2562	Plastic extruded product mfg	3
2412	Printing	44	2563	Plastic bag and film mfg	—
2413	Services to printing	11	2564	Plastic product, rigid fibre reinforced, mfg	8
241	Total	61	2565	Plastic foam product mfg	2
	Publishing		2566	Plastic injection moulded product mfg	8
2421	Newspaper printing or publishing	10	256	Total	23
2422	Other periodical publishing	7	25	Total petroleum, coal, chemical and associated product mfg	51
2423	Book and other publishing	3		NON-METALLIC MINERAL PRODUCT MFG	
242	Total	20	261	Glass and glass product mfg	6
243	Recorded media manufacturing and publishing	—		Ceramic mfg	
24	Total printing, publishing and recorded media	80	2621	Clay brick mfg	3
	PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG		2622	Ceramic product mfg	1
251	Petroleum refining	—	2623	Ceramic tile and pipe mfg	—
252	Petroleum and coal product mfg n.e.c.	1	2629	Ceramic product mfg n.e.c.	4
	Basic chemical mfg		262	Total	8
2531	Fertiliser mfg	2		Cement, lime, plaster and concrete product mfg	
2532	Industrial gas mfg	1	2631	Cement and lime mfg	1
2533	Synthetic resin mfg	1	2632	Plaster product mfg	1
2534	Organic industrial chemical mfg n.e.c.	1	2633	Concrete slurry mfg	17
2535	Inorganic industrial chemical mfg n.e.c.	3	2634	Concrete pipe and box culvert mfg	1
253	Total	8	2635	Concrete product mfg n.e.c.	13
	Other chemical product mfg		263	Total	32
2541	Explosive mfg	1	264	Non-metallic mineral product mfg n.e.c.	8
2542	Paint mfg	1	26	Total non-metallic mineral product mfg	55
2543	Medicinal and pharmaceutical product mfg	2		METAL PRODUCT MFG	
2544	Pesticide mfg	—		Iron and steel mfg	
2545	Soap and other detergent mfg	1	2711	Basic iron and steel mfg	7
2546	Cosmetic and toiletry preparation mfg	2	2712	Iron and steel casting and forging	3
2547	Ink mfg	—	2713	Steel pipe and tube mfg	—
2549	Chemical product mfg n.e.c.	2	271	Total	10
254	Total	10		Basic non-ferrous metal mfg	
	Rubber product mfg		2721	Alumina production	—
2551	Rubber tyre mfg	5	2722	Aluminium smelting	1
2559	Rubber product mfg n.e.c.	4	2723	Copper, silver, lead and zinc smelting, refining	1
255	Total	8	2729	Basic non-ferrous metal mfg n.e.c.	—
			272	Total	2

For footnotes see end of table.

Industry class		Establishments at 30 June ²	Industry class		Establishments at 30 June ²
ANZSIC code	Description	No.	ANZSIC code	Description	No.
2731	Non-ferrous basic metal product mfg Aluminium rolling, drawing, extruding	—	2841	Electronic equipment mfg Computer and business machine mfg	1
2732	Non-ferrous metal rolling, drawing, extruding n.e.c.	—	2842	Telecommunication, broadcasting and transceiving equipment mfg	1
2733	Non-ferrous metal casting	2	2849	Electronic equipment mfg n.e.c.	7
273	<i>Total</i>	2	284	<i>Total</i>	9
2741	Structural metal product mfg Structural steel fabricating	28	2851	Electrical equipment and appliance mfg Household appliance mfg	4
2742	Architectural aluminium product mfg	21	2852	Electric cable and wire mfg	—
2749	Structural metal product mfg n.e.c.	5	2853	Battery mfg	—
274	<i>Total</i>	54	2854	Electric light and sign mfg	7
2751	Sheet metal product mfg Metal container mfg	3	2859	Electrical equipment mfg n.e.c.	5
2759	Sheet metal product mfg n.e.c.	21	285	<i>Total</i>	16
275	<i>Total</i>	24	2861	Industrial machinery and equipment mfg Agricultural machinery mfg	8
2761	Fabricated metal product mfg Hand tool and general hardware mfg	3	2862	Mining and construction machinery mfg	3
2762	Spring and wire product mfg	2	2863	Food processing machinery mfg	2
2763	Nut, bolt, screw and rivet mfg	—	2864	Machine tool and part mfg	7
2764	Metal coating and finishing	8	2865	Lifting and material handling equipment mfg	12
2765	Non-ferrous pipe fitting mfg	2	2866	Pump and compressor mfg	1
2769	Fabricated metal product mfg n.e.c.	32	2867	Commercial space heating and cooling equipment mfg	2
276	<i>Total</i>	47	2869	Industrial machinery and equipment mfg n.e.c.	13
27	Total metal product mfg	139	286	<i>Total</i>	48
	MACHINERY AND EQUIPMENT MFG		28	Total machinery and equipment mfg	141
2811	Motor vehicle and part mfg Motor vehicle mfg	1		OTHER MANUFACTURING	
2812	Motor vehicle body mfg	9		Prefabricated building mfg	
2813	Automotive electrical and instrument mfg	1	2911	Prefabricated metal building mfg	8
2819	Automotive component mfg n.e.c.	10	2919	Prefabricated building mfg n.e.c.	1
281	<i>Total</i>	21	291	<i>Total</i>	9
2821	Other transport equipment mfg Shipbuilding	4	2921	Furniture mfg Wooden furniture and upholstered seat mfg	61
2822	Boatbuilding	14	2922	Sheet metal furniture mfg	—
2823	Railway equipment mfg	—	2923	Mattress mfg (except rubber)	1
2824	Aircraft mfg	2	2929	Furniture mfg n.e.c.	13
2829	Transport equipment mfg n.e.c.	—	292	<i>Total</i>	75
282	<i>Total</i>	21		Miscellaneous manufacturing	
2831	Photographic and scientific equipment mfg Photographic and optical good mfg	3	2941	Jewellery and silverware mfg	4
2832	Medical and surgical equipment mfg	19	2942	Toy and sporting good mfg	7
2839	Professional and scientific equipment mfg n.e.c.	3	2949	Manufacturing n.e.c.	14
283	<i>Total</i>	26	294	<i>Total</i>	24
			29	Total other manufacturing	109
			21-29	TOTAL MANUFACTURING	904

¹ See paragraph 7 of the Explanatory Notes.² See paragraphs 4 to 10 of the Explanatory Notes.

Industry class		Employment at end of June ²	Wages and salaries ³	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁴
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
FOOD, BEVERAGE AND TOBACCO MFG						
Meat and meat product mfg						
2113	Bacon, ham and smallgoods mfg	256	5.0	34.5	0.14	134.9
211	Total ⁵	1 090	27.3	212.3	0.13	194.8
Dairy product mfg						
2129	Dairy product mfg n.e.c.	486	n.p.	n.p.	n.p.	n.p.
212	Total ⁵	648	16.7	200.9	0.08	310.1
213	Fruit and vegetable processing	n.p.	n.p.	n.p.	n.p.	n.p.
214	Oil and fat mfg	—	—	—	—	—
Flour mill and cereal food mfg						
2151	Flour mill product mfg	45	1.3	37.6	0.04	835.9
215	Total ⁵	n.p.	n.p.	n.p.	n.p.	n.p.
Bakery product mfg						
2161	Bread mfg	500	11.1	47.0	0.24	94.0
2162	Cake and pastry mfg	297	4.8	19.0	0.25	64.0
216	Total ⁵	797	15.9	66.0	0.24	82.8
Other food mfg						
2173	Seafood processing	726	15.2	161.0	0.09	221.8
2179	Food mfg n.e.c.	70	n.p.	n.p.	n.p.	n.p.
217	Total ⁵	1 589	47.0	367.3	0.13	231.1
Beverage and malt mfg						
2181	Soft drink, cordial and syrup mfg	142	n.p.	n.p.	n.p.	n.p.
2182	Beer and malt mfg	216	n.p.	n.p.	n.p.	n.p.
2183	Wine mfg	13	n.p.	n.p.	n.p.	n.p.
218	Total ⁵	371	11.1	90.6	0.12	244.3
219	Tobacco product mfg	—	—	—	—	—
21	Total food, beverage and tobacco mfg	6 020	165.4	1 342.3	0.12	223.0
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG						
Textile fibre, yarn and woven fabric mfg						
2212	Synthetic fibre textile mfg	164	n.p.	n.p.	n.p.	n.p.
221	Total ⁵	847	22.6	90.6	0.25	107.0
Textile product mfg						
2221	Made-up textile product mfg	245	n.p.	n.p.	n.p.	n.p.
222	Total ⁵	505	11.7	44.3	0.26	87.7

For footnotes see end of table.

Industry class		Employ- ment at end of June ²	Wages and salaries ³	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁴
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
223	Knitting mills	n.p.	n.p.	n.p.	n.p.	n.p.
224	Clothing mfg	54	1.1	4.2	0.26	77.5
225	Footwear mfg	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.
22	Total textile, clothing, footwear and leather mfg	1 818	45.5	189.4	0.24	104.2
WOOD AND PAPER PRODUCT MFG						
Log sawmilling and timber dressing						
2311	Log sawmilling	510	n.p.	n.p.	n.p.	n.p.
231	Total ⁵	1 509	39.0	343.0	0.11	227.3
Other wood product mfg						
2323	Wooden structural component mfg	254	4.8	19.3	0.25	76.1
2329	Wood product mfg n.e.c.	148	2.7	11.4	0.24	76.8
232	Total ⁵	n.p.	n.p.	n.p.	n.p.	n.p.
233	Paper and paper product mfg	n.p.	n.p.	n.p.	n.p.	n.p.
23	Total wood and paper product mfg	3 545	111.8	886.6	0.13	250.1
PRINTING, PUBLISHING AND RECORDED MEDIA						
Printing and services to printing						
2412	Printing	628	15.8	52.4	0.30	83.4
241	Total ⁵	754	18.8	59.9	0.31	79.4
Publishing						
2421	Newspaper printing or publishing	978	31.0	80.6	0.38	82.4
2422	Other periodical publishing	19	0.5	2.9	0.17	150.6
2423	Book and other publishing	4	0.1	0.5	0.16	122.5
242	Total	1 001	31.6	83.9	0.38	83.9
243	Recorded media manufacturing and publishing	—	—	—	—	—
24	Total printing, publishing and recorded media	1 756	50.4	143.8	0.35	81.9
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG						
251	Petroleum refining	—	—	—	—	—
252	Petroleum and coal product mfg n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.

For footnotes see end of table.

Industry class		Employment at end of June ²	Wages and salaries ³	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁴
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
Basic chemical mfg						
2535	Inorganic industrial chemical mfg n.e.c.	232	n.p.	n.p.	n.p.	n.p.
253	Total ⁵	323	n.p.	n.p.	n.p.	n.p.
254	Other chemical product mfg	197	7.8	48.4	0.16	245.7
Rubber product mfg						
2559	Rubber product mfg n.e.c.	10	0.5	1.5	0.33	148.1
255	Total ⁵	n.p.	n.p.	n.p.	n.p.	n.p.
Plastic product mfg						
2562	Plastic extruded product mfg	89	2.5	20.2	0.12	226.9
2564	Plastic product, rigid fibre reinforced, mfg	89	1.8	11.3	0.16	127.1
256	Total ⁵	311	7.7	48.0	0.16	154.4
25	Total petroleum, coal, chemical and associated product mfg	883	27.8	209.3	0.13	237.0
NON-METALLIC MINERAL PRODUCT MFG						
261	Glass and glass product mfg	202	n.p.	n.p.	n.p.	n.p.
Ceramic mfg						
2629	Ceramic product mfg n.e.c.	14	0.1	0.5	0.31	34.6
262	Total ⁵	109	n.p.	n.p.	n.p.	n.p.
Cement, lime, plaster and concrete product mfg						
2633	Concrete slurry mfg	117	3.6	44.8	0.08	383.3
2635	Concrete product mfg n.e.c.	198	n.p.	n.p.	n.p.	n.p.
263	Total ⁵	563	18.7	181.3	0.10	322.1
264	Non-metallic mineral product mfg n.e.c.	94	2.5	18.8	0.13	200.5
26	Total non-metallic mineral product mfg	968	29.2	244.2	0.12	252.3
METAL PRODUCT MFG						
Iron and steel mfg						
2711	Basic iron and steel mfg	361	n.p.	n.p.	n.p.	n.p.
2712	Iron and steel casting and forging	120	n.p.	n.p.	n.p.	n.p.
271	Total ⁵	481	n.p.	n.p.	n.p.	n.p.
272	Basic non-ferrous metal mfg	n.p.	n.p.	n.p.	n.p.	n.p.
273	Non-ferrous basic metal product mfg	n.p.	n.p.	n.p.	n.p.	n.p.

For footnotes see end of table.

Industry class		Employment at end of June ²	Wages and salaries ³	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁴
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
Structural metal product mfg						
2741	Structural steel fabricating	360	9.8	55.3	0.18	153.6
2742	Architectural aluminium product mfg	254	5.5	26.4	0.21	104.0
2749	Structural metal product mfg n.e.c.	23	0.4	3.5	0.11	153.3
274	<i>Total</i>	637	15.7	85.3	0.18	133.8
Sheet metal product mfg						
2751	Metal container mfg	129	n.p.	n.p.	n.p.	n.p.
2759	Sheet metal product mfg n.e.c.	170	n.p.	n.p.	n.p.	n.p.
275	<i>Total</i>	299	6.5	32.9	0.20	109.9
Fabricated metal product mfg						
2761	Hand tool and general hardware mfg	66	1.2	5.4	0.22	81.7
2769	Fabricated metal product mfg n.e.c.	204	3.7	13.5	0.28	66.4
276	<i>Total⁵</i>	404	7.7	29.3	0.26	72.5
27	Total metal product mfg	3 314	132.7	796.6	0.17	240.4
MACHINERY AND EQUIPMENT MFG						
281	Motor vehicle and part mfg	937	30.3	88.4	0.34	94.4
Other transport equipment mfg						
2822	Boatbuilding	119	1.7	5.9	0.29	49.5
282	<i>Total⁵</i>	644	n.p.	n.p.	n.p.	n.p.
Photographic and scientific equipment mfg						
2831	Photographic and optical good mfg	22	0.6	3.3	0.18	151.6
2832	Medical and surgical equipment mfg	49	0.9	2.2	0.43	44.1
2839	Professional and scientific equipment mfg n.e.c.	9	n.p.	n.p.	n.p.	n.p.
283	<i>Total</i>	80	n.p.	n.p.	n.p.	n.p.
284	Electronic equipment mfg	38	0.6	2.4	0.26	64.2
Electrical equipment and appliance mfg						
2854	Electric light and sign mfg	55	1.2	2.8	0.45	50.7
285	<i>Total⁵</i>	282	7.0	25.9	0.27	91.8

For footnotes see end of table.

Industry class		Employment at end of June ²	Wages and salaries ³	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed ⁴
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
Industrial machinery and equipment mfg						
2864	Machine tool and part mfg	38	0.7	2.6	0.26	67.2
2865	Lifting and material handling equipment mfg	218	6.5	24.2	0.27	111.0
2869	Industrial machinery and equipment mfg n.e.c.	148	3.2	8.1	0.40	54.9
286	Total ⁵	524	12.8	44.4	0.29	84.7
28	Total machinery and equipment mfg	2 504	66.8	236.9	0.28	94.6
OTHER MANUFACTURING						
Prefabricated building mfg						
2911	Prefabricated metal building mfg	49	1.0	5.5	0.19	112.3
291	Total ⁵	n.p.	n.p.	n.p.	n.p.	n.p.
Furniture mfg						
2921	Wooden furniture and upholstered seat mfg	522	9.5	35.7	0.27	68.4
292	Total ⁵	600	10.9	43.7	0.25	72.9
Miscellaneous manufacturing						
2942	Toy and sporting good mfg	29	0.4	1.2	0.34	41.4
2949	Manufacturing n.e.c.	50	0.9	2.8	0.31	56.8
294	Total ⁵	n.p.	n.p.	n.p.	n.p.	n.p.
29	Total other manufacturing	745	13.4	54.2	0.25	72.7
21-29	TOTAL MANUFACTURING	21 554	643.0	4 103.2	0.16	190.4

¹ See paragraph 7 of the Explanatory Notes.

² Includes working proprietors.

³ Excludes the drawings of working proprietors.

⁴ Turnover divided by the number of persons employed at the end of June. Includes working proprietors.

⁵ 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.

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

Industry subdivision ANZSIC code	Description	1989-90		1990-91		1991-92		1992-93		1993-94		1989-90 to 1993-94	
		1989-90	to 1990-91	1990-91	to 1991-92	1991-92	to 1992-93	1992-93	to 1993-94	1993-94	Percentage movement	Change in gross product per person employed ^{4,5}	
21	Food, beverage and tobacco mfg	1.4		-1.9		-1.4		5.8		3.8		13.4	
22	Textile, clothing, footwear and leather mfg	-2.5		-2.3		0.3		0.3		-4.3		1	
23	Wood and paper product mfg	-6.9		-12.0		0.5		-12.4		-27.8		25.6	
24	Printing, publishing and recorded media	-2.2		-4.0		-6.0		11		-2.0		0.5	
25	Petroleum, coal, chemical and associated product mfg	-5.2		-11.1		4.8		-7.0		-17.9		18.3	
26	Non-metallic mineral product mfg	-8.4		3		16		26.7		38.6		26.6	
27	Metal product mfg	-2.6		1		-7.5		1.4		-7.8		34.2	
28	Machinery and equipment mfg	1.4		9.8		-19.5		19.4		7		-2.8	
29	Other manufacturing	-24.9		-13.2		-4.1		-11.1		-44.4		-7.5	
21-29	Total manufacturing	-3.0		-3.1		-2.9		2.4		-6.5		16.9	

¹ See paragraph 7 of the Explanatory Notes.

² See paragraphs 21 to 23 of the Explanatory Notes.

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

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

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

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁶	
	Number	Proportion	Number	Proportion	Amount	Proportion	Amount	Proportion
	No.	%	No.	%	\$m	%	\$m	%
FOOD, BEVERAGE AND TOBACCO MFG								
0-3 persons	20	15.3	42	0.7	0.8	0.5	6.4	0.5
4-9 persons	40	30.5	238	4.0	3.4	2.1	33.9	2.5
10-19 persons	20	15.3	264	4.4	5.7	3.4	89.8	6.7
20-49 persons	19	14.5	637	10.6	13.9	8.4	138.6	10.3
50-99 persons	16	12.2	1 174	19.5	24.2	14.6	192.1	14.3
Total less than 100 persons	115	87.8	2 356	39.1	47.9	29.0	460.8	34.3
100-199 persons	8	6.1	1 077	17.9	31.5	19.1	253.5	18.9
200-499 persons	7	5.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	1	0.8	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	16	12.2	3 664	60.9	117.4	71.0	881.4	65.7
Total	131	100.0	6 020	100.0	165.3	100.0	1 342.2	100.0
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG								
0-3 persons	24	46.2	51	2.8	0.8	1.8	3.4	1.8
4-9 persons	12	23.1	72	4.0	1.2	2.7	7.6	4.0
10-19 persons	4	7.7	48	2.6	1.1	2.5	3.4	1.8
20-49 persons	4	7.7	87	4.8	1.6	3.6	9.0	4.7
50-99 persons	3	5.8	226	12.4	6.3	13.9	30.7	16.2
Total less than 100 persons	46	88.5	485	26.7	11.2	24.6	54.1	28.6
100-199 persons	3	5.8	480	26.4	13.0	28.7	54.0	28.5
200-499 persons	3	5.8	853	46.9	21.3	46.8	81.3	42.9
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	6	11.5	1 333	73.3	34.3	75.4	135.3	71.4
Total	52	100.0	1 818	100.0	45.5	100.0	189.4	100.0

For footnotes see end of table.

5

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

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number	Proportion	Number	Proportion	Amount	Proportion	Amount	Proportion
	No.	%	No.	%	\$m	%	\$m	%
WOOD AND PAPER PRODUCT MFG								
0-3 persons	51	34.9	114	3.2	1.6	1.4	8.2	0.9
4-9 persons	50	34.2	307	8.7	5.5	4.9	24.3	2.7
10-19 persons	22	15.1	273	7.7	6.1	5.4	34.1	3.9
20-49 persons	8	5.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	6	4.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	138	94.5	1 458	41.1	39.0	34.9	320.0	36.1
100-199 persons	5	3.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	2	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	1	0.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	8	5.5	2 087	58.9	72.9	65.1	566.6	63.9
Total	146	100.0	3 545	100.0	111.8	100.0	886.6	100.0
PRINTING, PUBLISHING AND RECORDED MEDIA								
0-3 persons	27	33.8	58	3.3	1.1	2.2	5.2	3.6
4-9 persons	28	35.0	168	9.6	4.0	8.0	13.0	9.1
10-19 persons	11	13.8	136	7.7	2.7	5.3	8.2	5.7
20-49 persons	7	8.8	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	3	3.8	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	76	95.0	726	41.3	17.5	34.7	53.3	37.1
100-199 persons	1	1.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	3	3.8	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>	4	5.0	1 030	58.7	32.9	65.3	90.5	62.9
Total	80	100.0	1 756	100.0	50.4	100.0	143.8	100.0

For footnotes see end of table.

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number	Proportion	Number	Proportion	Amount	Proportion	Amount	Proportion
	No.	%	No.	%	\$m	%	\$m	%
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG								
0-3 persons	13	25.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
4-9 persons	17	33.3	103	11.7	2.8	10.0	17.6	8.5
10-19 persons	9	17.6	147	16.6	4.1	14.9	32.7	15.7
20-49 persons	9	17.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50-99 persons	—	—	—	—	—	—	—	—
Total less than 100 persons	48	94.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100-199 persons	1	2.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	1	2.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	2	3.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	51	100.0	883	100.0	27.5	100.0	208.4	100.0
NON-METALLIC MINERAL PRODUCT MFG								
0-3 persons	24	43.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
4-9 persons	10	18.2	63	6.5	1.1	3.8	6.1	2.5
10-19 persons	8	14.5	104	10.7	2.6	8.8	15.1	6.2
20-49 persons	8	14.5	231	23.9	6.5	22.3	54.7	22.4
50-99 persons	2	3.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total less than 100 persons	53	96.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100-199 persons	2	3.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	2	3.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	55	100.0	968	100.0	29.2	100.0	244.2	100.0

For footnotes see end of table.

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number	Proportion	Number	Proportion	Amount	Proportion	Amount	Proportion
	No.	%	No.	%	\$m	%	\$m	%
METAL PRODUCT MFG								
0-3 persons	33	23.7	76	2.3	1.3	1.0	7.7	1.0
4-9 persons	59	42.4	367	11.1	7.2	5.4	36.9	4.6
10-19 persons	25	18.0	362	10.9	8.1	6.1	36.1	4.5
20-49 persons	15	10.8	442	13.3	11.3	8.5	69.7	8.7
50-99 persons	2	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	134	96.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100-199 persons	2	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	1	0.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	2	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	5	3.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	139	100.0	3 314	100.0	132.7	100.0	796.6	100.0
MACHINERY AND EQUIPMENT MFG								
0-3 persons	58	41.1	133	5.3	2.4	3.5	8.9	3.7
4-9 persons	42	29.8	243	9.7	4.9	7.3	19.3	8.1
10-19 persons	25	17.7	345	13.8	7.8	11.6	29.0	12.3
20-49 persons	10	7.1	283	11.3	6.8	10.2	25.5	10.8
50-99 persons	3	2.1	220	8.8	6.0	9.0	19.2	8.1
<i>Total less than 100 persons</i>	138	97.9	1 224	48.9	27.8	41.6	101.8	43.0
100-199 persons	—	—	—	—	—	—	—	—
200-499 persons	1	0.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	2	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	3	2.1	1 280	51.1	39.0	58.4	135.1	57.0
Total	141	100.0	2 504	100.0	66.8	100.0	238.9	100.0

For footnotes see end of table.

5

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

Employment size group	Establishments at 30 June ²		Employment at end of June ³		Wages and salaries ^{4, 5}		Turnover ⁵	
	Number	Proportion	Number	Proportion	Amount	Proportion	Amount	Proportion
	No.	%	No.	%	\$m	%	\$m	%
OTHER MANUFACTURING								
0-3 persons	51	46.8	106	14.2	1.3	10.0	6.1	11.2
4-9 persons	38	34.9	219	29.4	3.9	29.0	17.4	32.0
10-19 persons	12	11.0	173	23.2	3.8	28.3	14.0	25.8
20-49 persons	8	7.3	248	33.3	4.4	32.7	16.7	30.9
50-99 persons	—	—	—	—	—	—	—	—
Total less than 100 persons	109	100.0	745	100.0	13.4	100.0	54.2	100.0
100-199 persons	—	—	—	—	—	—	—	—
200-499 persons	—	—	—	—	—	—	—	—
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	—	—	—	—	—	—	—	—
Total	109	100.0	745	100.0	13.4	100.0	54.2	100.0
TOTAL MANUFACTURING								
0-3 persons	301	33.3	651	3.0	10.9	1.7	63.4	1.5
4-9 persons	297	32.9	1 780	8.3	34.0	5.3	176.0	4.3
10-19 persons	135	14.9	1 852	8.6	41.9	6.5	262.4	6.4
20-49 persons	89	9.8	2 678	12.4	66.5	10.4	426.6	10.4
50-99 persons	36	4.0	2 572	11.9	68.8	10.7	506.3	12.3
Total less than 100 persons	857	94.8	9 533	44.2	222.0	34.5	1 434.8	35.0
100-199 persons	22	2.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200-499 persons	18	2.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500-999 persons	6	0.7	3 785	17.6	160.7	25.0	895.8	21.8
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	46	5.1	12 021	55.8	420.7	65.5	2 667.4	65.0
Total	904	100.0	21 554	100.0	642.6	100.0	4 102.2	100.0

¹ See paragraph 7 of the Explanatory Notes.

² See paragraphs 4 to 10 of the Explanatory Notes.

³ Includes working proprietors.

⁴ Excludes the drawings of working proprietors.

⁵ Figures may be slightly less than those presented in other tables, because they exclude those manufacturing establishments which operated during 1993-94 but were not operating at 30 June 1994. See paragraph 24 of the Explanatory Notes.

Industry subdivision		Locations at 30 June ²	Employment at end of June ³	Wages and salaries ⁴	Turnover
ANZSIC code	Description	No.	No.	\$m	\$m
GREATER HOBART STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	47	1 881	55.1	384.1
22	Textile, clothing, footwear and leather mfg	27	693	17.9	86.4
23	Wood and paper product mfg	43	874	31.8	259.0
24	Printing, publishing and recorded media	44	955	27.7	80.4
25	Petroleum, coal, chemical and associated product mfg	19	189	7.1	56.9
26	Non-metallic mineral product mfg	24	411	11.5	69.9
27	Metal product mfg	59	1 249	55.5	369.2
28	Machinery and equipment mfg	59	1 048	25.8	114.7
29	Other manufacturing	44	333	6.2	25.4
21-29	Total manufacturing	367	7 632	238.5	1 446.0
SOUTHERN STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	17	589	14.0	96.7
22	Textile, clothing, footwear and leather mfg	—	—	—	—
23	Wood and paper product mfg	15	169	n.p.	n.p.
24	Printing, publishing and recorded media	4	15	0.4	1.6
25	Petroleum, coal, chemical and associated product mfg	2	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	3	18	n.p.	n.p.
27	Metal product mfg	2	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	7	17	0.3	1.1
29	Other manufacturing	4	7	0.1	0.3
21-29	Total manufacturing	54	859	21.2	169.4
NORTHERN STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	29	1 210	33.1	267.3
22	Textile, clothing, footwear and leather mfg	16	n.p.	n.p.	n.p.
23	Wood and paper product mfg	59	1 180	n.p.	n.p.
24	Printing, publishing and recorded media	20	439	13.5	40.5
25	Petroleum, coal, chemical and associated product mfg	19	n.p.	n.p.	n.p.
26	Non-metallic mineral product mfg	24	264	n.p.	n.p.
27	Metal product mfg	55	1 674	68.2	391.3
28	Machinery and equipment mfg	38	1 022	32.1	92.5
29	Other manufacturing	33	282	5.4	21.4
21-29	Total manufacturing	294	6 929	217.4	1 236.7

For footnotes see end of table.

Industry subdivision		Locations at 30 June ²	Employment at end of June ³	Wages and salaries ⁴	Turnover
ANZSIC code	Description	No.	No.	\$m	\$m
MERSEY-LYELL STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	45	2 299	62.3	588.8
22	Textile, clothing, footwear and leather mfg	9	n.p.	n.p.	n.p.
23	Wood and paper product mfg	34	1 294	40.4	303.0
24	Printing, publishing and recorded media	15	343	8.7	21.3
25	Petroleum, coal, chemical and associated product mfg	13	347	9.5	92.9
26	Non-metallic mineral product mfg	19	272	n.p.	n.p.
27	Metal product mfg	26	n.p.	n.p.	n.p.
28	Machinery and equipment mfg	43	415	8.5	28.7
29	Other manufacturing	28	121	1.7	6.9
21-29	Total manufacturing	232	6 036	163.4	1 243.8
TASMANIA EXCLUDING GREATER HOBART STATISTICAL DIVISION					
21	Food, beverage and tobacco mfg	91	4 098	109.3	952.7
22	Textile, clothing, footwear and leather mfg	25	1 117	27.4	102.9
23	Wood and paper product mfg	109	2 644	79.2	626.6
24	Printing, publishing and recorded media	40	797	22.6	63.4
25	Petroleum, coal, chemical and associated product mfg	34	695	20.7	152.4
26	Non-metallic mineral product mfg	46	554	17.6	174.2
27	Metal product mfg	84	2 054	77.0	427.0
28	Machinery and equipment mfg	88	1 454	41.0	122.3
29	Other manufacturing	65	410	7.2	28.5
21-29	Total manufacturing	581	13 824	402.0	2 649.9
TASMANIA					
21	Food, beverage and tobacco mfg	138	5 979	164.4	1 336.9
22	Textile, clothing, footwear and leather mfg	52	1 810	45.3	189.3
23	Wood and paper product mfg	152	3 518	111.0	885.6
24	Printing, publishing and recorded media	84	1 752	50.2	143.8
25	Petroleum, coal, chemical and associated product mfg	53	884	27.8	209.3
26	Non-metallic mineral product mfg	70	965	29.1	244.1
27	Metal product mfg	143	3 303	132.5	796.1
28	Machinery and equipment mfg	147	2 502	66.7	236.9
29	Other manufacturing	109	743	13.4	54.0
21-29	Total manufacturing	948	21 456	640.5	4 095.9

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

EXPLANATORY NOTES

INTRODUCTION

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

2 The manufacturing collection is conducted on an annual basis. For the 1993-94 collection, businesses were requested to provide data on employment, wages and salaries and turnover for each manufacturing establishment. A sample of approximately 18,000 establishments was asked to supply additional information on commodities produced and sold. Commodities information from this sample will be published in *Manufacturing Production, Australia: Principal Commodities Produced, 1993-94* (8365.0), to be released early in 1997.

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

SCOPE AND COVERAGE

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

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

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

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

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

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

STANDARD UNITS

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

RELIABILITY OF ESTIMATES

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

12 The standard error can also be expressed as a percentage of the estimate, and this is known as the relative standard error. The relative standard errors for the 1992-93 data presented in this publication are 5% or less (with most of them 2% or less). For further information, see the 1992-93 issue of this publication.

13 The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by businesses and errors made in collection and processing of the data. Inaccuracies of this kind are referred to as non-sampling error and they may occur in any collection, whether it be a full count or only a sample. Every effort is made to reduce non-sampling error to a minimum by careful design of forms, editing of data and efficient operating procedures.

COMPARABILITY WITH PREVIOUS STATISTICS

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

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

16 The majority of businesses affected by these lags and omissions and to which both types of adjustments apply are small. Although these adjustments have resulted in counts of manufacturers in Tasmania at 30 June 1994 being adjusted upward by 10%, the effect on 1993-94 turnover is much less at 1%. The effect on employment is an adjustment of 3%. Most industries were affected to a similar degree.

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

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

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

20 The basis for the calculation of the data used in table 4 of this publication for the data item 'Percentage change in gross product per person employed' is different to that used in the 1992-93 issue of this publication. The employment data now used are 'Employment at the end of June', whereas in the 1992-93 issue the conceptually more precise data item 'Average employment over the year' was used. For some industries, the values obtained by using these different methods may differ significantly and, therefore, care should be exercised when making inter-year comparisons. (The reason for making this change is that the detailed data necessary to calculate 'Average employment over the year' were not obtained by the 1993-94 collection.)

GROSS PRODUCT AT FACTOR
COST

21 Table 4 presents data by industry subdivision for the period 1989-90 to 1993-94 (inclusive) related to constant price estimates of gross product at factor cost. The meaning and measurement of production at constant prices and the limitations and qualifications of the estimates are discussed in detail in *Australian National Accounts: Concepts, Sources and Methods* (5216.0).

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

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

EMPLOYMENT SIZE DATA

24 Summary of operations data at the industry subdivision level classified by employment size are presented in table 5. The statistics in this table relate only to those manufacturing establishments operating at 30 June 1994. As such, the figures presented may be slightly less than those presented in the other tables from the manufacturing collection. These other tables include data for those manufacturing establishments which operated at any time during 1993-94.

STATISTICAL DIVISION DATA

25 The location data presented in table 6 are based on additional data collected in the 1993-94 census. The extra data requested were the activity carried out at the location, the number of persons employed and the address of the location.

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

27 As indicated in paragraph 7, a manufacturing establishment covers all activities of the establishment, including any non-manufacturing activities. In table 6, the non-manufacturing locations of manufacturing establishments have been excluded. For this reason, the State totals (for location data, other than the number of locations) in table 6 may be less than those shown in tables 1, 3 and 5 (for establishment data). However, it is also possible for the State totals in table 6 to be greater than those shown in tables 1, 3 and 5, as a result of individual locations of establishments being allocated a different industry classification to that of the 'parent' establishment.

USE OF ANZSIC

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

INFORMATION PAPER

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

RELATED PUBLICATIONS

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

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

- *Environment Protection Expenditure, Australia, 1992-93 and 1993-94* (4603.0), to be released early in 1997.
- *Labour Force, Australia* (6203.0).
- *Indexes of Industrial Production, Australia* (8125.0), issued quarterly.
- *Business Operations and Industry Performance, Australia, 1993-94* (8140.0), released on 6 September 1995.
- *Manufacturing Industry, Australia, Preliminary, 1994-95* (8201.0), released on 23 August 1996.
- *Information Paper: Availability of Statistics Related to Manufacturing, 1996* (8205.0), released on 21 March 1996.
- *Manufacturing Industry, Australia, 1993-94* (8221.0), released on 18 October 1996.
- *Manufacturing Production, Australia: Principal Commodities Produced, 1993-94* (8365.0), to be released early in 1997.

MONTHLY COMMODITY DATA

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

BACK DATA AND UNPUBLISHED STATISTICS

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

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

ROUNDING

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

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

SYMBOLS AND OTHER USAGES

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

GLOSSARY

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

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

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

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

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

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

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

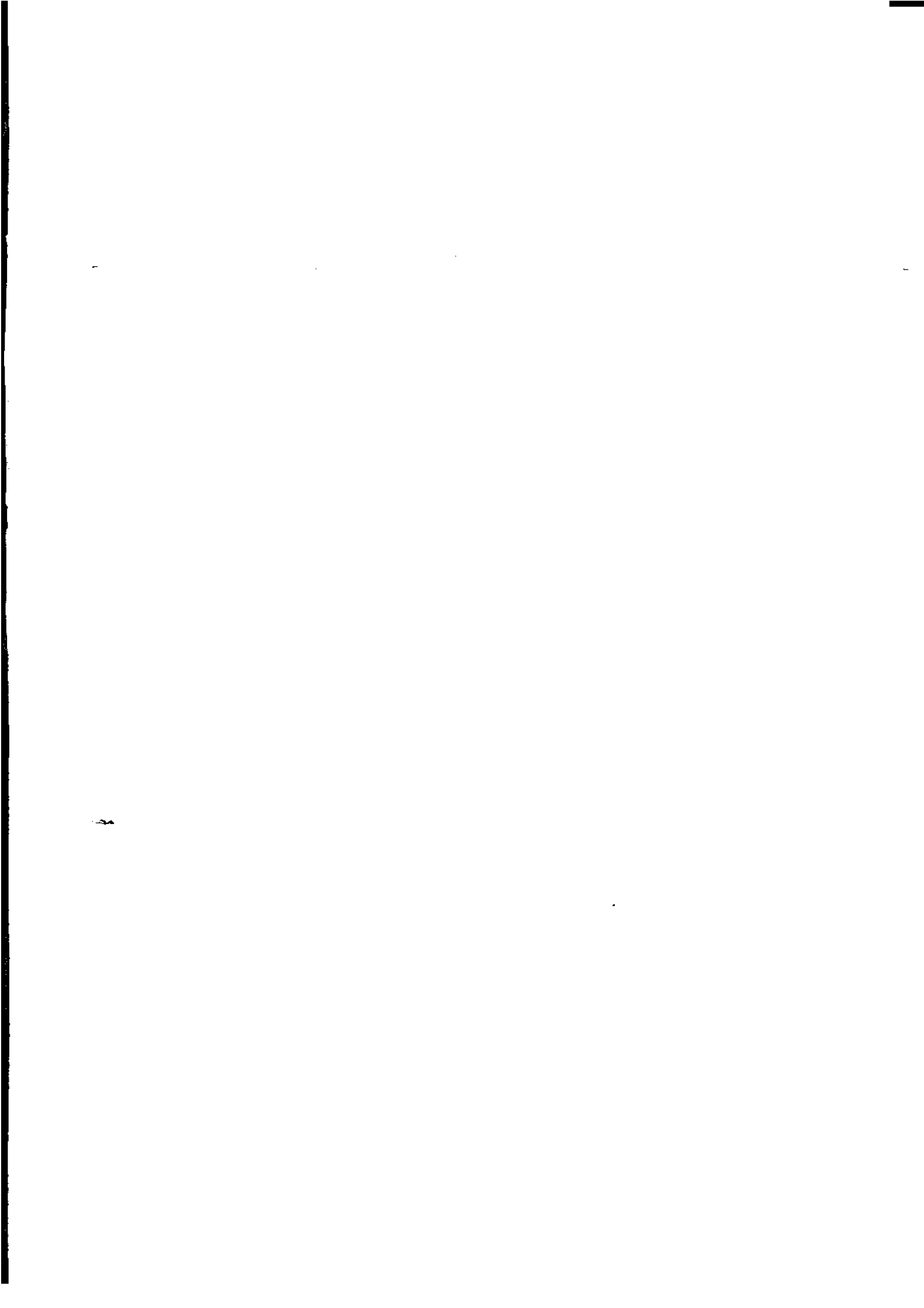
21	Food, beverage and tobacco mfg
22	Textile, clothing, footwear and leather mfg
23	Wood and paper product mfg
24	Printing, publishing and recorded media
25	Petroleum, coal, chemical and associated product mfg
26	Non-metallic mineral product mfg
27	Metal product mfg
28	Machinery and equipment mfg
29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

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

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

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

Total government subsidies	Includes revenue received from government bodies in the form of bounties, subsidies and export grants. It also includes payments for Jobstart and subsidies for apprenticeship schemes. Excludes capital grants payments.
Turnover	(See Note below.) Sales (exclusive of excise and sales tax) of goods whether produced by the establishment or not, plus transfers out of goods to other establishments of the same business, plus bounties and subsidies on production, plus all other operating income from outside the establishment (such as commission income, repair and service income, and rent, leasing and hiring income), plus capital work done by an establishment's own employees for the business' own use, or for rental or lease. Receipts from interest, royalties, dividends and the sale of fixed tangible assets are excluded. Note: Transfers to other establishments of the same business referred to in the definition of turnover are valued, for statistical purposes, at prices commensurate with the prices which would have been received if the establishments concerned had been under separate ownership, that is, at commercial selling price. A significant proportion of the commodities manufactured by some industries is manufactured on commission for non-manufacturing businesses from materials owned and supplied by those businesses. As a consequence, the turnover figures do not reflect the gross value of those commodities but only the commission earned relating to them.
Turnover per person employed	Turnover of manufacturing establishments which operated during the year ended 30 June divided by employment at the end of June in the same year.
Value added	Turnover, plus the increase (or less the decrease) in the value of stocks, less purchases, transfers in and selected expenses.
Wages and salaries	The gross wages and salaries of all employees of the establishment. The item includes severance, termination and redundancy payments, but excludes reimbursements or allowances to employees for travel, entertainment, etc. The drawings of working proprietors are also excluded.
Wages and salaries to turnover ratio	The wages and salaries paid by manufacturing establishments which operated during the year ended 30 June as a proportion of the turnover of manufacturing establishments which operated during the same year.



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