



1994-95

EMBARGO: 11.30 AM (CANBERRA TIME) MON 26 MAY 1997

Manufacturing Industry

Western Australia

NOTES

ABOUT THIS ISSUE

The data item 'Number of establishments' has not been included in this publication and will be omitted from all 1994-95 and later years' publications relating to the annual manufacturing industry collection. In recent years, year to year movements in numbers of establishments have borne little relationship to the changes in economic performance of the industries involved. For this reason, the Australian Bureau of Statistics (ABS) does not encourage the use of the number of establishments as an analytical tool. However, the data can be made available on request, with notes on their limitations. For further information, see paragraph 21 of the Explanatory notes.

.....

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
r	figure or series revised since previous issue
*	data subject to sampling variability of between 25% and 50%
**	data subject to sampling variability of greater than 50%
—	nil or rounded to zero

.....

INQUIRIES

For information about other ABS statistics and services, please refer to the back of this publication.

For further information about statistics in this publication and the availability of related unpublished statistics, contact John Ridley on (02) 9268 4541.

CONTENTS

	Page
	5
SUMMARY OF FINDINGS	
Overview	7
Employment	7
Turnover	9
Ratio of wages and salaries to turnover	10
Turnover per person employed	11
Gross product at factor cost (average 1989-90 prices)	11
Employment size	12
Exports by manufacturers	14
TABLES	
List of tables	16
INFORMATION	
Explanatory notes	31
Technical notes	38
Standard errors	39
Glossary	40



PREFACE

.....

BACKGROUND

This publication contains detailed industry statistics compiled from a survey of manufacturing establishments (see paragraphs 5 to 11 of the Explanatory notes) conducted in respect of 1994-95, with some comparative statistics for earlier years. It expands and updates the information which was published in *Manufacturing Industry, Australia, Preliminary, 1994-95* (8201.0), which was released on 23 August 1996 and *Manufacturing Industry, Australia, 1994-95* (8221.0), which was released on 31 January 1997.

For the 1994-95 manufacturing collection, a sample of approximately 20,000 manufacturing establishments, nationally, was approached to provide data on employment, wages and salaries, turnover and whether their products were exported. Information related to exports emanating from the manufacturing sector are shown in tables 5 and 6.

Guidelines to the quality of estimates from the sample surveys as measured by the standard (sampling) error are shown on page 38.

In addition to data for the above items, this publication contains additional data to provide a more complete picture of the manufacturing industry. The additional data include information on percentage change in gross product at factor cost (average 1989-90 prices) (table 3).

The sample of approximately 7,500 out of the establishments referred to above was also asked to supply value of sales for commodities produced. These commodity data will be published in *Manufacturing Production, Australia: Principal Commodities Produced, 1994-95* (8365.0), expected to be released later 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

All manufacturing 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 13 and 14 of the Explanatory notes.

As explained above, about 7,500 establishments included in the 1994-95 collection were asked to supply value of sales for commodities produced. Similarly, 18,000 establishments included in the 1993-94 collection were asked to supply this information. This has meant that the industry code for the responding units included in either (or both) of these commodity samples has been able to be determined on an objective industry coding basis, compared to the more subjective industry coding which has

occurred for non-responding units and units not included in either of these commodity samples, and for all units in each of the three prior manufacturing collections. More information on this subject can be found in paragraph 18 of the Explanatory notes.

Because of the above reasons, comparison of industry class (especially) level data published in the 1993-94 and later issues of this publication with data published in the 1992-93 and earlier issues of this publication 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. In general, unpublished data for 1994-95 consist of finer industry dissections of the data presented in tables 3 to 6. 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 2 for contact details.

P. C. Kelly
Regional Director
Western Australia

SUMMARY OF FINDINGS

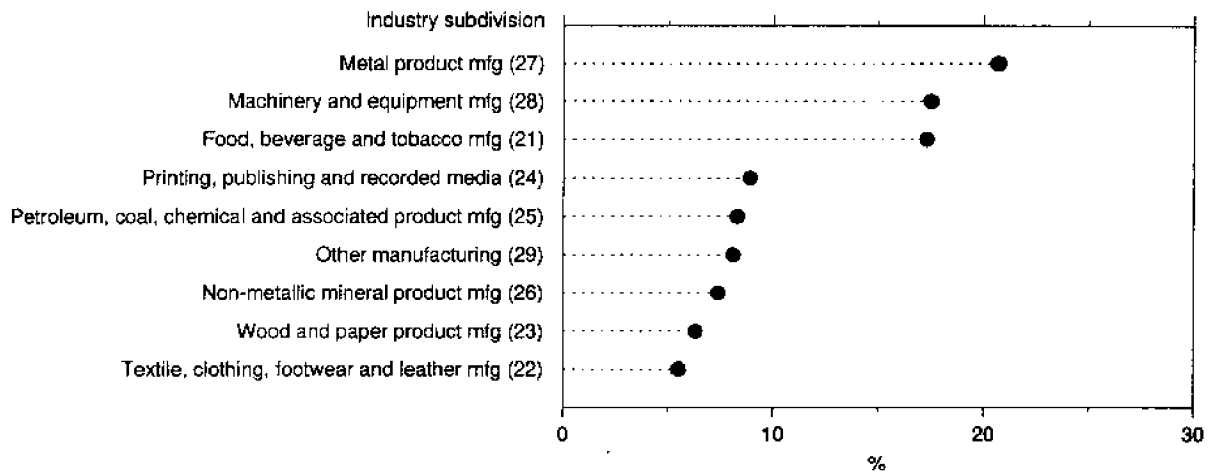
OVERVIEW

Turnover for the year 1994-95 by manufacturing establishments operating in Western Australia was \$14,684m. This represents a 6.6% increase, in current price terms, from the \$13,778m turnover recorded for the year 1993-94. In constant price terms (1989-90 prices), manufacturing gross product at factor cost increased by 4.4% in 1994-95 from 1993-94. Manufacturing employment at the end of June 1995 was 71,300, some 9.1% higher than 12 months earlier. This is the third annual increase since June 1992.

EMPLOYMENT (TABLES 1 AND 2)

The 1994-95 manufacturing survey estimated that 71,300 persons were employed at the end of June 1995. As in previous years, Metal product manufacturing (20.7%) was the largest contributor. However, Machinery and equipment manufacturing (17.5%) is now the second largest contributor, ahead of Food, beverage and tobacco manufacturing (17.3%). Textile, clothing, footwear and leather manufacturing (5.5%) and Wood and paper product manufacturing (6.3%) remain the smallest contributors.

Distribution of employment, June 1995



Manufacturing employment increased by 9.1% between June 1994 and June 1995. Eight of the nine industry subdivisions recorded increases in the level of employment over this period. Machinery and equipment manufacturing (up 15.5% from 10,800 persons to 12,500 persons), Textile, clothing, footwear and leather manufacturing (up 15.0% from 3,400 persons to 3,900 persons) and Food, beverage and tobacco manufacturing (up 12.4% from 10,900 persons to 12,300 persons) recorded the largest percentage increases. Employment in Wood and paper product manufacturing remained unchanged (at 4,500 persons).

SUMMARY OF FINDINGS *continued*

.....

The percentage contribution by Western Australia to total Australian manufacturing employment at the end of June 1995 was 7.7%. This represents an increase of 0.5 percentage points on the total contribution reported at the end of June 1994. The percentage contribution to total manufacturing employment by the other States and Territories at the end of June 1995 was: New South Wales 33.1%, Victoria 31.6%, Queensland 15.0%, South Australia 9.4%, Tasmania 2.4%, the Australian Capital Territory 0.5% and the Northern Territory 0.3%.

The Western Australian industry subdivisions which made a significant contribution to national manufacturing employment at the end of June 1995 at the industry subdivision level were Non-metallic mineral product manufacturing (13.7%), Other manufacturing (10.8%) and Metal product manufacturing (10.1%).

Longer term trends (June 1990 to June 1995)

Employment in the Western Australian manufacturing industry increased by 100 persons (up 0.2% from 71,200 persons to 71,300 persons) over the period June 1990 to June 1995. After a fall in employment was recorded for all industry subdivisions in at least the 12 months following June 1990, employment at June 1995 for all industry subdivisions has (generally speaking) returned to about the same level as recorded at June 1990. Over the period June 1990 to June 1995, four of the nine industry subdivisions recorded an increase in employment, four recorded a decrease in employment and one recorded the same level of employment. The largest percentage increases were recorded by Non-metallic mineral product manufacturing (up 11.4% from 4,800 persons to 5,300 persons), Textile, clothing, footwear and leather manufacturing (up 4.9% from 3,700 persons to 3,900 persons) and Petroleum, coal, chemical and associated product manufacturing (up 3.1% from 5,700 persons to 5,900 persons). The largest percentage decreases were recorded by Wood and paper product manufacturing (down 5.3% from 4,800 persons to 4,500 persons), Other manufacturing (down 3.8% from 6,000 persons to 5,800 persons) and Food, beverage and tobacco manufacturing (down 3.3% from 12,700 persons to 12,300 persons). Employment in Printing, publishing and recorded media was the same at both June 1990 and June 1995 (6,300 persons).

Western Australia (with a marginal increase of 0.2%) was one of only three States or Territories to increase employment in manufacturing over the period June 1990 to June 1995. A substantial percentage increase in employment was recorded by the Australian Capital Territory (up 7.8% from 3,900 persons to 4,200 persons), with employment also increasing marginally in Queensland (up 0.2% from 138,500 persons to 138,900 persons). During this period, large percentage decreases were recorded by Victoria (down 18.6% from 358,700 persons to 291,900 persons), Tasmania (down 17.7% from 27,000 persons to 22,200 persons), South Australia (down 14.1% from 101,400 persons to 87,200 persons) and New South Wales (down 13.8% from 354,900 persons to 305,900 persons). The Northern Territory recorded a small decrease (down 2.5% from 3,200 persons to 3,100 persons).

The percentage contribution by Western Australia to Australian manufacturing employment has increased since June 1990 (increasing by 1.0 percentage points to 7.7%), as did Queensland (up 1.9 percentage points to 15.0%). Victoria decreased its

SUMMARY OF FINDINGS *continued*

percentage share of employment over this period (down 2.3 percentage points to 31.6%), as did New South Wales (down 0.5 percentage points to 33.1%), South Australia (down 0.2 percentage points to 9.4%) and Tasmania (down 0.1 percentage points to 2.4%). Both Territories maintained their minor shares of Australian manufacturing employment over the period.

TURNOVER (TABLES 1 AND 2)

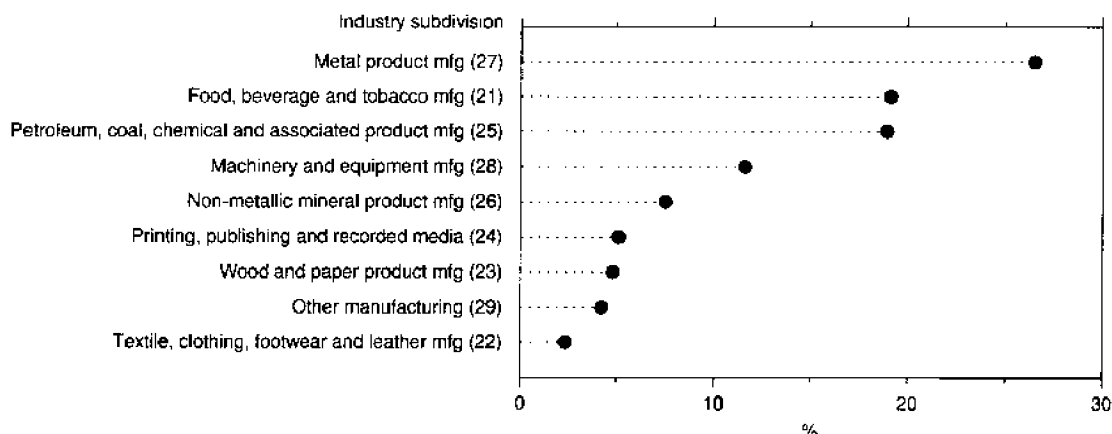
Turnover for the year 1994-95 by manufacturing establishments operating in Western Australia was \$14,684m. This represents a 6.6% increase, in current price terms, from \$13,778m turnover recorded for the year 1993-94. Metal product manufacturing remains the industry subdivision with the largest contribution to turnover in the manufacturing industry. However, Food, beverage and tobacco manufacturing is now the second largest contributor, ahead of Petroleum, coal, chemical and associated product manufacturing.

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

- Metal product manufacturing (26.5%), where the industry group Basic non-ferrous metal manufacturing (ANZSIC group 272 at 16.5%) and the industry class Structural steel fabricating (ANZSIC class 2741 at 3.0%) were the most substantial.
- Food, beverage and tobacco manufacturing (19.1%), where the industry classes Meat processing (ANZSIC class 2111 at 3.5%), Seafood processing (ANZSIC class 2173 at 2.9%) and Beer and malt manufacturing (ANZSIC class 2182 at 1.9%) were the most substantial.
- Petroleum, coal, chemical and associated product manufacturing (18.9%), where the data for the most significant industry groups and classes are not available for publication.
- Machinery and equipment manufacturing (11.6%), where the industry classes Mining and construction machinery manufacturing (ANZSIC class 2862 at 1.8%) and Shipbuilding (ANZSIC class 2821 at 1.1%) were the most substantial.

Industry classes making a notable contribution to total turnover and not included in the subdivisions listed above included Newspaper printing or publishing (ANZSIC class 2421 at 2.5%) and Printing (ANZSIC class 2412 at 1.8%).

Distribution of turnover



SUMMARY OF FINDINGS *continued*

The percentage contribution by Western Australia to total Australian manufacturing turnover in 1994-95 was 7.7%. This represents an increase of 0.2 percentage points on the contribution reported in 1993-94. The percentage contribution to turnover by the other States and Territories in 1994-95 was: New South Wales 33.9%, Victoria 31.8%, Queensland 14.5%, South Australia 9.2%, Tasmania 2.3%, the Northern Territory 0.4% and the Australian Capital Territory 0.3%.

The Western Australian industry subdivisions which made a significant contribution to national manufacturing turnover in 1994-95 at the industry subdivision level were Non-metallic mineral product manufacturing (12.3%), Metal product manufacturing (11.2%) and Other manufacturing (10.7%).

Longer term trends (1989-90 to 1994-95)

Turnover for the manufacturing industry in Western Australia increased, in current price terms, by 9.3% over the period 1989-90 to 1994-95. Eight industry subdivisions recorded increases and one recorded a decrease over the same period. The industry subdivisions with the largest percentage increases were Non-metallic mineral product manufacturing (up 29.3% from \$857m to \$1,107m), Textile, clothing, footwear and leather manufacturing (up 28.1% from \$265m to \$339m), Machinery and equipment manufacturing (up 26.7% from \$1,340m to \$1,697m) and Printing, publishing and recorded media (up 26.3% from \$595m to \$752m). The only decrease was recorded in Metal product manufacturing (down 11.1% from \$4,382m to \$3,894m).

Three of the States recorded a decrease in their contribution to Australian turnover between 1989-90 and 1994-95. Western Australia decreased its contribution by 0.2 percentage points (to 7.7% of Australian turnover), as did Victoria (down 1.0 percentage points to 31.8%) and Tasmania (down 0.2 percentage points to 2.3%). The three States to record an increase were Queensland (up 0.7 percentage points to 14.5%), New South Wales (up 0.5 percentage points to 33.9%) and South Australia (up 0.3 percentage points to 9.2%). The Northern Territory (at 0.4%) and the Australian Capital Territory (at 0.3%) maintained their share of Australian turnover over the period.

RATIO OF WAGES AND SALARIES TO TURNOVER (TABLES 1 AND 2)

In 1994-95, the ratio of wages and salaries to turnover for Western Australia's manufacturing industry was 0.15; that is, on average, 15 cents in wages and salaries is paid for each \$1.00 of turnover. This ratio has increased from the 0.14 recorded each year from 1989-90 to 1993-94.

Although there was this overall increase in the ratio between 1989-90 and 1994-95, the ratio rose in only two of the nine industry subdivisions for the period. It fell in five industry subdivisions and was the same for both 1989-90 and 1994-95 for the other two industry subdivisions. The industry subdivisions to record an increase were Metal product manufacturing (0.10 to 0.13) and Petroleum, coal, chemical and associated product manufacturing (0.07 to 0.08). The largest falls were recorded by Machinery and equipment manufacturing (0.24 to 0.21), Textile, clothing, footwear and leather manufacturing (0.28 to 0.26) and Other manufacturing (0.23 to 0.21). The ratio was the same for both 1989-90 and 1994-95 for Printing, publishing and recorded media (0.25) and Non-metallic mineral product manufacturing (0.16).

SUMMARY OF FINDINGS *continued*

.....

Of the industries available for publication, the largest ratios of wages and salaries to turnover in 1994-95 were recorded in Wool scouring (ANZSIC class 2211) (0.42), Ceramic product manufacturing n.e.c. (ANZSIC class 2629) (0.42), Men's and boys' wear manufacturing (ANZSIC class 2241) (0.37) and Paper stationery manufacturing (ANZSIC class 2411) (0.36). Of the industries available for publication, the smallest ratios of wages and salaries to turnover were recorded in Pesticide manufacturing (ANZSIC class 2544) (0.05), Seafood processing (ANZSIC class 2173) (0.06), Prepared animal and bird feed manufacturing (ANZSIC class 2174) (0.06) and Synthetic resin manufacturing (ANZSIC class 2533) (0.06).

TURNOVER PER PERSON EMPLOYED (TABLES 1 AND 2)

Turnover per person employed for total manufacturing in Western Australia for 1994-95 was \$205,900, which is 2.3% lower than the figure recorded 12 months earlier. Petroleum, coal, chemical and associated product manufacturing has continued to comprise a substantially larger share of turnover than of employment, which has resulted in this subdivision again recording a substantially higher value of turnover per person employed (\$469,500) than other subdivisions in the manufacturing industry. Textile, clothing, footwear and leather manufacturing recorded the lowest value for this ratio (\$86,600). 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.

GROSS PRODUCT AT FACTOR COST (AVERAGE 1989-90 PRICES) (TABLE 3)

Constant price estimates of gross product at factor cost are the most accurate measure of the relative growth or decline of the manufacturing industry, as they discount the impact of price changes. In constant price terms, manufacturing gross product at factor cost increased by 4.4% from \$5,021m in 1993-94 to \$5,244m in 1994-95.

Seven of the nine industry subdivisions recorded an increase in constant price estimates of gross product at factor cost over the period 1993-94 to 1994-95. The largest percentage increases were recorded by Machinery and equipment manufacturing (up 14.2%), Printing, publishing and recorded media (up 13.8%) and Other manufacturing (up 12.2%). Metal product manufacturing (down 2.9%) and Wood and paper product manufacturing (down 2.6%) recorded the decreases.

Longer term trends (1989-90 to 1994-95)

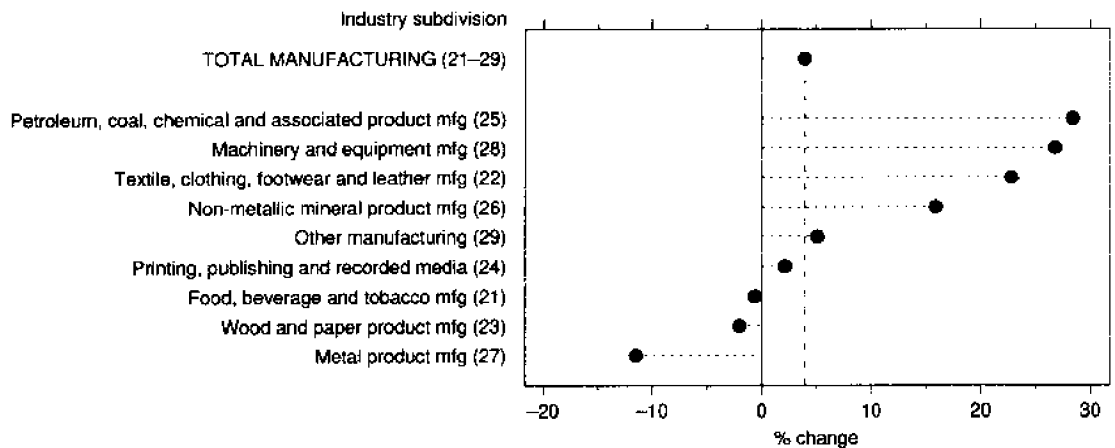
Over the period 1989-90 to 1994-95, manufacturing gross product at factor cost in constant price terms increased by 3.9%. Six industry subdivisions recorded an increase with the other three industry subdivisions recording decreases.

The largest percentage increases were recorded by Petroleum, coal, chemical and associated product manufacturing (up 28.4%), Machinery and equipment manufacturing (up 26.8%) and Textile, clothing, footwear and leather manufacturing (up 22.8%). The largest percentage decrease was recorded by Metal product manufacturing (down 11.5%).

SUMMARY OF FINDINGS *continued*

Over the period 1989-90 to 1994-95, there was an increase in gross product per person employed (average 1989-90 prices) of 3.7%. Eight of the nine industry subdivisions recorded an increase over this period. The largest percentage increases were recorded by Petroleum, coal, chemical and associated product manufacturing (up 24.5%), Machinery and equipment manufacturing (up 24.4%) and Textile, clothing, footwear and leather manufacturing (up 17.1%). The industry subdivision to record a decrease over this period was Metal product manufacturing (down 10.6%).

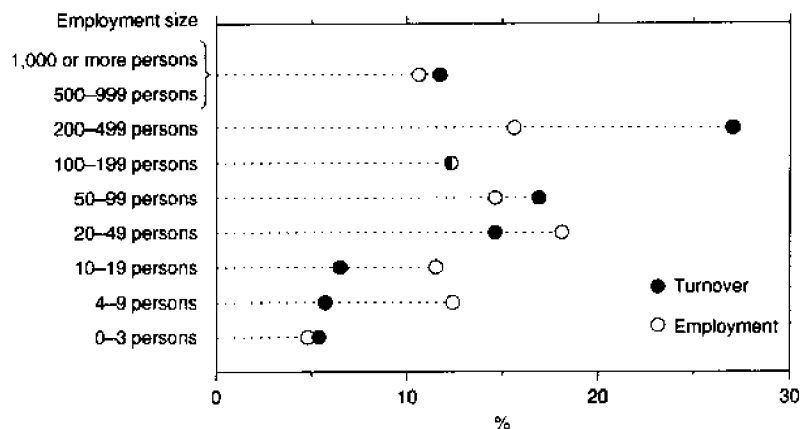
Gross product at factor cost (1989-90 prices), 1989-90 to 1994-95



EMPLOYMENT SIZE (TABLE 4)

Large establishments (i.e. those employing 100 or more persons) accounted for 38.6% of employment at the end of June 1995 and 51.0% of manufacturing turnover for 1994-95. Establishments employing 20-99 persons accounted for 32.7% of employment and 31.4% of turnover. Small establishments (i.e. those employing 0-19 persons) accounted for 28.8% of employment and 17.6% of turnover. Manufacturing establishments employing 500 or more persons at the end of June 1995 employed 10.6% of all persons working in the manufacturing industry in Western Australia and contributed 11.7% of all manufacturing turnover.

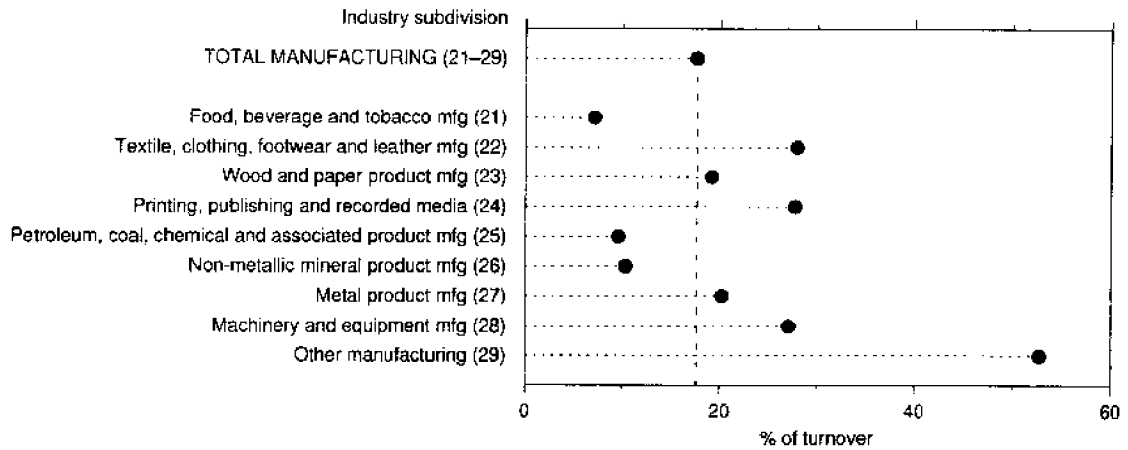
Distribution of manufacturing turnover and employment



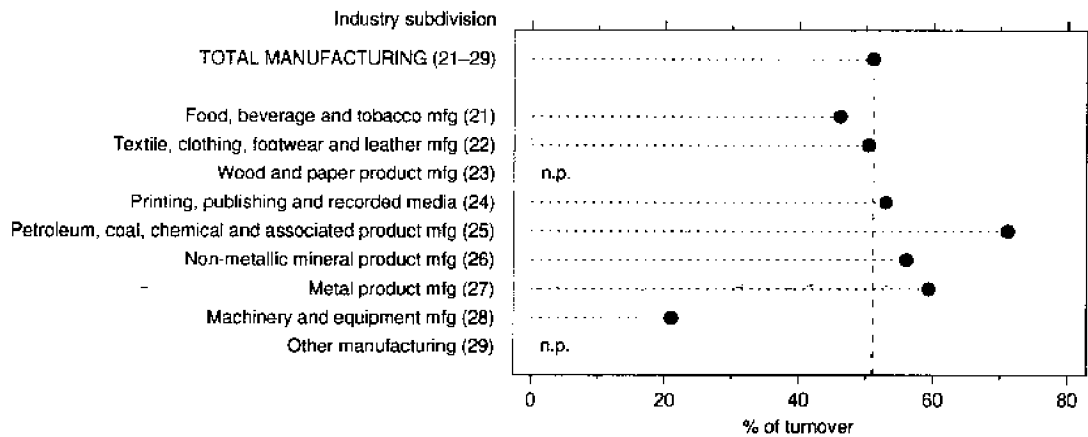
SUMMARY OF FINDINGS *continued*

For five of the seven industry subdivisions available for publication, more than 50% of turnover was contributed by large establishments (employing 100 or more persons). The industries where large establishments contributed most to turnover were Petroleum, coal, chemical and associated product manufacturing (71.1%), Metal product manufacturing (59.4%) and Non-metallic mineral product manufacturing (56.0%). Small establishments (employing 0–19 persons) made a relatively significant contribution to turnover for Other manufacturing (52.7%).

Distribution of turnover by employment size, 0–19 persons



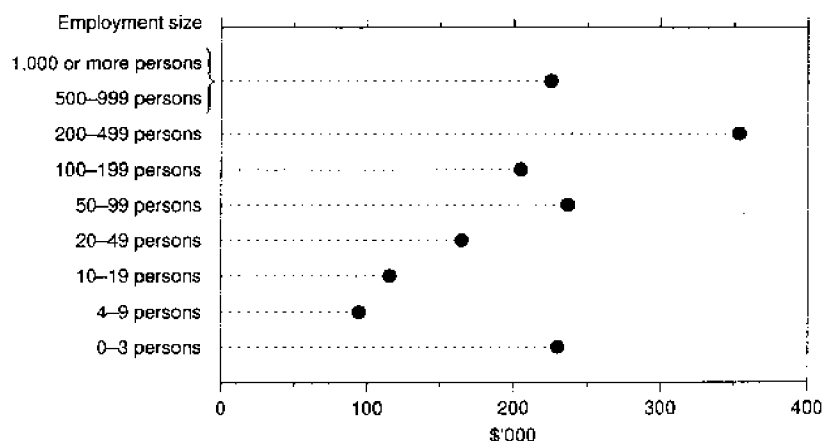
Distribution of turnover by employment size, 100 or more persons



Whilst establishments employing 0–3 persons recorded a relatively high ratio of turnover per person employed at the end of June 1995 (\$230,200), small establishments (employing 0–19 persons) displayed a much lower ratio of turnover per person employed at the end of June 1995 (\$125,400) than establishments in the larger size categories. Large establishments (employing 100 or more persons) recorded an average turnover per person employed of \$270,800, with establishments employing between 200 and 499 persons having a ratio of \$353,700.

SUMMARY OF FINDINGS *continued*

Turnover per person employed



EXPORTS BY MANUFACTURERS (TABLES 5 AND 6)

It should be noted that tables 5 and 6 do not include all exports of goods manufactured in Western Australia. Rather, they show the extent to which Western Australian manufacturers are directly involved in the export process. Further information about the data in tables 5 and 6 is contained in paragraphs 26 to 29 of the Explanatory notes.

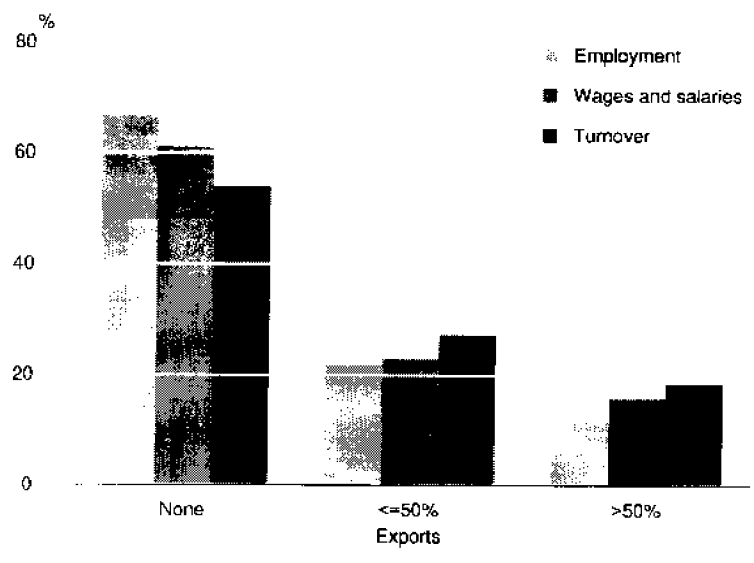
For 1994-95, the percentage of the sales of goods produced in the manufacturing industry which were subsequently exported was 19.5%. The Metal product manufacturing industry subdivision recorded the highest percentage contribution with 33.7%, followed by Petroleum, coal, chemical and associated product manufacturing (18.7%), Machinery and equipment manufacturing (18.3%), Food, beverage and tobacco manufacturing (16.8%) and Wood and paper product manufacturing (16.8%). The industry subdivisions to record the smallest percentage contribution were Printing, publishing and recorded media (0.4%) and Other manufacturing (2.0%).

The percentage of the sales of goods produced in the manufacturing industry which were subsequently exported varied according to employment size. Establishments employing 100 or more persons recorded the largest contribution with 21.3%, while establishments employing 50-99 persons recorded the smallest contribution with 12.9%.

Establishments that export contributed over one-third to manufacturing activity in Western Australia, with a proportion of employment (33.3%), wages and salaries (38.8%) and turnover (46.0%). Establishments that export more than 50% of their sales of goods produced accounted for 11.7% of employment and 18.6% of turnover in the manufacturing industry.

SUMMARY OF FINDINGS *continued*

Distribution of selected variables by proportion of goods exported



LIST OF TABLES

	Page
1 Summary of operations by industry subdivision, 1989-90 to 1994-95	17
2 Summary of operations by industry class	19
3 Percentage change in gross product (1989-90 prices) by industry subdivision, 1989-90 to 1994-95	24
4 Summary of operations by employment size and industry subdivision	25
5 Exports of goods produced by broad employment size and industry subdivision	29
6 Summary of operations by proportion of exports and industry subdivision	30

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

INDUSTRY SUBDIVISION		Employment at end of June(c)	Wages and salaries(d)(e)	Turnover(e)	Ratio of wages and salaries to turnover(e)	Turnover per person employed(e)(f)	
ANZSIC code	Description	'000	\$m	\$m	Ratio	\$'000	
21	Food, beverage and tobacco mfg	1994-95	12.3	339.8	2 810.6	0.12	228.4
		1993-94	10.9	312.5	2 673.8	0.12	244.3
		1992-93	11.6	327.6	2 621.4	0.12	226.0
		1991-92	11.6	316.5	2 606.4	0.12	224.9
		1990-91	12.5	311.3	2 556.3	0.12	204.6
		1989-90	12.7	303.1	2 408.6	0.13	189.3
22	Textile, clothing, footwear and leather mfg	1994-95	3.9	88.2	338.9	0.26	86.6
		1993-94	3.4	78.2	296.7	0.26	87.3
		1992-93	3.2	70.4	269.9	0.26	83.7
		1991-92	3.2	70.4	261.4	0.27	82.2
		1990-91	3.4	72.6	269.9	0.27	79.4
		1989-90	3.7	73.2	264.6	0.28	71.0
23	Wood and paper product mfg	1994-95	4.5	125.3	698.2	0.18	154.4
		1993-94	4.5	126.5	691.6	0.18	152.8
		1992-93	4.6	117.4	641.5	0.18	140.8
		1991-92	4.2	105.4	590.8	0.18	141.6
		1990-91	4.3	110.0	582.8	0.19	135.3
		1989-90	4.8	112.7	591.2	0.19	123.8
24	Printing, publishing and recorded media	1994-95	6.3	186.2	751.9	0.25	118.6
		1993-94	6.0	169.4	645.0	0.26	107.4
		1992-93	5.5	151.9	603.9	0.25	109.5
		1991-92	5.7	145.9	584.3	0.25	101.7
		1990-91	6.1	151.2	576.4	0.26	94.5
		1989-90	6.3	150.9	595.1	0.25	94.6
25	Petroleum, coal, chemical and associated product mfg	1994-95	5.9	218.7	2 772.0	0.08	469.5
		1993-94	5.3	195.2	2 738.7	0.07	512.9
		1992-93	5.2	185.6	2 742.2	0.07	523.6
		1991-92	5.5	184.8	2 803.9	0.07	510.0
		1990-91	5.5	186.7	2 699.6	0.07	488.1
		1989-90	5.7	176.9	2 469.5	0.07	431.4
26	Non-metallic mineral product mfg	1994-95	5.3	172.6	1 107.4	0.16	209.1
		1993-94	4.8	153.7	983.9	0.16	205.3
		1992-93	4.8	135.6	889.5	0.15	186.0
		1991-92	4.7	137.4	775.4	0.18	165.7
		1990-91	4.3	132.3	720.5	0.18	166.8
		1989-90	4.8	139.1	856.5	0.16	180.1

For footnotes see end of table.

1

MFG ESTABLISHMENTS(a), Summary of Operations(b) *continued*

INDUSTRY SUBDIVISION			Employment at end of June(c)	Wages and salaries(d)(e)	Turnover(e)	Ratio of wages and salaries to turnover(e)	Turnover per person employed(e)(f)
ANZSIC code	Description		'000	\$m	\$m	Ratio	\$'000
27	Metal product mfg	1994-95	14.8	517.6	3 893.9	0.13	263.7
		1993-94	14.0	487.8	3 664.6	0.13	261.6
		1992-93	14.4	493.8	3 899.7	0.13	271.6
		1991-92	13.7	465.4	3 579.8	0.13	261.9
		1990-91	14.0	445.3	4 221.0	0.11	301.4
		1989-90	14.9	453.4	4 382.2	0.10	294.0
28	Machinery and equipment mfg	1994-95	12.5	355.6	1 697.5	0.21	136.2
		1993-94	10.8	298.2	1 551.9	0.19	143.9
		1992-93	10.5	282.9	1 380.3	0.20	131.3
		1991-92	10.1	280.7	1 209.2	0.23	120.0
		1990-91	10.4	281.2	1 172.4	0.24	112.2
		1989-90	12.2	315.7	1 339.8	0.24	109.6
29	Other manufacturing	1994-95	5.8	129.9	614.1	0.21	106.0
		1993-94	5.6	116.5	531.6	0.22	95.6
		1992-93	5.2	107.4	462.3	0.23	88.3
		1991-92	5.2	105.2	439.2	0.24	84.7
		1990-91	5.1	104.7	432.8	0.24	84.4
		1989-90	6.0	118.4	521.9	0.23	86.7
21-29 Total manufacturing		1994-95	71.3	2 133.9	14 684.5	0.15	205.9
		1993-94	65.4	1 938.1	13 777.8	0.14	210.8
		1992-93	65.0	1 872.5	13 510.9	0.14	207.8
		1991-92	63.8	1 811.6	12 850.4	0.14	201.4
		1990-91	65.7	1 795.2	13 231.6	0.14	201.3
		1989-90	71.2	1 843.4	13 429.4	0.14	188.7

(a) See paragraph 8 of the Explanatory notes.

(b) For factors affecting comparability of data over the time periods shown, see paragraphs 15 to 18 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.

MFG ESTABLISHMENTS(a), Summary of Operations by Industry Class

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed(d)
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
FOOD, BEVERAGE AND TOBACCO MFG						
Meat and meat product mfg						
2111	Meat processing	2 549	71.5	509.0	0.14	199.7
2112	Poultry processing	775	n.p.	n.p.	n.p.	n.p.
2113	Bacon, ham and smallgoods mfg	670	n.p.	n.p.	n.p.	n.p.
211	Total	3 994	111.2	781.7	0.14	195.7
Dairy product mfg						
2121	Milk and cream processing	516	n.p.	n.p.	n.p.	n.p.
2122	Ice cream mfg	108	n.p.	n.p.	n.p.	n.p.
2129	Dairy product mfg n.e.c.	258	n.p.	n.p.	n.p.	n.p.
212	Total	882	33.4	316.8	0.11	359.2
213	Fruit and vegetable processing	378	n.p.	n.p.	n.p.	n.p.
214	Oil and fat mfg	155	n.p.	n.p.	n.p.	n.p.
Flour mill and cereal food mfg						
2151	Flour mill product mfg	200	6.6	77.4	0.09	387.2
2152	Cereal food and baking mix mfg	160	2.9	21.7	0.13	136.2
215	Total	360	9.5	99.1	0.10	275.8
Bakery product mfg						
2161	Bread mfg	1 057	27.7	116.1	0.24	109.9
2162	Cake and pastry mfg	749	16.8	64.7	0.26	86.3
2163	Biscuit mfg	**26	*0.2	**0.8	**0.21	*32.2
216	Total	1 832	44.7	181.6	0.25	99.1
Other food mfg						
2171	Sugar mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2172	Confectionery mfg	97	1.3	7.9	0.16	81.3
2173	Seafood processing	1 367	26.8	427.0	0.06	312.3
2174	Prepared animal and bird feed mfg	381	9.8	150.7	0.06	395.9
2179	Food mfg n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.
217	Total	2 846	66.8	757.6	0.09	266.2
Beverage and malt mfg						
2181	Soft drink, cordial and syrup mfg	759	27.9	232.9	0.12	306.9
2182	Beer and malt mfg	402	21.7	275.7	0.08	685.2
2183	Wine mfg	665	11.2	64.5	0.17	96.9
2184	Spirit mfg	32	0.5	3.1	0.17	96.3
218	Total	1 858	61.3	576.2	0.11	310.0
219	Tobacco product mfg	—	—	—	—	—
21	Total food, beverage and tobacco mfg	12 305	339.8	2 810.6	0.12	228.4
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG						
Textile fibre, yarn and woven fabric mfg						
2211	Wool scouring	173	5.6	13.6	0.42	78.5
2212	Synthetic fibre textile mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2213	Cotton textile mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2214	Wool textile mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2215	Textile finishing	n.p.	n.p.	n.p.	n.p.	n.p.
221	Total	751	n.p.	n.p.	n.p.	n.p.
Textile product mfg						
2221	Made-up textile product mfg	1 262	29.4	121.0	0.24	95.9
2222	Textile floor covering mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2223	Rope, cordage and twine mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2229	Textile product mfg n.e.c.	70	1.2	4.0	0.30	57.5
222	Total	1 368	31.1	127.0	0.24	92.8

For footnotes see end of table.

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed(d)
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
Knitting mills						
2231	Hosiery mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2232	Cardigan and pullover mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2239	Knitting mill product mfg n.e.c.	52	1.0	2.9	0.34	54.8
223	Total	n.p.	n.p.	n.p.	n.p.	n.p.
Clothing mfg						
2241	Men's and boys' wear mfg	296	5.3	14.3	0.37	48.3
2242	Women's and girls' wear mfg	278	4.1	15.4	0.26	55.2
2243	Sleepwear, underwear and infant clothing mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2249	Clothing mfg n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.
224	Total	933	16.5	61.9	0.27	66.3
225	Footwear mfg	n.p.	n.p.	n.p.	n.p.	n.p.
Leather and leather product mfg						
2261	Leather tanning and fur dressing	294	6.7	39.9	0.17	135.8
2262	Leather and leather substitute product mfg	135	3.0	10.6	0.28	78.8
226	Total	429	9.7	50.6	0.19	117.9
22	Total textile, clothing, footwear and leather mfg	3 912	88.2	338.9	0.26	86.6
WOOD AND PAPER PRODUCT MFG						
Log sawmilling and timber dressing						
2311	Log sawmilling	1 068	27.8	107.4	0.26	100.6
2312	Wood chipping	n.p.	n.p.	n.p.	n.p.	n.p.
2313	Timber resawing and dressing	515	13.5	78.4	0.17	152.1
231	Total	n.p.	n.p.	n.p.	n.p.	n.p.
Other wood product mfg						
2321	Plywood and veneer mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2322	Fabricated wood mfg	609	n.p.	n.p.	n.p.	n.p.
2323	Wooden structural component mfg	901	17.8	82.1	0.22	91.1
2329	Wood product mfg n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.
232	Total	2 360	59.8	310.1	0.19	131.4
Paper and paper product mfg						
2331	Pulp, paper and paperboard mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2332	Solid paperboard container mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2333	Corrugated paperboard container mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2334	Paper bag and sack mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2339	Paper product mfg n.e.c.	26	0.2	2.2	0.11	84.6
233	Total	n.p.	n.p.	n.p.	n.p.	n.p.
23	Total wood and paper product mfg	4 522	125.3	698.2	0.18	154.4
PRINTING, PUBLISHING AND RECORDED MEDIA						
Printing and services to printing						
2411	Paper stationery mfg	487	13.2	37.0	0.36	76.1
2412	Printing	2 425	65.1	262.9	0.25	108.4
2413	Services to printing	440	11.6	35.1	0.33	79.7
241	Total	3 352	89.9	335.0	0.27	99.9
Publishing						
2421	Newspaper printing or publishing	2 570	85.6	372.6	0.23	145.0
2422	Other periodical publishing	213	5.1	20.8	0.25	97.3
2423	Book and other publishing	104	1.9	8.6	0.22	83.0
242	Total	2 887	92.6	402.0	0.23	139.2
243	Recorded media manufacturing and publishing	99	3.6	14.9	0.24	149.8
24	Total printing, publishing and recorded media	6 338	186.2	751.9	0.25	118.6

For footnotes see end of table.

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed(d)
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG						
251	Petroleum refining	n.p.	n.p.	n.p.	n.p.	n.p.
252	Petroleum and coal product mfg n.e.c.	83	n.p.	n.p.	n.p.	n.p.
Basic chemical mfg						
2531	Fertiliser mfg	484	n.p.	n.p.	n.p.	n.p.
2532	Industrial gas mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2533	Synthetic resin mfg	32	0.7	10.6	0.06	328.7
2534	Organic industrial chemical mfg n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.
2535	Inorganic industrial chemical mfg n.e.c.	1 033	n.p.	n.p.	n.p.	n.p.
253	Total	1 744	79.5	742.2	0.11	425.7
Other chemical product mfg						
2541	Explosive mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2542	Paint mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2543	Medicinal and pharmaceutical product mfg	370	n.p.	n.p.	n.p.	n.p.
2544	Pesticide mfg	213	7.6	144.8	0.05	679.3
2545	Soap and other detergent mfg	207	4.5	30.9	0.15	149.7
2546	Cosmetic and toiletry preparation mfg	56	1.0	5.6	0.17	100.9
2547	Ink mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2549	Chemical product mfg n.e.c.	98	3.0	32.4	0.09	331.7
254	Total	n.p.	n.p.	n.p.	n.p.	n.p.
Rubber product mfg						
2551	Rubber tyre mfg	126	3.6	18.3	0.19	144.6
2559	Rubber product mfg n.e.c.	211	5.6	27.0	0.21	128.1
255	Total	337	9.2	45.3	0.20	134.3
Plastic product mfg						
2561	Plastic blow moulded product mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2562	Plastic extruded product mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2563	Plastic bag and film mfg	379	n.p.	n.p.	n.p.	n.p.
2564	Plastic product, rigid fibre reinforced, mfg	214	4.7	26.6	0.18	124.0
2565	Plastic foam product mfg	106	n.p.	n.p.	n.p.	n.p.
2566	Plastic injection moulded product mfg	720	18.8	81.8	0.23	113.7
256	Total	1 711	48.6	269.1	0.18	157.3
25	Total petroleum, coal, chemical and associated product mfg	5 904	218.7	2 772.0	0.08	469.5
NON-METALLIC MINERAL PRODUCT MFG						
261	Glass and glass product mfg	484	n.p.	n.p.	n.p.	n.p.
Ceramic mfg						
2621	Clay brick mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2622	Ceramic product mfg	99	3.4	11.7	0.29	117.4
2623	Ceramic tile and pipe mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2629	Ceramic product mfg n.e.c.	280	5.6	13.1	0.42	46.9
262	Total	1 710	n.p.	n.p.	n.p.	n.p.
Cement, lime, plaster and concrete product mfg						
2631	Cement and lime mfg	711	22.6	246.1	0.09	346.3
2632	Plaster product mfg	277	9.2	58.9	0.16	212.9
2633	Concrete slurry mfg	516	16.8	186.7	0.09	361.9
2634	Concrete pipe and box culvert mfg	217	9.3	41.6	0.22	191.5
2635	Concrete product mfg n.e.c.	1 082	36.8	209.0	0.18	193.3
263	Total	2 803	94.6	742.4	0.13	264.9
264	Non-metallic mineral product mfg n.e.c.	299	7.7	46.2	0.17	154.4
26	Total non-metallic mineral product mfg	5 296	172.6	1 107.4	0.16	209.1

For footnotes see end of table.

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed(d)
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
METAL PRODUCT MFG						
Iron and steel mfg						
2711	Basic iron and steel mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2712	Iron and steel casting and forging	635	19.8	71.2	0.28	112.1
2713	Steel pipe and tube mfg	n.p.	n.p.	n.p.	n.p.	n.p.
271	<i>Total</i>	979	33.8	234.0	0.14	238.9
Basic non-ferrous metal mfg						
2721	Alumina production	n.p.	n.p.	n.p.	n.p.	n.p.
2722	Aluminium smelting	—	—	—	—	—
2723	Copper, silver, lead and zinc smelting, refining	n.p.	n.p.	n.p.	n.p.	n.p.
2729	Basic non-ferrous metal mfg n.e.c.	763	n.p.	n.p.	n.p.	n.p.
272	<i>Total</i>	4 780	240.3	2 420.0	0.10	506.3
Non-ferrous basic metal product mfg						
2731	Aluminium rolling, drawing, extruding	n.p.	n.p.	n.p.	n.p.	n.p.
2732	Non-ferrous metal rolling, drawing, extruding n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.
2733	Non-ferrous metal casting	n.p.	n.p.	n.p.	n.p.	n.p.
273	<i>Total</i>	223	n.p.	n.p.	n.p.	n.p.
Structural metal product mfg						
2741	Structural steel fabricating	2 831	84.5	438.4	0.19	154.8
2742	Architectural aluminium product mfg	1 481	35.2	199.5	0.18	134.7
2749	Structural metal product mfg n.e.c.	597	15.0	81.1	0.18	135.8
274	<i>Total</i>	4 910	134.7	718.9	0.19	146.4
Sheet metal product mfg						
2751	Metal container mfg	367	n.p.	n.p.	n.p.	n.p.
2759	Sheet metal product mfg n.e.c.	1 121	32.1	130.8	0.25	116.7
275	<i>Total</i>	1 488	n.p.	n.p.	n.p.	n.p.
Fabricated metal product mfg						
2761	Hand tool and general hardware mfg	42	1.3	4.3	0.31	102.6
2762	Spring and wire product mfg	351	8.2	58.8	0.14	167.4
2763	Nut, bolt, screw and rivet mfg	75	1.5	6.2	0.24	83.1
2764	Metal coating and finishing	630	15.4	52.7	0.29	83.5
2765	Non-ferrous pipe fitting mfg	119	3.1	14.2	0.22	119.8
2769	Fabricated metal product mfg n.e.c.	1 169	26.2	98.8	0.26	84.5
276	<i>Total</i>	2 386	55.6	234.9	0.24	98.5
27	Total metal product mfg	14 765	517.6	3 893.9	0.13	263.7
MACHINERY AND EQUIPMENT MFG						
Motor vehicle and part mfg						
2811	Motor vehicle mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2812	Motor vehicle body mfg	755	16.1	76.9	0.21	102.0
2813	Automotive electrical and instrument mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2819	Automotive component mfg n.e.c.	801	18.1	67.0	0.27	83.6
281	<i>Total</i>	2 046	51.2	168.5	0.30	82.4
Other transport equipment mfg						
2821	Shipbuilding	657	23.5	166.1	0.14	252.9
2822	Boatbuilding	723	12.2	70.5	0.17	97.6
2823	Railway equipment mfg	354	n.p.	n.p.	n.p.	n.p.
2824	Aircraft mfg	307	12.1	41.5	0.29	134.9
2829	Transport equipment mfg n.e.c.	52	n.p.	n.p.	n.p.	n.p.
282	<i>Total</i>	2 094	60.5	359.5	0.17	171.7

For footnotes see end of table.

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Turnover	Ratio of wages and salaries to turnover	Turnover per person employed(d)
ANZSIC code	Description	No.	\$m	\$m	Ratio	\$'000
Photographic and scientific equipment mfg						
2831	Photographic and optical good mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2832	Medical and surgical equipment mfg	418	7.4	25.5	0.29	61.0
2839	Professional and scientific equipment mfg n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.
283	<i>Total</i>	682	14.8	56.4	0.26	82.7
Electronic equipment mfg						
2841	Computer and business machine mfg	229	7.8	43.3	0.18	189.0
2842	Telecommunication, broadcasting and transceiving equipment mfg	334	16.4	76.0	0.22	227.4
2849	Electronic equipment mfg n.e.c.	750	21.0	101.7	0.21	135.6
284	<i>Total</i>	1 313	45.2	220.9	0.20	168.2
Electrical equipment and appliance mfg						
2851	Household appliance mfg	522	11.9	57.7	0.21	110.6
2852	Electric cable and wire mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2853	Battery mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2854	Electric light and sign mfg	113	3.0	8.6	0.34	76.1
2859	Electrical equipment mfg n.e.c.	541	17.3	78.1	0.22	144.4
285	<i>Total</i>	1 289	36.5	169.1	0.22	131.2
Industrial machinery and equipment mfg						
2861	Agricultural machinery mfg	507	12.1	64.3	0.19	126.7
2862	Mining and construction machinery mfg	1 422	47.3	271.6	0.17	191.0
2863	Food processing machinery mfg	43	1.0	3.4	0.28	79.7
2864	Machine tool and part mfg	294	7.1	26.7	0.27	90.8
2865	Lifting and material handling equipment mfg	821	27.4	124.5	0.22	151.7
2866	Pump and compressor mfg	292	7.6	31.6	0.24	108.5
2867	Commercial space heating and cooling equipment mfg	330	10.1	55.1	0.18	166.8
2869	Industrial machinery and equipment mfg n.e.c.	1 331	34.9	145.7	0.24	109.5
286	<i>Total</i>	5 040	147.4	723.0	0.20	143.4
28	Total machinery and equipment mfg	12 464	355.6	1 697.5	0.21	136.2
OTHER MANUFACTURING						
Prefabricated building mfg						
2911	Prefabricated metal building mfg	n.p.	n.p.	n.p.	n.p.	n.p.
2919	Prefabricated building mfg n.e.c.	n.p.	n.p.	n.p.	n.p.	n.p.
291	<i>Total</i>	384	11.0	98.4	0.11	256.2
Furniture mfg						
2921	Wooden furniture and upholstered seat mfg	3 013	63.2	255.8	0.25	84.9
2922	Sheet metal furniture mfg	324	7.8	46.5	0.17	143.8
2923	Mattress mfg (except rubber)	250	6.6	40.9	0.16	163.5
2929	Furniture mfg n.e.c.	841	18.2	80.2	0.23	95.4
292	<i>Total</i>	4 428	95.8	423.5	0.23	95.6
Miscellaneous manufacturing						
2941	Jewellery and silverware mfg	237	n.p.	n.p.	n.p.	n.p.
2942	Toy and sporting good mfg	163	3.5	15.2	0.23	93.4
2949	Manufacturing n.e.c.	584	n.p.	n.p.	n.p.	n.p.
294	<i>Total</i>	984	23.1	92.2	0.25	93.7
29	Total other manufacturing	5 796	129.9	614.1	0.21	106.0
21-29	TOTAL MANUFACTURING	71 303	2 133.9	14 684.5	0.15	205.9

(a) See paragraph 8 of the Explanatory notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

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

3

MFG ESTABLISHMENTS(a), Percentage Change in Gross Product(b) (1989-90 Prices)(c)

1989-90 TO 1994-95

INDUSTRY SUBDIVISION							Change in gross product per person employed(d)(e)	
ANZSIC code	Description	1989-90 to 1990-91	1990-91 to 1991-92	1991-92 to 1992-93	1992-93 to 1993-94	1993-94 to 1994-95	Percentage movement	
21	Food, beverage and tobacco mfg	3.0	-0.5	-4.8	-1.7	3.7	-0.6	2.8
22	Textile, clothing, footwear and leather mfg	0.3	-3.5	2.2	13.7	9.2	22.8	17.1
23	Wood and paper product mfg	-7.8	-1.9	8.6	2.5	-2.6	-2.0	3.6
24	Printing, publishing and recorded media	-8.0	-3.9	-0.8	2.4	13.8	2.1	1.4
25	Petroleum, coal, chemical and associated product mfg	5.6	1.8	3.9	5.6	9.0	28.4	24.5
26	Non-metallic mineral product mfg	-22.7	4.7	13.0	14.8	10.3	15.9	4.1
27	Metal product mfg	-4.0	-3.4	-0.5	-1.2	-2.9	-11.5	-10.6
28	Machinery and equipment mfg	-12.4	2.2	6.7	16.2	14.2	26.8	24.4
29	Other manufacturing	-20.8	-0.1	3.9	14.0	12.2	5.1	9.1
21-29	Total manufacturing	-4.6	-1.0	1.6	3.7	4.4	3.9	3.7

(a) See paragraph 8 of the Explanatory notes.

(b) For information on gross product at factor cost, see paragraphs 22 to 24 of the Explanatory notes.

(c) For factors affecting comparability of data over the time periods shown, see paragraphs 15 to 18 of the Explanatory notes.

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

(e) The basis for the calculation of this data item in this (and the 1993-94) issue of the publication differs from that used in the 1992-93 issue of the publication. See paragraph 19 of the Explanatory notes.

4

MFG ESTABLISHMENTS(a), Summary of Operations by Employment Size

Employment size group	EMPLOYMENT AT END OF JUNE(b).....		WAGES AND SALARIES(c)(d)...		TURNOVER(d).....		Ratio of wages and salaries to turnover(d)	Turnover per person employed(d)(e)
	Number	Proportion	Amount	Proportion	Amount	Proportion		
	No.	%	\$m	%	\$m	%		
FOOD, BEVERAGE AND TOBACCO MFG								
0-3 persons	157	1.3	2.0	0.6	13.6	0.5	0.15	86.4
4-9 persons	684	5.6	10.1	3.0	68.1	2.4	0.15	99.6
10-19 persons	759	6.2	14.3	4.2	117.7	4.2	0.12	155.0
20-49 persons	2 193	17.8	57.4	16.9	501.7	17.9	0.11	228.8
50-99 persons	2 444	19.9	69.2	20.4	813.1	28.9	0.09	332.7
<i>Total less than 100 persons</i>	<i>6 237</i>	<i>50.7</i>	<i>153.0</i>	<i>45.1</i>	<i>1 514.2</i>	<i>53.9</i>	<i>0.10</i>	<i>242.8</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>6 068</i>	<i>49.3</i>	<i>186.6</i>	<i>54.9</i>	<i>1 295.7</i>	<i>46.1</i>	<i>0.14</i>	<i>213.5</i>
Total	12 305	100.0	339.7	100.0	2 809.9	100.0	0.12	228.4
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG								
0-3 persons	205	5.2	2.7	3.1	17.8	5.2	0.15	86.7
4-9 persons	567	14.5	8.3	9.4	32.1	9.5	0.26	56.5
10-19 persons	504	12.9	9.6	10.9	44.5	13.1	0.22	88.3
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>2 226</i>	<i>56.9</i>	<i>43.6</i>	<i>49.4</i>	<i>167.9</i>	<i>49.6</i>	<i>0.26</i>	<i>75.4</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>1 686</i>	<i>43.1</i>	<i>44.6</i>	<i>50.6</i>	<i>170.8</i>	<i>50.4</i>	<i>0.26</i>	<i>101.3</i>
Total	3 912	100.0	88.1	100.0	338.7	100.0	0.26	86.6
WOOD AND PAPER PRODUCT MFG								
0-3 persons	352	7.8	4.5	3.6	23.5	3.4	0.19	66.8
4-9 persons	679	15.0	12.6	10.1	57.2	8.2	0.22	84.2
10-19 persons	545	12.1	12.6	10.1	53.1	7.6	0.24	97.4
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	808	17.9	28.6	22.9	128.6	18.5	0.22	159.1
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	4 522	100.0	125.0	100.0	696.2	100.0	0.18	154.0

For footnotes see end of table.

Employment size group	EMPLOYMENT AT END OF JUNE(b).....		WAGES AND SALARIES(c)(d)...		TURNOVER(d).....		Ratio of wages and salaries to turnover(d)	Turnover per person employed(d)(e)
	Number	Proportion	Amount	Proportion	Amount	Proportion		
	No.	%	\$m	%	\$m	%		
.....								
PRINTING, PUBLISHING AND RECORDED MEDIA								
0-3 persons	339	5.3	5.1	2.7	22.2	3.0	0.23	65.5
4-9 persons	928	14.6	20.0	10.8	92.3	12.3	0.22	99.4
10-19 persons	1 081	17.1	27.0	14.5	93.5	12.5	0.29	86.5
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.
Total less than 100 persons	3 648	57.6	93.1	50.1	352.9	47.0	0.26	96.7
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	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total 100 or more persons	2 690	42.4	92.9	49.9	397.9	53.0	0.23	147.9
Total	6 338	100.0	186.0	100.0	750.7	100.0	0.25	118.5
.....								
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG								
0-3 persons	186	3.2	3.0	1.4	147.2	5.3	0.02	789.9
4-9 persons	494	8.4	11.7	5.4	66.8	2.4	0.18	135.1
10-19 persons	448	7.6	12.4	5.7	53.5	1.9	0.23	119.5
20-49 persons	1 067	18.1	30.7	14.1	319.4	11.5	0.10	299.3
50-99 persons	577	9.8	19.5	8.9	214.7	7.7	0.09	371.9
Total less than 100 persons	2 773	47.0	77.4	35.4	801.5	28.9	0.10	289.1
100-199 persons	739	12.5	29.2	13.4	229.4	8.3	0.13	310.5
200-499 persons	2 392	40.5	112.1	51.2	1 740.8	62.8	0.06	727.7
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	3 131	53.0	141.3	64.6	1 970.2	71.1	0.07	629.3
Total	5 904	100.0	218.6	100.0	2 771.7	100.0	0.08	469.5
.....								
NON-METALLIC MINERAL PRODUCT MFG								
0-3 persons	125	2.4	1.9	1.1	10.3	0.9	0.18	82.6
4-9 persons	470	8.9	9.1	5.3	50.9	4.6	0.18	108.5
10-19 persons	462	8.7	12.6	7.3	52.9	4.8	0.24	114.6
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.
Total less than 100 persons	2 478	46.8	69.9	40.6	487.0	44.0	0.14	196.5
100-199 persons	1 391	26.3	54.0	31.3	353.2	31.9	0.15	254.0
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	—	—	—	—	—	—	—	—
Total 100 or more persons	2 818	53.2	102.5	59.4	619.7	56.0	0.17	219.9
Total	5 296	100.0	172.4	100.0	1 106.7	100.0	0.16	209.0
.....								

For footnotes see end of table.

4 MFG ESTABLISHMENTS(a), Summary of Operations by Employment Size *continued*

Employment size group	EMPLOYMENT AT END OF JUNE(b).....		WAGES AND SALARIES(c)(d)...		TURNOVER(d)....		Ratio of wages and salaries to turnover(d)	Turnover per person employed(d)(e)
	Number	Proportion	Amount	Proportion	Amount	Proportion		
	No.	%	\$m	%	\$m	%		
							Ratio	\$'000
METAL PRODUCT MFG								
0-3 persons	425	2.9	6.0	1.2	429.8	11.2	0.01	1 010.5
4-9 persons	2 000	13.5	43.0	8.4	205.8	5.4	0.21	102.9
10-19 persons	1 269	8.6	39.6	7.7	142.2	3.7	0.28	112.1
20-49 persons	2 475	16.8	68.4	13.3	353.0	9.2	0.19	142.6
50-99 persons	2 109	14.3	63.7	12.4	429.9	11.2	0.15	203.9
<i>Total less than 100 persons</i>	<i>8 278</i>	<i>56.1</i>	<i>220.7</i>	<i>42.9</i>	<i>1 560.7</i>	<i>40.6</i>	<i>0.14</i>	<i>188.5</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	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total 100 or more persons</i>	<i>6 488</i>	<i>43.9</i>	<i>293.4</i>	<i>57.1</i>	<i>2 282.7</i>	<i>59.4</i>	<i>0.13</i>	<i>351.8</i>
Total	14 765	100.0	514.1	100.0	3 843.4	100.0	0.13	260.3
MACHINERY AND EQUIPMENT MFG								
0-3 persons	929	7.5	15.0	4.3	67.4	4.0	0.22	72.6
4-9 persons	1 463	11.7	29.5	8.4	127.6	7.6	0.23	87.3
10-19 persons	1 916	15.4	48.7	13.8	259.9	15.5	0.19	135.6
20-49 persons	3 464	27.8	98.7	28.0	484.2	28.8	0.20	139.8
50-99 persons	2 200	17.7	75.5	21.4	387.3	23.1	0.19	176.0
<i>Total less than 100 persons</i>	<i>9 972</i>	<i>80.0</i>	<i>267.3</i>	<i>75.9</i>	<i>1 326.4</i>	<i>79.0</i>	<i>0.20</i>	<i>133.0</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>2 493</i>	<i>20.0</i>	<i>84.6</i>	<i>24.1</i>	<i>352.7</i>	<i>21.0</i>	<i>0.24</i>	<i>141.5</i>
Total	12 464	100.0	351.9	100.0	1 679.1	100.0	0.21	134.7
OTHER MANUFACTURING								
0-3 persons	705	12.2	10.0	7.7	56.1	9.2	0.18	79.6
4-9 persons	1 588	27.4	30.8	23.8	136.3	22.3	0.23	85.9
10-19 persons	1 237	21.3	29.9	23.1	129.9	21.2	0.23	105.0
20-49 persons	1 092	18.8	29.6	22.9	139.5	22.8	0.21	127.8
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	5 796	100.0	129.4	100.0	612.3	100.0	0.21	105.6

For footnotes see end of table.

Employment size group	EMPLOYMENT AT END OF JUNE(b).....		WAGES AND SALARIES(c)(d)...		TURNOVER(d).....		Ratio of wages and salaries to turnover(d)	Turnover per person employed(d)(e)
	Number	Proportion	Amount	Proportion	Amount	Proportion		
	No.	%	\$m	%	\$m	%		
TOTAL MANUFACTURING								
0-3 persons	3 423	4.8	50.2	2.4	787.9	5.4	0.06	230.2
4-9 persons	8 875	12.4	175.2	8.2	837.2	5.7	0.21	94.3
10-19 persons	8 221	11.5	206.6	9.7	947.2	6.5	0.22	115.2
20-49 persons	12 901	18.1	358.8	16.9	2 129.0	14.6	0.17	165.0
50-99 persons	10 396	14.6	317.3	14.9	2 462.8	16.9	0.13	236.9
<i>Total less than 100 persons</i>	<i>43 815</i>	<i>61.4</i>	<i>1 108.1</i>	<i>52.1</i>	<i>7 164.2</i>	<i>49.0</i>	<i>0.15</i>	<i>163.5</i>
100-199 persons	8 779	12.3	291.3	13.7	1 797.3	12.3	0.16	204.7
200-499 persons	11 154	15.6	397.1	18.7	3 945.1	27.0	0.10	353.7
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>27 489</i>	<i>38.6</i>	<i>1 017.1</i>	<i>47.9</i>	<i>7 444.7</i>	<i>51.0</i>	<i>0.14</i>	<i>270.8</i>
TOTAL	71 303	100.0	2 125.2	100.0	14 608.8	100.0	0.15	204.9

(a) See paragraph 8 of the Explanatory notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1994-95 but were not operating at 30 June 1995. See paragraph 25 of the Explanatory notes.

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

5

MFG ESTABLISHMENTS(a), Exports of Goods Produced(b) by Broad Employment Size(c)

INDUSTRY SUBDIVISION		0-49 PERSONS.....		50-99 PERSONS.....	
		<i>Amount exported by this business or its agent</i>	<i>Exports as a proportion of sales of goods produced</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	%
21	Food, beverage and tobacco mfg	171.2	26.6	113.1	14.5
22	Textile, clothing, footwear and leather mfg	10.1	9.1	n.p.	n.p.
23	Wood and paper product mfg	n.p.	n.p.	n.p.	n.p.
24	Printing, publishing and recorded media	n.p.	n.p.	n.p.	n.p.
25	Petroleum, coal, chemical and associated product mfg	154.1	27.1	3.7	1.8
26	Non-metallic mineral product mfg	n.p.	n.p.	n.p.	n.p.
27	Metal product mfg	n.p.	n.p.	8.4	2.1
28	Machinery and equipment mfg	111.9	14.4	n.p.	n.p.
29	Other manufacturing	3.7	0.9	n.p.	n.p.
21-29	Total manufacturing	888.6	20.3	293.4	12.9

INDUSTRY SUBDIVISION		100 OR MORE PERSONS.....		TOTAL.....	
		<i>Amount exported by this business or its agent</i>	<i>Exports as a proportion of sales of goods produced</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	%
21	Food, beverage and tobacco mfg	161.2	13.0	445.5	16.8
22	Textile, clothing, footwear and leather mfg	n.p.	n.p.	28.4	9.3
23	Wood and paper product mfg	n.p.	n.p.	112.5	16.8
24	Printing, publishing and recorded media	—	—	1.8	0.4
25	Petroleum, coal, chemical and associated product mfg	349.6	18.1	507.4	18.7
26	Non-metallic mineral product mfg	18.2	3.2	44.7	4.4
27	Metal product mfg	n.p.	n.p.	1 268.7	33.7
28	Machinery and equipment mfg	n.p.	n.p.	255.2	18.3
29	Other manufacturing	n.p.	n.p.	11.2	2.0
21-29	Total manufacturing	1 493.5	21.3	2 675.4	19.5

(a) See paragraph 8 of the Explanatory notes.

(b) See paragraphs 26 to 29 of the Explanatory notes.

(c) This table excludes those manufacturing establishments which operated during 1994-95 but were not operating at 30 June 1995. See paragraph 25 of the Explanatory notes.

MFG ESTABLISHMENTS(a), Summary of Operations by Proportion of Exports(b)

INDUSTRY SUBDIVISION		ESTABLISHMENTS THAT DO NOT EXPORT.....			ESTABLISHMENTS WITH EXPORTS UP TO AND INCLUDING 50% OF SALES OF GOODS THAT THEY PRODUCED.....			ESTABLISHMENTS WITH EXPORTS OF MORE THAN 50% OF SALES OF GOODS THAT THEY PRODUCED.....		
		Employment at end of June(c)	Wages and salaries(d)	Turnover	Employment at end of June(c)	Wages and salaries(d)	Turnover	Employment at end of June(c)	Wages and salaries(d)	Turnover
ANZSIC code	Description	%	%	%	%	%	%	%	%	%
21	Food, beverage and tobacco mfg	63.2	60.9	56.2	20.2	21.3	26.0	16.6	17.8	17.8
22	Textile, clothing, footwear and leather mfg	63.8	59.3	63.0	26.4	28.7	26.0	9.8	11.9	11.0
23	Wood and paper product mfg	63.8	55.6	47.1	34.7	42.5	41.8	1.5	1.9	11.0
24	Printing, publishing and recorded media	94.3	94.9	94.8	5.7	5.1	5.2	—	—	—
25	Petroleum, coal, chemical and associated product mfg	58.5	55.9	29.7	33.5	34.3	57.0	8.0	9.8	13.3
26	Non-metallic mineral product mfg	60.6	57.9	62.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
27	Metal product mfg	61.5	50.5	55.1	10.0	8.4	5.4	28.4	41.1	39.5
28	Machinery and equipment mfg	61.3	56.8	53.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
29	Other manufacturing	86.6	86.8	86.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
21-29	Total manufacturing	66.7	61.1	54.0	21.6	22.9	27.4	11.7	15.9	18.6

(a) See paragraph 8 of the Explanatory notes.

(c) Includes working proprietors.

(b) See paragraphs 26 to 29 of the Explanatory notes.

(d) Excludes the drawings of working proprietors.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents final statistics for Western Australia compiled from a survey of manufacturing establishments for 1994-95, with some comparative statistics relating to preceding years.

2 The manufacturing collection is conducted on an annual basis. For the 1994-95 collection, a variety of samples was selected to produce data on a range of variables.

3 A sample of approximately 20,000 manufacturing establishments, nationally was requested to provide data on employment, wages and salaries, turnover and whether their products were exported. Approximately 7,500 of these establishments were asked to supply value of sales for commodities produced. (These commodity data will be released in the publication *Manufacturing Production, Australia: Principal Commodities Produced, 1994-95* (8365.0).)

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 main unit for which statistics are reported in the 1994-95 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.

6 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.

7 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.

8 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.

9 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 1994-95 manufacturing collection, 'significant' was defined as \$7.0 million or more.

EXPLANATORY NOTES *continued*

.....

10 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

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

RELIABILITY OF ESTIMATES

12 For information on this subject, see the sections Technical notes and Standard errors.

DATA ADJUSTED

13 As was done for the 1993-94 issue 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 on to the ABS business register in time for inclusion in the annual manufacturing industry survey. 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. The ABS is remedying these omissions.

14 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 1994-95 turnover for Western Australia is an increase of 1% while the effect on employment is an increase of 4%. Most industries were affected to a similar degree.

COMPARABILITY WITH PREVIOUS STATISTICS

15 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.

16 Commencing with the 1993-94 manufacturing collection, included are data relating to those 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. 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.

17 Commencing with the 1994-95 manufacturing collection, multi-establishment management units have been 'collapsed' 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. (Across Australia, approximately 1,500 manufacturing establishments were no longer separately identified and counted as a result of this process.)

18 As explained above, about 7,500 establishments included in the 1994-95 collection were asked to supply value of sales for commodities produced. Also, as explained in the previous issue of this publication, this procedure was similarly followed in respect of the 18,000 establishments included in the commodity sample as part of the 1993-94 collection. 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 either of these commodity samples has continued to be a subjectively determined code.

19 The basis for the calculation of the data used in table 3 of this publication for the data item 'Percentage change in gross product per person employed' is different to that used in the 1992-93 issue of this publication. The employment data now used are 'Employment at the end of June', whereas in the 1992-93 issue the conceptually more precise data item 'Average employment over the year' was used. For some industries, the values obtained by using these different methods may differ significantly and, therefore, care should be exercised when making inter-year comparisons. (The reason for making this change is that the detailed data necessary to calculate 'Average employment over the year' are no longer obtained.)

COUNTS OF THE NUMBER OF ESTABLISHMENTS

20 The data item 'Number of establishments' has not been included in this publication and will be omitted from all 1994-95 and later years' publications relating to the annual manufacturing industry collection. In recent years, year to year movements in numbers of establishments have borne little relationship to the changes in economic performance of the industries involved. For this reason, the ABS does not encourage the use of the number of establishments as an analytical tool. However, the data can be made available on request, with notes on their limitations.

21 As explained in more detail in those notes, the decision to cease publication of this data item was primarily made because the 'establishment' is only a statistical data collection unit and does not necessarily represent a separate physical location. These reporting arrangements may also change over time with no actual change in activity. There are also the effects of 'splitting' by the ABS (see paragraph 9), of the adjustments for lags to and omission from the ABS business register (see paragraphs 13 and 14) and for which the effect on the count of number of establishments is significant, and of the 'collapsing' of multi-establishment management units to form a single reporting unit (see paragraph 17).

GROSS PRODUCT AT FACTOR COST

22 Table 3 presents data by industry subdivision for the period 1989-90 to 1994-95 (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).

23 In association with the change of the base year for the data in table 3 to 1989-90 (introduced with the 1991-92 issue of this publication), the methodology used to derive these estimates also changed. This came about because only turnover data are now available from the manufacturing collection on an annual basis. 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 now 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).

24 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.)

EXPLANATORY NOTES *continued*

.....

EMPLOYMENT SIZE DATA

25 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 1995. 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 1994-95.

EXPORTS BY MANUFACTURERS

26 Data relating to the amount of sales and transfers out of goods produced which were subsequently exported by the manufacturer or its agent are presented in tables 5 and 6. This is the second time that these data have been obtained by the annual manufacturing collection, the first occasion being the 1992-93 collection.

27 All establishments selected in the manufacturing survey 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 1994-95 but were not operating at 30 June 1995.

28 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.

29 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.

EXPLANATORY NOTES *continued*

.....

USE OF ANZSIC

30 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 36). Similarly, ASIC-based data are not available from 1992-93.

INFORMATION PAPER

31 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

32 A series of publications (8221.1 to 8221.6) will be produced for each State. The publication for New South Wales (8221.1) also contains selected data for the Australian Capital Territory. These publications will all be released shortly.

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

- *Environment Protection Expenditure, Australia, 1992-93 and 1993-94* (4603.0), released on 20 March 1997.
- *Labour Force, Australia* (6203.0).
- *Indexes of Industrial Production, Australia* (8125.0).
- *Business Operations and Industry Performance, Australia, 1994-95* (8140.0), released on 4 October 1996.
- *Manufacturing Industry, Australia, Preliminary, 1995-96* (8201.0), released on 21 April 1997.
- *Information Paper: Availability of Statistics Related to Manufacturing, 1996* (8205.0), released on 21 March 1996.
- *Manufacturing Industry, Australia, 1994-95* (8221.0), released on 31 January 1997.
- *Manufacturing Production, Australia: Principal Commodities Produced, 1993-94* (8365.0), to be released in May 1997.
- *Manufacturing Production, Australia: Principal Commodities Produced, 1994-95* (8365.0), expected to be released later in 1997.

MONTHLY OR QUARTERLY COMMODITY DATA

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

BACK DATA AND UNPUBLISHED STATISTICS

35 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 referred to above provides more details.

EXPLANATORY NOTES *continued*

36 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 1994-95 (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

37 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 13), this 'rounding rule' also applies to employment counts.

38 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 NOTES DATA RELIABILITY

SAMPLE ERROR

The 1994-95 manufacturing survey was primarily designed to deliver industry class estimates for Australia and States for the data items employment, wages and salaries and turnover. For the two Territories, the sample was designed to deliver industry subdivision data only.

All 1994-95 (and 1992-93) data contained in this publication have, therefore, been obtained from samples of manufacturers. As such, these data are subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all manufacturers in the population. 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.

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 1994-95 employment, wages and salaries and turnover data presented in this publication are all less than 3% for industry subdivisions and are mainly 5% or less for industry classes.

Relative standard errors at the industry subdivision level for Western Australia for selected data items representing the data contained in this publication are shown in the section Standard errors. Detailed relative standard errors can be made available on request.

NON-SAMPLE ERROR

The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of inadequacies in available sources from which the population frame was compiled, imperfections in reporting by providers, errors made in collection such as in recording and coding data, and errors made in processing data. Inaccuracies of this kind are referred to collectively as non-sampling error and they may occur in any enumeration, whether it be a full count 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, over the past five years, the ABS has undertaken a program of upgrading the business register. This on-going upgrade has resulted in improvements in the quality of the statistical series whose population frames are drawn from the register.

STANDARD ERRORS SELECTED DATA ITEMS

INDUSTRY SUBDIVISION		Employment at end of June(a)	Wages and salaries(b)	Turnover
ANZSIC code	Description	%	%	%
21	Food, beverage and tobacco mfg	1.8	1.1	0.7
22	Textile, clothing, footwear and leather mfg	1.0	0.7	1.3
23	Wood and paper product mfg	2.6	2.0	1.3
24	Printing, publishing and recorded media	2.0	2.2	2.4
25	Petroleum, coal, chemical and associated product mfg	1.2	0.7	0.2
26	Non-metallic mineral product mfg	1.5	1.0	0.8
27	Metal product mfg	1.7	1.0	0.5
28	Machinery and equipment mfg	1.5	1.3	1.5
29	Other manufacturing	1.5	1.8	1.6
21-29	Total manufacturing	0.6	0.5	0.3

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

G L O S S A R Y

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.
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, that are exported (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 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 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 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 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 that they produced.

GLOSSARY *continued*

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 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 produced by the establishment (or for it on commission) which are exported (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 produced by all establishments, not just the aggregated value for those units which exported.
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 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.

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.

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 capitalised value of the cost of the materials and the wages and salaries involved.

GLOSSARY *continued*

.....

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 commission expenses (including sales commission expenses), 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 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 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. Excluded are export freight charges, sales of fixed tangible assets, and sales tax, excise and duties received (on behalf of the Government).
Sales of goods 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 for long-term contracts, and delivery and/or installation charges not separately invoiced to customers. 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. Excluded are 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.

GLOSSARY *continued*

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

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

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

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

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

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







For more information . . .

The ABS publishes a wide range of statistics and other information on Australia's economic and social conditions. Details of what is available in various publications and other products can be found in the ABS Catalogue of Publications and Products available from all ABS Offices.

ABS Products and Services

Many standard products are available from ABS bookshops located in each State and Territory. In addition to these products, information tailored to the needs of clients can be obtained on a wide range of media by contacting your nearest ABS Office. The ABS also provides a Subscription Service for standard products and some tailored information services.

National Dial-a-Statistic Line

0055 86 400

Steadycorn P/L: premium rate 25c/20 secs.

This number gives 24-hour access, 365 days a year, for a range of important economic statistics including the CPI.

Internet

<http://www.abs.gov.au>

A wide range of ABS information is available via the Internet, with basic statistics available for each State, Territory and Australia. We also have Key National Indicators, ABS product release details and other information of general interest.

Sales and Inquiries

client.services@abs.gov.au

National Mail Order Service
Subscription Service

(06) 252 5249
1800 02 0608

Information Inquiries

SYDNEY	(02) 9268 4611
MELBOURNE	(03) 9615 7755
BRISBANE	(07) 3222 6351
PERTH	(08) 9360 5140
ADELAIDE	(08) 8237 7100
CANBERRA	(06) 252 6627
HOBART	(03) 6222 5800
DARWIN	(08) 8943 2111

Bookshop Sales

(02) 9268 4620
(03) 9615 7755
(07) 3222 6350
(08) 9360 5307
(08) 8237 7582
(06) 207 0326
(03) 6222 5800
(08) 8943 2111



Client Services, ABS, PO Box 10, Belconnen ACT 2616

Produced by the Australian Government Publishing Service
© Commonwealth of Australia 1997

Recommended retail price: \$17.50



2822150007948

ISSN 1036-2789