## MANUFACTURING INDUSTRY

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- For further information about these and related statistics, contact John Ridley on Sydney 029268 4541, or any ABS office shown on the back cover of this publication.


## NOTES

ANNUAL MANUFACTURING INDUSTRY COLLECTION

ABOUT THIS ISSUE

DATA TO BE RELEASED IN OTHER PUBLICATIONS

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

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

The data contained in this publication relate to the operations of manufacturing establishments only. Details on employment, wages and salaries, turnover, Industry Gross Product (IGP) and direct exports are presented.

More detailed manufacturing industry statistics for each State will be released shortly in a series of publications Manufacturing Industry, [State], 1996-97
(Cat. nos 8221.1-8221.6). The publication for New South Wales (Cat. no. 8221.1) will also contain selected data for the Australian Capital Territory. For 1996-97, all of these publications contain a table showing industry subdivision data by Statistical Division.

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

Management unit data and a wide range of manufacturing related ABS data, as well as data from other sources, will be presented in the compendium publication Manufacturing, Australia, 1998 (Cat. no. 8225.0), to be released in December 1998. Management unit data at the total manufacturing level are also included in Business Operations and Industry Performance, Australia, Preliminary, 1996-97 (Cat. no. 8142.0).

ABS Australian Bureau of Statistics
ANZSIC Australian and New Zealand Standard Industrial Classification
ASIC Australian Standard Industrial Classification
IGP Industry Gross Product
mfg manufacturing
n.e.c. not elsewhere classified
. . not applicable

- nil or rounded to zero


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## OVERVIEW

Turnover for the year 1996-97 by manufacturing establishments operating in Australia was $\$ 208,348 \mathrm{~m}$, which resulted in an Industry Gross Product (IGP) for the year of $\$ 63,790 \mathrm{~m}$. These establishments employed 945,300 persons at the end of June 1997 and paid $\$ 32,634 \mathrm{~m}$ in wages and salaries in 1996-97.

## INDUSTRY GROSS PRODUCT

IGP (see the Glossary for its definition) is very similar to the national accounting measure gross product at factor cost, which is the official statistical measure of production. IGP for $1996-97$ was $\$ 63,790 \mathrm{~m}$. This represents a $0.9 \%$ increase, in current price terms, on the $\$ 63,230 \mathrm{~m}$ recorded for $1995-96$ and a $22.8 \%$ increase, in current price terms, on the $\$ 51,939 \mathrm{~m}$ recorded for 1992-93.

IGP per person employed at the end of June closely followed this trend, with a $0.8 \%$ increase (to $\$ 67,500$ ) for $1996-97$ over the $\$ 66,900$ recorded for $1995-96$ and a $22.3 \%$ increase over the $\$ 55,200$ recorded for 1992-93.

DISTRIBUTION OF IGP AND EMPLOYMENT


Total manufacturing IGP increased by $0.9 \%$, in current price terms, between $1995-96$ and 1996-97. Six industry subdivisions recorded an increase while the remaining three recorded a decrease. The industry subdivisions to record the largest percentage increases in IGP between 1995-96 and 1996-97 also recorded the largest dollar increases. They were Machinery and equipment manufacturing (up $7.5 \%-\$ 12,313 \mathrm{~m}$ to $\$ 13,238 \mathrm{~m}$ ) and Printing, publishing and recorded media (up $4.8 \%-\$ 6,428 \mathrm{~m}$ to $\$ 6,735 \mathrm{~m}$ ). The two industry subdivisions with the largest percentage decreases also recorded the largest dollar decreases. These were Non-metallic mineral product manufacturing (down 8.9\%) and Metal product manufacturing (down $5.3 \%$ ). The Non-metallic mineral product manufacturing subdivision (down $1.2 \%$ ) was the only subdivision to record a decrease, in current price terms, in IGP between 1992-93 and 1996-97.

The Australian manufacturing industry employed 945,300 persons at the end of June 1997 and paid $\$ 32,634 \mathrm{~m}$ in wages and salaries in 1996-97. This represents an average of $\$ 34,500$ paid in annual wages and salaries per person employed at the end of June 1997.

EMPLOYMENT


Australian manufacturing employment has remained relatively steady over the five years to June 1997. Employment increased only marginally between June 1996 ( 944,800 persons) and June 1997 ( 945,300 persons) but fell by $0.6 \%$ over the five years from June 1992 (950,700 persons) to June 1997, with a peak in June 1995 of 956,900 persons. Between June 1996 and June 1997, employment increased in five of the nine manufacturing industry subdivisions and decreased in the other four subdivisions. The industry subdivisions with the largest percentage increases were Printing, publishing and recorded media and Other manufacturing (both up 4.9\%). The industry subdivisions with the largest percentage decreases were Wood and paper product manufacturing (down 6.6\%) and Textile, clothing, footwear and leather manufacturing (down 1.3\%).

Average wages and salaries paid per person employed at the end of June rose in all nine manufacturing industry subdivisions between 1995-96 and 1996-97. The industry subdivisions recording the largest percentage falls in employment generally corresponded with the subdivisions recording the largest percentage increases in average wages and salaries paid. The exception was the Food, beverage and tobacco manufacturing subdivision, which had a small increase in employment (up $0.7 \%$ ) but had the second largest increase in wages and salaries paid per person employed (up 8.2\%).

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

- Machinery and equipment manufacturing (up $8.7 \%$ - $\$ 33,200$ to $\$ 36,100$ ), where 24 (out of 28 ) industry classes recorded an increase, with the largest being:
- Aircraft manufacturing (ANZSIC Class 2824) (up 20.3\%-\$43,900 to \$52,800);
- Lifting and material handling equipment manufacturing (ANZSIC Class 2865) (up $17.1 \%-\$ 31,800$ to $\$ 37,200$ ); and
- Mining and construction machinery manufacturing (ANZSIC Class 2862) (up $17.0 \%$ - $\$ 31,600$ to $\$ 37,000$ ).


## EMPLOYMENT AND WAGES continued

- Food, beverage and tobacco manufacturing (up $8.2 \%-\$ 31,600$ to $\$ 34,200$ ) where 18 (out of 23 ) industry classes recorded an increase, with the largest being:
- Soft drink, cordial and syrup manufacturing (ANZSIC Class 2181) (up 21.8\%-\$34,500 to \$42,000);
- Seafood processing (ANZSIC Class 2173) (up 17.7\%—\$21,000 to \$24,700); and
- Bread manufacturing (ANZSIC Class 2161) (up 17.4\%—\$25,400 to $\$ 29,900$ ).

The industry subdivisions to record the smallest percentage increases between 1995-96 and 1996-97 in wages and salaries paid per person employed at the end of June were:

- Other manufacturing (up $1.9 \%-\$ 23,900$ to $\$ 24,400$ ), where five industry classes recorded increases and four recorded decreases. Wooden furniture and upholstered seat manufacturing (ANZSIC Class 2921) (which contributes half of the employment in this subdivision) recorded a $2.6 \%$ increase $(\$ 22,100$ to $\$ 22,700)$.
- Printing, publishing and recorded media (up 3.0\%-\$33,500 to \$34,500), where all industry classes recorded an increase. Recorded media manufacturing and publishing (ANZSIC Class 2430 ) (up $10.2 \%-\$ 36,400$ to $\$ 40,100$ ) recorded the largest percentage increase, with Printing (ANZSIC Class 2412) (up $0.1 \%-\$ 31,200$ to $\$ 31,300$ ) recording the smallest percentage increase.

The industry classes which had the largest percentage increases in wages and salaries paid per person employed between 1995-96 and 1996-97 were Cement and lime manufacturing (ANZSIC Class 2631) (up 26.2\%—\$40,100 to \$50,600) and Solid paperboard container manufacturing (ANZSIC Class 2332) (up $26.1 \%-\$ 34,200$ to $\$ 43,100$ ).

## TURNOVER

Turnover rose, in current price terms, by $\$ 6,186 \mathrm{~m}$ to $\$ 208,348 \mathrm{~m}$ for $1996-97$. This represents a $3.1 \%$ increase on the $\$ 202,162 \mathrm{~m}$ recorded for $1995-96$. As prices for manufactured goods rose by only $0.6 \%$ for 1996-97 (see Price Indexes of Articles Produced by Manufacturing Industry, Australia (Cat. no. 6412.0)), real growth of about $2.5 \%$ is implied. This compares to implied real growth of about $1.1 \%$ for 1995-96 and 2.0\% for 1994-95.

Seven of the nine manufacturing industry subdivisions recorded an increase in turnover between 1995-96 and 1996-97. Food, beverage and tobacco manufacturing and Machinery and equipment manufacturing remain the largest contributors to total manufacturing turnover, and also recorded the largest increases in dollar terms. The largest percentage increases between 1995-96 and 1996-97 were recorded by Other manufacturing (up 9.1\%) and Printing, publishing and recorded media (up 7.7\%). Metal product manufacturing (down $0.7 \%$ ) and Wood and paper product manufacturing (down $0.5 \%$ ) were the industry subdivisions to record a fall in turnover.

The industry classes with the largest percentage increases between 1995-96 and 1996-97 were:

- Non-ferrous metal casting (ANZSIC Class 2733) (up 36.1\% or $\$ 36 \mathrm{~m}$ );
- Mattress manufacturing (except rubber) (ANZSIC Class 2923) (up 31.4\% or \$114m); and
- Rope, cordage and twine manufacturing (ANZSIC Class 2223) (up $30.7 \%$ or $\$ 26 \mathrm{~m}$ ).

The industry classes with the largest dollar increases between 1995-96 and 1996-97 were:

- Petroleum refining (ANZSIC Class 2510 ) (up $\$ 1,025 \mathrm{~m}$ or $15.5 \%$ ); and
- Motor vehicle manufacturing (ANZSIC Class 2811) (up \$696m or 7.4\%).

The industry classes with the largest percentage decreases between 1995-96 and 1996-97 were:

- Battery manufacturing (ANZSIC Class 2853) (down $49.6 \%$ or $\$ 142 \mathrm{~m}$ ); and
- Plywood and veneer manufacturing (ANZSIC Class 2321) (down $21.5 \%$ or $\$ 52 \mathrm{~m}$ ). The industry classes with the largest dollar decreases between 1995-96 and 1996-97 were:
- Aluminium smelting (ANZSIC Class 2722) (down $\$ 672 \mathrm{~m}$ or $17.5 \%$ );
- Copper, silver, lead and zinc smelting, refining (ANZSIC Class 2723) (down $\$ 422$ m or $14.9 \%$ ); and
- Meat processing (ANZSIC Class 2111) (down $\$ 357 \mathrm{~m}$ or $5.9 \%$ ).


## EXPORTS

## STATE COMPARISON

For 1996-97, Australian manufacturers directly exported $\$ 28,651 \mathrm{~m}$ of the goods that they produced. This represents a $0.8 \%$ decrease on the $\$ 28,895 \mathrm{~m}$ recorded for $1995-96$. This compares with an increase in manufacturers' direct exports from 1994-95 to 1995-96 of $15.7 \%$. The percentage of the total sales and transfers out of goods produced that were exported has also decreased (from $15.5 \%$ for $1995-96$ to $14.9 \%$ for 1996-97).

Manufacturers' direct exports increased in six industry subdivisions and decreased in the other three. However, the Metal product manufacturing subdivision's decrease of 16.0\% or $\$ 1,685 \mathrm{~m}$ (from $\$ 10,538 \mathrm{~m}$ for $1995-96$ to $\$ 8,853 \mathrm{~m}$ for $1996-97$ ) was, by far, the most significant contributor to the overall decrease. Industry subdivisions to record the largest percentage increases in direct exports between 1995-96 and 1996-97 were Non-metallic mineral product manufacturing (up $28.2 \%$ — $\$ 229 \mathrm{~m}$ to $\$ 294 \mathrm{~m}$ ) and Machinery and equipment manufacturing (up $13.5 \%-\$ 5,480 \mathrm{~m}$ to $\$ 6,221 \mathrm{~m}$ ).

For the first time since the commencement of integrated economic statistics with the 1968-69 collection, the contribution to Australian turnover for 1996-97 by Victorian manufacturers ( $\$ 68,515 \mathrm{~m}$ ) has exceeded that of manufacturers located in New South Wales $(\$ 68,065 \mathrm{~m})$. However, more people are still employed in manufacturing in New South Wales ( 310,200 persons) than in Victoria ( 306,500 persons).

(a) See paragraph 5 of the Explanatory Notes.
(b) For factors affecting comparability of data over the time periods shown, see paragraphs 13-18 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.
(g) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

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(e) Value data are at current prices and, therefore, do not discount the impact of price changes.
(f) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(g) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

| INDUSTRY CLASS | Employment at end of June(b) | Wages and salaries(c) | Turnover | Industry gross product | Turnover per person employed(d) | Industry gross product per person employed(e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANZSIC |  |  |  |  |  |  |
| code Description | no. | \$m | \$m | \$m | \$'000 | \$'000 |


|  | FOOD, BEVERAGE AND TOBACCO MFG Meat and meat product mfg |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2111 | Meat processing | 28874 | 891.1 | 5733.9 | 1314.2 | 198.6 | 45.5 |
| 2112 | Poultry processing | 11678 | 340.6 | 2143.3 | 453.4 | 183.5 | 38.8 |
| 2113 | Bacon, ham and smallgood mfg | 6484 | 191.4 | 1240.4 | 321.4 | 191.3 | 49.6 |
| 211 | Total | 47036 | 1423.1 | 9117.7 | 2089.0 | 193.8 | 44.4 |
| Dairy product mfg |  |  |  |  |  |  |  |
| 2121 | Milk and cream processing | 6550 | 252.7 | 2733.8 | 535.6 | 417.4 | 81.8 |
| 2122 | Ice cream mfg | 2693 | 85.4 | 636.2 | 225.1 | 236.2 | 83.6 |
| 2129 | Dairy product mfg n.e.c. | 7963 | 306.9 | 3650.3 | 618.5 | 458.4 | 77.7 |
| 212 | Total | 17206 | 644.9 | 7020.3 | 1379.3 | 408.0 | 80.2 |
| 213 | Fruit and vegetable processing | 11018 | 414.9 | 3308.2 | 800.5 | 300.3 | 72.7 |
| 214 | Oil and fat mfg | 1667 | 74.6 | 680.8 | 140.3 | 408.3 | 84.2 |
| Flour mill and cereal food mfg |  |  |  |  |  |  |  |
| 2151 | Flour mill product mfg | 2495 | 109.9 | 1343.8 | 266.0 | 538.7 | 106.6 |
| 2152 | Cereal food and baking mix mfg | 5623 | 196.6 | 1993.7 | 603.2 | 354.6 | 107.3 |
| 215 | Total | 8118 | 306.5 | 3337.5 | 869.2 | 411.1 | 107.1 |
| Bakery product mfg |  |  |  |  |  |  |  |
| 2161 | Bread mfg | 11495 | 343.2 | 1345.3 | 472.3 | 117.0 | 41.1 |
| 2162 | Cake and pastry mfg | 9864 | 238.6 | 1047.5 | 353.1 | 106.2 | 35.8 |
| 2163 | Biscuit mfg | 4509 | 132.9 | 721.1 | 257.8 | 159.9 | 57.2 |
| 216 | Total | 25868 | 714.7 | 3114.0 | 1083.2 | 120.4 | 41.9 |
| Other food mfg |  |  |  |  |  |  |  |
| 2171 | Sugar mfg | 6552 | 275.6 | 2520.8 | 560.4 | 384.8 | 85.5 |
| 2172 | Confectionery mfg | 6451 | 261.3 | 1322.0 | 452.6 | 204.9 | 70.2 |
| 2173 | Seafood processing | 3677 | 90.6 | 1041.5 | 174.6 | 283.3 | 47.5 |
| 2174 | Prepared animal and bird feed mfg | 4301 | 174.9 | 2495.9 | 443.5 | 580.4 | 103.1 |
| 2179 | Food mfg n.e.c. | 14940 | 529.0 | 3101.1 | 982.5 | 207.6 | 65.8 |
| 217 | Total | 35920 | 1331.5 | 10481.4 | 2613.7 | 291.8 | 72.8 |
| Beverage and malt mfg |  |  |  |  |  |  |  |
| 2181 | Soft drink, cordial and syrup mfg | 5352 | 224.9 | 2212.5 | 472.0 | 413.4 | 88.2 |
| 2182 | Beer and malt mfg | 2948 | 172.1 | 2370.4 | 846.6 | 804.2 | 287.2 |
| 2183 | Wine mfg | 6966 | 204.3 | 2268.7 | 768.2 | 325.7 | 110.3 |
| 2184 | Spirit mfg | 355 | 10.1 | 100.9 | 45.0 | 284.0 | 126.7 |
| 218 | Total | 15621 | 611.3 | 6952.5 | 2131.8 | 445.1 | 136.5 |
| 219 | Tobacco product mfg | 1573 | 88.7 | 966.0 | 370.2 | 613.9 | 235.3 |
| 21 | Total food, beverage and tobacco mfg | 164028 | 5610.2 | 44978.4 | 11477.2 | 274.2 | 70.0 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

| INDUSTRY CLASS | Employment at end of June(b) | Wages and salaries(c) | Turnover | Industry gross product | Turnover per person employed(d) | Industry gross product per person employed(e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANZSIC |  |  |  |  |  |  |
| code Description | no. | \$m | \$m | \$m | \$'000 | \$'000 |

TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG
Textile fibre, yarn and woven fabric mfg

| 2211 | Wool scouring |
| :--- | :--- |
| 2212 | Synthetic fibre textile mfg |
| 2213 | Cotton textile mfg |
| 2214 | Wool textile mfg |
| 2215 | Textile finishing |
| 221 | Total |


| 1850 | 77.2 | 450.2 | 143.1 | 243.4 | 77.3 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 4078 | 144.2 | 673.8 | 234.7 | 165.2 | 57.6 |
| 2928 | 98.1 | 486.4 | 157.2 | 166.1 | 53.7 |
| 2450 | 72.0 | 259.4 | 94.6 | 105.9 | 38.6 |
| 1802 | 61.2 | 278.2 | 106.4 | 154.4 | 59.1 |
| 13108 | 452.6 | 2147.9 | 736.0 | 163.9 | 56.1 |
|  |  |  |  |  |  |
| 5637 | 138.7 | 650.0 | 227.5 | 115.3 | 40.4 |
| 2918 | 101.0 | 606.0 | 165.6 | 207.7 | 56.7 |
| 688 | 25.4 | 109.9 | 38.5 | 159.8 | 56.0 |
| 2533 | 68.8 | 309.2 | 118.5 | 122.1 | 46.8 |
| 11776 | 333.8 | 1675.1 | 550.2 | 142.3 | 46.7 |

Knitting mills

| 31 | Hosiery mfg | 2379 | 66.8 | 274.4 | 118.4 | 115.3 | 49.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32 | Cardigan and pullover mfg | 1605 | 37.1 | 141.9 | 60.7 | 88.4 | 37.8 |
| 39 | Knitting mill product mfg n.e.c. | 2322 | 87.4 | 540.0 | 130.9 | 232.5 | 56.4 |
| 3 | Total | 6307 | 191.2 | 956.3 | 310.0 | 151.6 | 49.2 |
| Clothing mfg |  |  |  |  |  |  |  |
| 41 | Men's and boys' wear mfg | 8485 | 215.6 | 812.8 | 314.1 | 95.8 | 37.0 |
| 42 | Women's and girls' wear mfg | 11573 | 254.6 | 1559.0 | 512.4 | 134.7 | 44.3 |
| 43 | Sleepwear, underwear and infant clothing mfg | 3594 | 100.0 | 441.1 | 154.2 | 122.7 | 42.9 |
| 49 | Clothing mfg n.e.c. | 12781 | 208.8 | 894.1 | 307.7 | 70.0 | 24.1 |
| 4 | Total | 36433 | 779.1 | 3706.9 | 1288.4 | 101.7 | 35.4 |
| 5 | Footwear mfg | 5852 | 146.2 | 623.4 | 216.6 | 106.5 | 37.0 |
| Leather and leather product mfg |  |  |  |  |  |  |  |
| 61 | Leather tanning and fur dressing | 2657 | 89.8 | 723.8 | 133.3 | 272.4 | 50.2 |
| 62 | Leather and leather substitute product mfg | 868 | 20.0 | 101.9 | 30.2 | 117.4 | 34.8 |
| 6 | Total | 3525 | 109.8 | 825.7 | 163.6 | 234.2 | 46.4 |
|  | Total textile, clothing, footwear and leather mf | 76999 | 2012.6 | 9935.4 | 3264.8 | 129.0 | 42.4 |

## WOOD AND PAPER PRODUCT MFG

Log sawmilling and timber dressing

## Textile product $\mathbf{m f g}$

| 2221 | Made-up textile product mfg |
| :--- | :--- |
| 2222 | Textile floor covering mfg |
| 2223 | Rope, cordage and twine mfg |
| 2229 | Textile product mfg n.e.c. |
| 222 | Total |

## Clothing mfg

| 2241 | Men's and boys' wear mfg | 8485 | 215.6 | 812.8 | 314.1 | 95.8 | 37.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2242 | Women's and girls' wear mfg | 11573 | 254.6 | 1559.0 | 512.4 | 134.7 | 44.3 |
| 2243 | Sleepwear, underwear and infant clothing mfg | 3594 | 100.0 | 441.1 | 154.2 | 122.7 | 42.9 |
| 2249 | Clothing mfg n.e.c. | 12781 | 208.8 | 894.1 | 307.7 | 70.0 | 24.1 |
| 224 | Total | 36433 | 779.1 | 3706.9 | 1288.4 | 101.7 | 35.4 |
| 225 | Footwear mfg | 5852 | 146.2 | 623.4 | 216.6 | 106.5 | 37.0 |
| Leather and leather product mfg |  |  |  |  |  |  |  |
| 2261 | Leather tanning and fur dressing | 2657 | 89.8 | 723.8 | 133.3 | 272.4 | 50.2 |
| 2262 | Leather and leather substitute product mfg | 868 | 20.0 | 101.9 | 30.2 | 117.4 | 34.8 |
| 226 | Total | 3525 | 109.8 | 825.7 | 163.6 | 234.2 | 46.4 |
| 22 | Total textile, clothing, footwear and leather mfg | 76999 | 2012.6 | 9935.4 | 3264.8 | 129.0 | 42.4 |
|  | WOOD AND PAPER PRODUCT MFG Log sawmilling and timber dressing |  |  |  |  |  |  |
| 2311 | Log sawmilling | 7140 | 180.5 | 814.0 | 325.0 | 114.0 | 45.5 |
| 2312 | Wood chipping | 945 | 33.6 | 464.9 | 169.7 | 491.9 | 179.5 |
| 2313 | Timber resawing and dressing | 6953 | 219.2 | 1046.3 | 386.5 | 150.5 | 55.6 |
| 231 | Total | 15039 | 433.3 | 2325.3 | 881.2 | 154.6 | 58.6 |
| Other wood product mfg |  |  |  |  |  |  |  |
| 2321 | Plywood and veneer mfg | 1328 | 43.0 | 190.8 | 77.1 | 143.7 | 58.0 |
| 2322 | Fabricated wood mfg | 4153 | 174.4 | 966.2 | 289.9 | 232.6 | 69.8 |
| 2323 | Wooden structural component mfg | 16489 | 420.1 | 1905.1 | 603.1 | 115.5 | 36.6 |
| 2329 | Wood product mfg n.e.c. | 6750 | 135.2 | 604.0 | 210.3 | 89.5 | 31.2 |
| 232 | Total | 28720 | 772.7 | 3666.1 | 1180.3 | 127.6 | 41.1 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

| INDUSTRY CLASS | Employment at end of June(b) | Wages and salaries(c) | Turnover | Industry gross product | Turnover per person employed(d) | Industry gross product per person employed(e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANZSIC |  |  |  |  |  |  |
| code Description | no. | \$m | \$m | \$m | \$'000 | \$'000 |
| Paper and paper product mfg |  |  |  |  |  |  |
| 2331 Pulp, paper and paperboard mfg | 5364 | 283.9 | 2324.2 | 846.1 | 433.3 | 157.7 |
| 2332 Solid paperboard container mfg | 2437 | 105.0 | 537.4 | 214.6 | 220.5 | 88.0 |
| 2333 Corrugated paperboard container mfg | 5648 | 263.1 | 1555.1 | 508.4 | 275.3 | 90.0 |
| 2334 Paper bag and sack mfg | 941 | 32.2 | 206.2 | 68.2 | 219.1 | 72.5 |
| 2339 Paper product mfg n.e.c. | 3354 | 129.8 | 867.0 | 280.5 | 258.5 | 83.6 |
| 233 Total | 17745 | 814.0 | 5489.9 | 1917.8 | 309.4 | 108.1 |
| 23 Total wood and paper product mfg | 61504 | 2019.9 | 11481.2 | 3979.3 | 186.7 | 64.7 |

PRINTING, PUBLISHING AND RECORDED MEDIA
Printing and services to printing

| 2411 | Paper stationery mfg |
| :--- | :--- |
| 2412 | Printing |
| 2413 | Services to printing |
| 241 | Total |
|  |  |
| Publishing |  |
| 2421 | Newspaper printing or publishing <br> 2422 |
| Other periodical publishing  <br> 2423 Book and other publishing <br> 242 Total |  |


| 7098 | 225.9 | 1085.5 | 382.5 | 152.9 | 53.9 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 39786 | 1244.2 | 5336.5 | 2139.4 | 134.1 | 53.8 |
| 7036 | 224.6 | 675.7 | 356.1 | 96.0 | 50.6 |
| 53920 | 1694.7 | 7097.7 | 2878.0 | 131.6 | 53.4 |
|  |  |  |  |  |  |
| 29556 | 1154.7 | 4746.1 | 2234.0 | 160.6 | 75.6 |
| 5450 | 195.8 | 993.3 | 363.7 | 182.3 | 66.7 |
| 5610 | 201.8 | 1367.7 | 833.8 | 243.8 | 148.6 |
| 40616 | 1552.3 | 7107.1 | 3431.6 | 175.0 | 84.5 |
|  |  |  |  |  |  |
| $2 \mathbf{2 0 4}$ | 88.4 | 662.8 | 425.2 | 300.8 | 192.9 |
|  |  |  |  |  |  |
| $\mathbf{9 6 7 3 9}$ | $\mathbf{3 3 3 5 . 3}$ | $\mathbf{1 4 8 6 7 . 6}$ | $\mathbf{6 7 3 4 . 7}$ | $\mathbf{1 5 3 . 7}$ | $\mathbf{6 9 . 6}$ |

24 Total printing, publishing and recorded media
96739
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG
251

Petroleum refining
252 Petroleum and coal product $\mathbf{m f g}$ n.e.c.

| 3673 | 251.8 | 7646.5 | 1245.4 | 2081.9 | 339.1 |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |
| 647 | 34.2 | 344.8 | 72.8 | 533.2 | 112.6 |
|  |  |  |  |  |  |
| 2293 | 104.4 | 1074.0 | 318.0 | 468.3 | 138.7 |
| 1326 | 62.5 | 333.4 | 153.7 | 251.4 | 115.9 |
| 4695 | 250.1 | 2141.0 | 500.2 | 456.0 | 106.5 |
| 2100 | 114.2 | 1294.1 | 290.9 | 616.4 | 138.5 |
| 3475 | 178.7 | 1487.3 | 458.9 | 428.1 | 132.1 |
| 13889 | 709.8 | 6329.8 | 1721.7 | 455.8 | 124.0 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| 1783 | 89.6 | 769.2 | 295.4 | 431.4 | 165.7 |
| 5480 | 211.1 | 1557.3 | 559.9 | 284.2 | 102.2 |
| 12020 | 499.7 | 4060.5 | 1293.1 | 337.8 | 107.6 |
| 1445 | 70.1 | 1186.6 | 303.8 | 821.1 | 210.3 |
| 3583 | 134.4 | 1184.2 | 321.0 | 330.5 | 89.6 |
| 3697 | 152.5 | 987.8 | 270.3 | 267.2 | 73.1 |
| 654 | 25.3 | 199.3 | 43.7 | 304.9 | 66.9 |
| 3360 | 124.4 | 878.8 | 258.0 | 261.6 | 76.8 |
| 32021 | 1307.1 | 10823.7 | 3345.3 | 338.0 | 104.5 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June.

Includes working proprietors.

| INDUSTRY CLASS | Employment at end of June(b) | Wages and salaries(c) | Turnover | Industry gross product | Turnover per person employed(d) | Industry gross product per person employed(e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANZSIC <br> code Description | no. | \$m | \$m | \$m | \$'000 | \$'000 |


| Rubber product mfg |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | ---: | :--- | :--- | :--- |
| 2551 | Rubber tyre mfg | 3792 | 185.5 | 900.2 | 334.6 | 237.4 | 88.2 |
| 2559 | Rubber product mfg n.e.c. | 4362 | 145.6 | 659.3 | 244.9 | 151.1 | 56.1 |
| 255 | Total | 8154 | 331.1 | 1559.5 | 579.5 | 191.3 | 71.1 |


| 2561 | Plastic blow moulded product mfg |
| :--- | :--- |
| 2562 | Plastic extruded product mfg |
| 2563 | Plastic bag and film mfg |
| 2564 | Plastic product, rigid fibre reinforced, mfg |
| 2565 | Plastic foam product mfg |
| 2566 | Plastic injection moulded product mfg |
| 256 | Total |

Total petroleum, coal, chemical and associated product mfg

| $\mathbf{9 3} \mathbf{3 7 6}$ | $\mathbf{3 8 0 5 . 7}$ | $\mathbf{3 2 8 6 2 . 9}$ | $\mathbf{9 0 9 1 . 8}$ | $\mathbf{3 5 1 . 9}$ | $\mathbf{9 7 . 4}$ |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |
| 5280 | 215.6 | 1060.3 | 381.8 | 200.8 | 72.3 |
|  |  |  |  |  |  |
| 4089 | 145.8 | 674.1 | 296.6 | 164.8 | 72.5 |
| 1276 | 46.7 | 203.6 | 62.8 | 159.6 | 49.3 |
| 1023 | 38.1 | 159.5 | 66.7 | 155.9 | 65.2 |
| 1970 | 51.9 | 203.7 | 109.7 | 103.4 | 55.7 |
| 8357 | 282.6 | 1240.8 | 535.8 | 148.5 | 64.1 |

Cement, lime, plaster and concrete product mfg
2631
2632 Plaster product mfg

| 2428 | 122.9 | 1099.5 | 439.9 | 452.9 | 181.2 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 1776 | 75.2 | 531.3 | 192.4 | 299.2 | 108.4 |
| 5440 | 210.6 | 2180.6 | 294.3 | 400.8 | 54.1 |
| 1548 | 58.7 | 269.1 | 95.9 | 173.8 | 61.9 |
| 7379 | 233.7 | 1377.1 | 392.0 | 186.6 | 53.1 |
| 18570 | 701.1 | 5457.6 | 1414.5 | 293.9 | 76.2 |
|  |  |  |  |  |  |
| 4909 | 174.0 | 863.6 | 313.2 | 175.9 | 63.8 |
|  |  |  |  |  |  |
| $\mathbf{3 7 1 1 7}$ | $\mathbf{1 3 7 3 . 2}$ | $\mathbf{8 6 2 2 . 3}$ | $\mathbf{2 6 4 5 . 3}$ | $\mathbf{2 3 2 . 3}$ | $\mathbf{7 1 . 3}$ |

Total non-metallic mineral product mfg
117

## METAL PRODUCT MFG

## Iron and steel mfg

| 2711 | Basic iron and steel mfg | 20420 | 1090.4 | 8980.4 | 2475.6 | 439.8 | 121.2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2712 | Iron and steel casting and forging | 6478 | 239.0 | 960.0 | 373.2 | 148.2 | 57.6 |
| 2713 | Steel pipe and tube mfg | 2373 | 104.0 | 850.6 | 214.3 | 358.5 | 90.3 |
| 271 | Total | 29271 | 1433.4 | 10791.0 | 3063.1 | 368.7 | 104.6 |
| Basic non-ferrous metal mfg |  |  |  |  |  |  |  |
| 2721 | Alumina production | 5752 | 320.8 | 3012.6 | 1011.2 | 523.8 | 175.8 |
| 2722 | Aluminium smelting | 5221 | 267.5 | 3159.3 | 966.0 | 605.1 | 185.0 |
| 2723 | Copper, silver, lead and zinc smelting, refining | 3010 | 163.7 | 2403.1 | 350.5 | 798.3 | 116.4 |
| 2729 | Basic non-ferrous metal mfg n.e.c. | 1626 | 71.6 | 1735.9 | 182.0 | 1067.3 | 111.9 |
| 272 | Total | 15609 | 823.6 | 10310.9 | 2509.8 | 660.6 | 160.8 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

|  |  |  |  |  |  | Industry gross |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Employment at end | Wages and |  | Industry gross | Turnover per person | product per person |
| INDUSTRY CLASS |  | salaries(c) | Turnover |  |  | employed(e) |


| ANZSIC |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| code | Description | no. $\$ \mathrm{~m}$ | $\$ \mathrm{~m}$ |


|  |  |  |  |  |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| Non-ferrous basic metal product mfg |  |  |  |  |  |  |
| 2731 | Aluminium rolling, drawing, extruding | 3525 | 153.1 | 1127.2 | 260.9 | 319.8 |
| 2732 | Non-ferrous metal rolling, drawing, extruding n.e.c. | 1689 | 68.0 | 876.6 | 148.7 | 519.0 |
| 2733 | Non-ferrous metal casting | 1394 | 40.4 | 137.4 | 51.5 | 98.6 |
| 273 | Total | 6608 | 261.5 | 2141.1 | 461.2 | 324.0 |
|  |  |  |  |  |  |  |
|  | Structural metal product mfg |  |  |  |  |  |
| 2741 | Structural steel fabricating | 1812 | 628.7 | 3410.8 | 1082.4 | 188.3 |
| 2742 | Architectural aluminium product mfg | 13266 | 376.8 | 1805.7 | 542.8 | 136.1 |
| 2749 | Structural metal product mfg n.e.c. | 5352 | 144.2 | 769.7 | 245.5 | 143.8 |
| 274 | Total | 36730 | 1149.7 | 5986.3 | 1870.7 | 163.0 |


| 3896 | 145.1 | 1024.4 | 279.8 | 262.9 | 71.8 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15097 | 476.4 | 2276.7 | 805.5 | 150.8 | 53.4 |
| 18993 | 621.5 | 3301.1 | 1085.3 | 173.8 | 57.1 |
| 2388 | 66.1 | 239.0 | 112.9 | 100.1 | 47.3 |
| 5403 | 191.2 | 1004.9 | 322.5 | 186.0 | 59.7 |
| 1983 | 67.6 | 321.1 | 133.0 | 162.0 | 67.1 |
| 7110 | 193.8 | 662.4 | 314.6 | 93.2 | 44.2 |
| 2542 | 79.8 | 318.5 | 139.8 | 125.3 | 55.0 |
| 23564 | 679.7 | 2817.8 | 1093.2 | 119.6 | 46.4 |
| 42991 | 1278.2 | 5363.6 | 2115.9 | 124.8 | 49.2 |
| 150201 | 5567.8 | 37894.0 | 11106.2 | 252.3 | 73.9 |

Fabricated metal product mfg
Hand tool and general hardware m

| 2762 | Spring and wire product mfg |
| :--- | :--- |
| 2763 | Nut, bolt, screw and rivet mfg |
| 2764 | Metal coating and finishing |

MACHINERY AND EQUIPMENT MFG

| Motor vehicle and part mfg |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Motor vehicle mfg | 20702 | 857.5 | 10158.5 | 2379.0 | 490.7 | 114.9 |
| Motor vehicle body mfg | 7773 | 225.4 | 1019.8 | 322.1 | 131.2 | 41.4 |
| Automotive electrical and instrument mfg | 5225 | 189.3 | 923.7 | 271.2 | 176.8 | 51.9 |
| Automotive component mfg n.e.c. | 21771 | 731.3 | 3208.6 | 1239.7 | 147.4 | 56.9 |
| Total | 55472 | 2003.5 | 15310.6 | 4212.1 | 276.0 | 75.9 |
| Other transport equipment mfg |  |  |  |  |  |  |
| Shipbuilding | 7130 | 289.9 | 1595.3 | 490.3 | 223.7 | 68.8 |
| Boatbuilding | 3514 | 82.2 | 389.2 | 121.9 | 110.8 | 34.7 |
| Railway equipment mfg | 5199 | 200.7 | 874.8 | 297.6 | 168.3 | 57.2 |
| Aircraft mfg | 12165 | 642.1 | 1459.0 | 661.8 | 119.9 | 54.4 |
| Transport equipment mfg n.e.c. | 589 | 14.8 | 68.5 | 23.2 | 116.4 | 39.4 |
| Total | 28596 | 1229.6 | 4386.8 | 1594.8 | 153.4 | 55.8 |
| Photographic and scientific equipment mfg |  |  |  |  |  |  |
| Photographic and optical good mfg | 2658 | 99.3 | 689.6 | 294.5 | 259.4 | 110.8 |
| Medical and surgical equipment mfg | 4518 | 129.8 | 468.9 | 179.3 | 103.8 | 39.7 |
| Professional and scientific equipment mfg n.e.c. | 3517 | 129.5 | 439.9 | 164.5 | 125.1 | 46.8 |
| Total | 10693 | 358.6 | 1598.4 | 638.3 | 149.5 | 59.7 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

|  |  |  |  |  |
| :--- | ---: | :--- | :--- | :--- |
| INDUSTRY CLASS | Employment |  | Industry gross |  |
|  | at end | Wages and |  | Industry | | Turnover |
| ---: |
| product |


| ANZSIC |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| code | Description | no. | $\$ \mathrm{~m}$ | $\$ \mathrm{l}$ |  |


| Electronic equipment mfg |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2841 | Computer and business machine mfg | 3059 | 123.7 | 1401.8 | 260.2 | 458.3 | 85.1 |
| 2842 | Telecommunication, broadcasting and transceiving equipment mfg | 7517 | 320.5 | 2211.6 | 938.8 | 294.2 | 124.9 |
| 2849 | Electronic equipment mfg n.e.c. | 10553 | 380.0 | 1869.9 | 678.2 | 177.2 | 64.3 |
| 284 | Total | 21129 | 824.2 | 5483.3 | 1877.2 | 259.5 | 88.8 |
| Electrical equipment and appliance mfg |  |  |  |  |  |  |  |
| 2851 | Household appliance mfg | 12909 | 403.8 | 2091.6 | 637.4 | 162.0 | 49.4 |
| 2852 | Electric cable and wire mfg | 4476 | 194.2 | 1377.5 | 362.5 | 307.8 | 81.0 |
| 2853 | Battery mfg | 645 | 21.7 | 144.1 | 55.1 | 223.6 | 85.5 |
| 2854 | Electric light and sign mfg | 4568 | 127.4 | 511.5 | 172.7 | 112.0 | 37.8 |
| 2859 | Electrical equipment mfg n.e.c. | 16099 | 544.7 | 2454.5 | 867.4 | 152.5 | 53.9 |
| 285 | Total | 38697 | 1291.8 | 6579.2 | 2095.1 | 170.0 | 54.1 |
| Industrial machinery and equipment mfg |  |  |  |  |  |  |  |
| 2861 | Agricultural machinery mfg | 6682 | 193.0 | 884.4 | 287.1 | 132.4 | 43.0 |
| 2862 | Mining and construction machinery mfg | 7906 | 292.3 | 1492.9 | 488.3 | 188.8 | 61.8 |
| 2863 | Food processing machinery mfg | 2138 | 81.0 | 338.8 | 118.7 | 158.5 | 55.5 |
| 2864 | Machine tool and part mfg | 7530 | 243.1 | 829.1 | 393.5 | 110.1 | 52.3 |
| 2865 | Lifting and material handling equipment mfg | 8485 | 315.7 | 1383.5 | 454.1 | 163.1 | 53.5 |
| 2866 | Pump and compressor mfg | 3127 | 120.5 | 562.3 | 189.8 | 179.8 | 60.7 |
| 2867 | Commercial space heating and cooling equipment mfg | 2864 | 94.2 | 477.0 | 126.7 | 166.5 | 44.2 |
| 2869 | Industrial machinery and equipment mfg n.e.c. | 14133 | 449.5 | 1934.0 | 762.6 | 136.8 | 54.0 |
| 286 | Total | 52866 | 1789.3 | 7901.9 | 2820.9 | 149.5 | 53.4 |
| 28 | Total machinery and equipment mfg | 207454 | 7497.0 | 41260.3 | 13238.5 | 198.9 | 63.8 |


|  | OTHER MANUFACTURING |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Prefabricated building mfg |  |  |  |  |  |  |
| 2911 | Prefabricated metal building mfg | 2447 | 67.4 | 500.5 | 162.4 | 204.5 | 66.4 |
| 2919 | Prefabricated building mfg n.e.c. | 389 | 10.8 | 66.5 | 22.1 | 171.2 | 56.9 |
| 291 | Total | 2836 | 78.2 | 567.0 | 184.6 | 199.9 | 65.1 |
| Furniture mfg |  |  |  |  |  |  |  |
| 2921 | Wooden furniture and upholstered seat mfg | 28484 | 646.1 | 2733.0 | 933.4 | 95.9 | 32.8 |
| 2922 | Sheet metal furniture mfg | 3287 | 93.7 | 429.1 | 152.2 | 130.6 | 46.3 |
| 2923 | Mattress mfg (except rubber) | 3207 | 84.6 | 477.3 | 139.4 | 148.8 | 43.5 |
| 2929 | Furniture mfg n.e.c. | 7185 | 190.7 | 781.1 | 344.5 | 108.7 | 47.9 |
| 292 | Total | 42163 | 1015.2 | 4420.5 | 1569.4 | 104.8 | 37.2 |
| Miscellaneous manufacturing |  |  |  |  |  |  |  |
| 2941 | Jewellery and silverware mfg | 2932 | 73.6 | 366.0 | 108.7 | 124.8 | 37.1 |
| 2942 | Toy and sporting good mfg | 2386 | 55.2 | 263.2 | 82.4 | 110.3 | 34.5 |
| 2949 | Manufacturing n.e.c. | 7564 | 190.0 | 829.1 | 307.1 | 109.6 | 40.6 |
| 294 | Total | 12882 | 318.8 | 1458.3 | 498.2 | 113.2 | 38.7 |
| 29 | Total other manufacturing | 57881 | 1412.1 | 6445.8 | 2252.1 | 111.4 | 38.9 |
| 21-29 | TOTAL MANUFACTURING | 945298 | 32634.0 | 208348.0 | 63789.8 | 220.4 | 67.5 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

| INDUSTR | SUBDIVISION | Employment at end of June(b) | Wages and salaries(c) | Turnover | Industry <br> gross product | Turnover per person employed(d) | Industry gross product per person employed(e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANZSIC |  |  |  |  |  |  |  |
| code | Description | '000 | \$m | \$m | \$m | \$'000 | \$'000 |
| NEW SOUTH WALES |  |  |  |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 48.5 | 1739.7 | 13339.3 | 3146.2 | 275.1 | 64.9 |
| 22 | Textile, clothing, footwear and leather mfg | 24.2 | 635.3 | 3298.6 | 1053.7 | 136.2 | 43.5 |
| 23 | Wood and paper product mfg | 19.1 | 627.8 | 3526.3 | 1269.2 | 185.1 | 66.6 |
| 24 | Printing, publishing and recorded media | 39.5 | 1465.0 | 6759.0 | 3018.9 | 171.2 | 76.5 |
| 25 | Petroleum, coal, chemical and associated product mfg | 32.4 | 1338.8 | 11868.7 | 3123.2 | 366.6 | 96.5 |
| 26 | Non-metallic mineral product mfg | 11.5 | 431.0 | 2719.6 | 847.9 | 236.0 | 73.6 |
| 27 | Metal product mfg | 53.7 | 2117.7 | 13929.7 | 4074.3 | 259.6 | 75.9 |
| 28 | Machinery and equipment mfg | 64.5 | 2444.2 | 10639.1 | 3779.4 | 164.8 | 58.6 |
| 29 | Other manufacturing | 16.9 | 424.0 | 1984.6 | 690.4 | 117.7 | 40.9 |
| 21-29 | Total manufacturing | 310.2 | 11223.4 | 68065.1 | 21003.3 | 219.4 | 67.7 |
| VICTORIA |  |  |  |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 46.4 | 1650.2 | 14036.5 | 3714.0 | 302.2 | 80.0 |
| 22 | Textile, clothing, footwear and leather mfg | 37.1 | 985.9 | 4711.5 | 1573.4 | 127.1 | 42.4 |
| 23 | Wood and paper product mfg | 17.3 | 595.1 | 3415.0 | 1028.6 | 197.1 | 59.4 |
| 24 | Printing, publishing and recorded media | 29.6 | 1013.1 | 4583.5 | 2086.8 | 154.9 | 70.5 |
| 25 | Petroleum, coal, chemical and associated product mfg | 36.2 | 1507.2 | 11607.6 | 3568.6 | 320.9 | 98.7 |
| 26 | Non-metallic mineral product mfg | 9.3 | 356.5 | 2084.5 | 636.3 | 224.2 | 68.4 |
| 27 | Metal product mfg | 39.0 | 1365.4 | 8468.0 | 2826.5 | 217.4 | 72.6 |
| 28 | Machinery and equipment mfg | 73.5 | 2725.7 | 17558.7 | 5650.4 | 238.9 | 76.9 |
| 29 | Other manufacturing | 18.1 | 454.7 | 2049.3 | 740.2 | 112.9 | 40.8 |
| 21-29 | Total manufacturing | 306.5 | 10653.7 | 68514.6 | 21824.9 | 223.6 | 71.2 |
| QUEENSLAND |  |  |  |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 34.3 | 1134.1 | 8880.1 | 2148.0 | 258.6 | 62.6 |
| 22 | Textile, clothing, footwear and leather mfg | 5.8 | 122.8 | 585.2 | 185.8 | 100.1 | 31.8 |
| 23 | Wood and paper product mfg | 10.8 | 318.9 | 1707.5 | 589.9 | 158.2 | 54.6 |
| 24 | Printing, publishing and recorded media | 12.0 | 359.5 | 1436.2 | 648.3 | 120.0 | 54.2 |
| 25 | Petroleum, coal, chemical and associated product mfg | 10.8 | 412.0 | 4748.7 | 1081.2 | 441.2 | 100.4 |
| 26 | Non-metallic mineral product mfg | 7.6 | 269.7 | 1828.4 | 505.1 | 241.6 | 66.7 |
| 27 | Metal product mfg | 25.2 | 852.1 | 6500.2 | 1798.0 | 258.4 | 71.5 |
| 28 | Machinery and equipment mfg | 24.3 | 776.6 | 3441.6 | 1134.8 | 141.9 | 46.8 |
| 29 | Other manufacturing | 10.6 | 248.0 | 1092.2 | 392.6 | 102.9 | 37.0 |
| 21-29 | Total manufacturing | 141.3 | 4493.5 | 30220.0 | 8483.7 | 213.9 | 60.0 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

| INDUSTRY SUBDIVISION |  | Employment at end of June(b) | Wages and salaries(c) | Turnover | Industry gross product | Turnover per person employed(d) | Industry gross product per person employed(e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANZSIC |  |  |  |  |  |  |  |
| code | Description | '000 | \$m | \$m | \$m | \$'000 | \$'000 |
| SOUTH AUSTRALIA |  |  |  |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 15.2 | 492.5 | 4084.2 | 1259.3 | 267.9 | 82.6 |
| 22 | Textile, clothing, footwear and leather mfg | 4.8 | 132.6 | 761.3 | 228.6 | 157.1 | 47.2 |
| 23 | Wood and paper product mfg | 5.7 | 184.2 | 910.4 | 310.9 | 160.6 | 54.8 |
| 24 | Printing, publishing and recorded media | 5.7 | 179.0 | 805.1 | 348.4 | 142.2 | 61.5 |
| 25 | Petroleum, coal, chemical and associated product mfg | 6.6 | 245.6 | 1362.4 | 546.2 | 205.0 | 82.2 |
| 26 | Non-metallic mineral product mfg | 2.6 | 93.7 | 605.4 | 190.1 | 232.6 | 73.0 |
| 27 | Metal product mfg | 11.4 | 407.4 | 2539.1 | 710.4 | 223.3 | 62.5 |
| 28 | Machinery and equipment mfg | 28.2 | 1014.7 | 6917.8 | 1814.7 | 245.0 | 64.3 |
| 29 | Other manufacturing | 5.2 | 121.5 | 564.1 | 163.4 | 109.2 | 31.6 |
| 21-29 | Total manufacturing | 85.5 | 2871.0 | 18549.7 | 5572.1 | 217.1 | 65.2 |

## WESTERN AUSTRALIA

| 24 |  | 394.1 | 3130.5 | 780.1 | 240.5 | 59.9 |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| 21 | Food, beverage and tobacco mfg | 13.0 | 394.3 | 88.0 | 362.7 | 148.2 |
| 22 | Textile, clothing, footwear and leather mfg | 3.3 | 45.3 |  |  |  |
| 23 | Wood and paper product mfg | 4.4 | 127.8 | 713.4 | 280.4 | 162.4 |
| 24 | Printing, publishing and recorded media | 6.5 | 200.9 | 847.3 | 404.7 | 131.1 |
| 25 | Petroleum, coal, chemical and associated product mfg | 6.5 | 271.9 | 3082.0 | 714.9 | 473.0 |
| 26 | Non-metallic mineral product mfg | 5.0 | 181.4 | 1024.2 | 349.4 | 205.7 |
| 27 | Metal product mfg | 16.1 | 617.1 | 4813.4 | 1169.8 | 299.0 |
| 28 | Machinery and equipment mfg | 12.8 | 404.4 | 2183.1 | 669.3 | 170.2 |
| 29 | Other manufacturing | 5.8 | 134.7 | 631.9 | 224.1 | 109.7 |
|  |  |  |  | 52.7 |  |  |
| $21-29$ | Total manufacturing | 73.3 | 2420.2 | 16788.7 | 4741.0 | 229.0 |


|  |  |  |  |  |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| 21 | Food, beverage and tobacco mfg |  |  |  |  |  |
| 22 | Textile, clothing, footwear and leather mfg | 5.6 | 176.1 | 1357.2 | 383.0 | 240.3 |
| 23 | Wood and paper product mfg | 1.5 | 44.0 | 198.4 | 67.7 | 129.1 |
| 24 | Printing, publishing and recorded media | 3.8 | 152.5 | 1140.2 | 479.8 | 296.2 |
| 25 | Petroleum, coal, chemical and associated product mfg | 1.6 | 54.8 | 180.7 | 83.9 | 112.3 |
| 26 | Non-metallic mineral product mfg | 0.8 | 26.8 | 169.5 | 49.8 | 216.0 |
| 27 | Metal product mfg | 0.8 | 30.3 | 241.2 | 88.9 | 303.2 |
| 28 | Machinery and equipment mfg | 3.4 | 144.7 | 1015.4 | 295.5 | 297.7 |
| 29 | Other manufacturing | 3.1 | 99.0 | 378.0 | 136.8 | 121.7 |
|  |  | 0.8 | 15.9 | 62.5 | 21.2 | 74.3 |
| $21-29$ | Total manufacturing | 21.6 | 744.1 | 4743.1 | 1606.7 | 219.8 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

| INDUSTR | SUBDIVISION | Employment at end of June(b) | Wages and salaries(c) | Turnover | Industry <br> gross <br> product | Turnover per person employed(d) | Industry gross product per person employed(e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ANZSIC |  |  |  |  |  |  |  |
| code | Description | '000 | \$m | \$m | \$m | \$'000 | \$'000 |
| NORTHERN TERRITORY |  |  |  |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 0.5 | 12.7 | 85.9 | 27.4 | 165.7 | 52.9 |
| 22 | Textile, clothing, footwear and leather mfg | 0.1 | 2.3 | 9.4 | 3.5 | 109.8 | 41.4 |
| 23 | Wood and paper product mfg | 0.2 | 5.2 | 26.5 | 9.4 | 152.1 | 54.3 |
| 24 | Printing, publishing and recorded media | 0.5 | 12.2 | 40.3 | 23.5 | 89.2 | 52.1 |
| 25 | Petroleum, coal, chemical and associated product mfg | 0.1 | 2.8 | 21.3 | 6.9 | 239.8 | 77.0 |
| 26 | Non-metallic mineral product mfg | 0.2 | 6.9 | 73.9 | 20.6 | 346.1 | 96.6 |
| 27 | Metal product mfg | 1.3 | 55.0 | 593.3 | 220.7 | 473.9 | 176.3 |
| 28 | Machinery and equipment mfg | 0.4 | 14.2 | 47.5 | 16.5 | 112.7 | 39.1 |
| 29 | Other manufacturing | 0.2 | 3.6 | 17.4 | 6.0 | 113.9 | 39.3 |
| 21-29 | Total manufacturing | 3.4 | 114.9 | 915.6 | 334.6 | 272.6 | 99.6 |

## AUSTRALIAN CAPITAL TERRITORY

| 21 | Food, beverage and tobacco mfg | 0.3 | 10.9 | 64.8 | 19.2 | 198.2 | 58.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 | Textile, clothing, footwear and leather mfg | 0.1 | 1.7 | 8.3 | 3.7 | 67.2 | 30.3 |
| 23 | Wood and paper product mfg | 0.2 | 8.6 | 42.0 | 10.9 | 172.8 | 44.9 |
| 24 | Printing, publishing and recorded media | 1.5 | 50.9 | 215.5 | 120.1 | 140.4 | 78.2 |
| 25 | Petroleum, coal, chemical and associated product mfg | - | 0.7 | 2.7 | 1.0 | 98.1 | 38.2 |
| 26 | Non-metallic mineral product mfg | 0.1 | 3.8 | 45.1 | 7.0 | 331.3 | 51.6 |
| 27 | Metal product mfg | 0.3 | 8.6 | 34.9 | 10.8 | 118.0 | 36.5 |
| 28 | Machinery and equipment mfg | 0.6 | 18.1 | 94.4 | 36.6 | 165.9 | 64.3 |
| 29 | Other manufacturing | 0.3 | 9.8 | 43.8 | 14.1 | 131.8 | 42.5 |
| 21-29 | Total manufacturing | 3.6 | 113.0 | 551.3 | 223.5 | 153.6 | 62.3 |


| 21 | Food, beverage and tobacco mfg | 164.0 | 5610.2 | 44978.4 | 11477.2 | 274.2 | 70.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 | Textile, clothing, footwear and leather mfg | 77.0 | 2012.6 | 9935.4 | 3264.8 | 129.0 | 42.4 |
| 23 | Wood and paper product mfg | 61.5 | 2019.9 | 11481.2 | 3979.3 | 186.7 | 64.7 |
| 24 | Printing, publishing and recorded media | 96.7 | 3335.3 | 14867.6 | 6734.7 | 153.7 | 69.6 |
| 25 | Petroleum, coal, chemical and associated product mfg | 93.4 | 3805.7 | 32862.9 | 9091.8 | 351.9 | 97.4 |
| 26 | Non-metallic mineral product mfg | 37.1 | 1373.2 | 8622.3 | 2645.3 | 232.3 | 71.3 |
| 27 | Metal product mfg | 150.2 | 5567.8 | 37894.0 | 11106.2 | 252.3 | 73.9 |
| 28 | Machinery and equipment mfg | 207.5 | 7497.0 | 41260.3 | 13238.5 | 198.9 | 63.8 |
| 29 | Other manufacturing | 57.9 | 1412.1 | 6445.8 | 2252.1 | 111.4 | 38.9 |
| 21-29 | Total manufacturing | 945.3 | 32634.0 | 208348.0 | 63789.8 | 220.4 | 67.5 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Includes working proprietors.
(c) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(d) Turnover divided by the number of persons employed at the end of June. Includes working proprietors.
(e) Industry gross product divided by the number of persons employed at the end of June. Includes working proprietors.

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

INDUSTRY SUBDIVISION
1992-93 TO 1996-97

| ANZSIC |  | 1992-93 | 1995-96 | Percentage | Change in IGP per person |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Code | Description | 1995-96 | 1996-97 | movement | employed(c) |
| 21 | Food, beverage and tobacco mfg | 17.1 | 0.7 | 18.0 | 18.6 |
| 22 | Textile, clothing, footwear and leather mfg | 3.6 | 2.3 | 6.0 | 13.7 |
| 23 | Wood and paper product mfg | 19.5 | -1.6 | 17.6 | 19.7 |
| 24 | Printing, publishing and recorded media | 24.0 | 4.8 | 29.9 | 22.2 |
| 25 | Petroleum, coal, chemical and associated product mfg | 25.2 | 0.5 | 25.8 | 22.7 |
| 26 | Non-metallic mineral product mfg | 8.3 | -8.9 | -1.2 | 6.2 |
| 27 | Metal product mfg | 28.3 | -5.3 | 21.5 | 23.6 |
| 28 | Machinery and equipment mfg | 27.6 | 7.5 | 37.1 | 32.4 |
| 29 | Other manufacturing | 17.0 | 3.0 | 20.6 | 17.8 |
| 21-29 | Total manufacturing | 21.7 | 0.9 | 22.8 | 22.3 |

(a) See paragraph 5 of the Explanatory Notes.
(b) Percentage changes are calculated using current price data and, therefore, do not discount the impact of price changes. For factors affecting comparability of data over the time periods shown, see paragraphs 13-18 of the Explanatory Notes.
(c) Based on employment at the end of June of the reference year. Includes working proprietors.

5
MANUFACTURING ESTABLISHMENTS(a), Summary of Operations—Employment size(b)


FOOD, BEVERAGE AND TOBACCO MANUFACTURING

| 0-4 persons | 3.1 | 1.9 | 55.3 | 1.0 | 431.9 | 1.0 | 109.2 | 1.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 5.3 | 3.2 | 110.7 | 2.0 | 766.9 | 1.7 | 177.3 | 1.6 |
| 10-19 persons | 8.8 | 5.3 | 201.4 | 3.6 | 1732.4 | 3.9 | 406.5 | 3.6 |
| 20-49 persons | 17.2 | 10.5 | 470.1 | 8.5 | 4243.1 | 9.5 | 1009.7 | 8.8 |
| 50-99 persons | 19.3 | 11.8 | 607.8 | 10.9 | 5550.5 | 12.4 | 1291.8 | 11.3 |
| Total less than 100 persons | 53.8 | 32.8 | 1445.3 | 26.0 | 12724.8 | 28.5 | 2994.4 | 26.2 |
| 100-199 persons | 21.2 | 12.9 | 705.4 | 12.7 | 6195.5 | 13.9 | 1682.0 | 14.7 |
| 200-499 persons | 53.7 | 32.7 | 2049.4 | 36.9 | 17040.8 | 38.1 | 4501.2 | 39.4 |
| 500-999 persons | 22.9 | 14.0 | 840.9 | 15.1 | 5181.9 | 11.6 | 1432.5 | 12.5 |
| 1000 or more persons | 12.5 | 7.6 | 515.2 | 9.3 | 3555.8 | 8.0 | 806.6 | 7.1 |
| Total 100 or more persons | 110.3 | 67.2 | 4110.9 | 74.0 | 31974.0 | 71.5 | 8422.4 | 73.8 |
| Total | 164.0 | 100.0 | 5556.1 | 100.0 | 44698.8 | 100.0 | 11416.8 | 100.0 |

TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING

| 0-4 persons | 9.8 | 12.8 | 135.8 | 6.9 | 691.5 | 7.1 | 260.2 | 8.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 8.6 | 11.1 | 149.3 | 7.6 | 683.3 | 7.0 | 251.2 | 7.8 |
| 10-19 persons | 8.9 | 11.6 | 188.9 | 9.6 | 874.5 | 9.0 | 316.5 | 9.8 |
| 20-49 persons | 11.8 | 15.3 | 290.4 | 14.7 | 1597.8 | 16.4 | 486.7 | 15.1 |
| 50-99 persons | 9.4 | 12.3 | 281.4 | 14.2 | 1472.2 | 15.1 | 439.6 | 13.7 |
| Total less than 100 persons | 48.5 | 63.0 | 1045.8 | 52.9 | 5319.3 | 54.5 | 1754.2 | 54.5 |
| 100-199 persons | 11.7 | 15.2 | 379.5 | 19.2 | 2005.1 | 20.5 | 609.5 | 18.9 |
| 200-499 persons | 12.3 | 16.0 | 410.4 | 20.8 | 1872.0 | 19.2 | 673.0 | 20.9 |
| 500-999 persons | 4.5 | 5.8 | 140.3 | 7.1 | 564.4 | 5.8 | 181.8 | 5.6 |
| 1000 or more persons | - | - | - | - | - | - | - | - |
| Total 100 or more persons | 28.5 | 37.0 | 930.2 | 47.1 | 4441.5 | 45.5 | 1464.3 | 45.5 |
| Total | 77.0 | 100.0 | 1976.1 | 100.0 | 9760.8 | 100.0 | 3218.5 | 100.0 |


| 0-4 persons | 6.1 | 9.9 | 107.9 | 5.4 | 519.9 | 4.5 | 171.2 | 4.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 6.4 | 10.5 | 142.5 | 7.1 | 635.8 | 5.6 | 210.9 | 5.3 |
| 10-19 persons | 8.8 | 14.3 | 228.5 | 11.4 | 1078.1 | 9.4 | 366.3 | 9.2 |
| 20-49 persons | 9.8 | 16.0 | 275.1 | 13.7 | 1410.4 | 12.3 | 451.3 | 11.4 |
| 50-99 persons | 6.5 | 10.5 | 217.4 | 10.8 | 1461.1 | 12.8 | 559.4 | 14.1 |
| Total less than 100 persons | 37.6 | 61.2 | 971.2 | 48.4 | 5105.3 | 44.7 | 1759.0 | 44.4 |
| 100-199 persons | 8.7 | 14.2 | 341.5 | 17.0 | 1914.0 | 16.7 | 725.3 | 18.3 |
| 200-499 persons | 10.7 | 17.4 | 464.2 | 23.1 | 2846.5 | 24.9 | 1086.2 | 27.4 |
| 500-999 persons | 4.4 | 7.2 | 228.9 | 11.4 | 1562.6 | 13.7 | 391.1 | 9.9 |
| 1000 or more persons | - | - | - | - | - | - | - | - |
| Total 100 or more persons | 23.9 | 38.8 | 1034.5 | 51.6 | 6323.1 | 55.3 | 2202.7 | 55.6 |
| Total | 61.5 | 100.0 | 2005.7 | 100.0 | 11428.4 | 100.0 | 3961.8 | 100.0 |

(a) See paragraph 5 of the Explanatory Notes.
(b) See paragraph 21 of the Explanatory Notes for an explanation of the impact of unincorporated joint ventures on these estimates.
(c) Includes working proprietors.
(d) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997. See paragraph 20 of the Explanatory Notes.
(f) See paragraph 19 of the Explanatory Notes.

5
MANUFACTURING ESTABLISHMENTS(a), Summary of Operations-Employment size(b) continued

|  | Employment at end of June(c)...... |  | Wages and salaries(d)(e). |  | Turnover(e)................. |  | Industry gross product(e)....... |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employment size group(f) | '000 | \% | \$m | \% | \$m | \% | \$m | \% |

PRINTING, PUBLISHING AND RECORDED MEDIA

| 0-4 persons | 7.7 | 7.9 | 161.0 | 4.9 | 725.8 | 4.9 | 315.6 | 4.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 9.4 | 9.7 | 242.0 | 7.3 | 921.9 | 6.2 | 409.1 | 6.1 |
| 10-19 persons | 11.0 | 11.4 | 318.0 | 9.6 | 1175.8 | 8.0 | 515.0 | 7.7 |
| 20-49 persons | 14.6 | 15.1 | 475.1 | 14.4 | 1777.7 | 12.0 | 773.4 | 11.6 |
| 50-99 persons | 12.2 | 12.6 | 430.2 | 13.0 | 2009.3 | 13.6 | 938.0 | 14.0 |
| Total less than 100 persons | 54.9 | 56.7 | 1626.2 | 49.2 | 6610.6 | 44.8 | 2951.1 | 44.1 |
| 100-199 persons | 12.7 | 13.1 | 472.6 | 14.3 | 2311.3 | 15.7 | 872.9 | 13.0 |
| 200-499 persons | 12.8 | 13.3 | 480.0 | 14.5 | 1996.0 | 13.5 | 898.9 | 13.4 |
| 500-999 persons | 7.1 | 7.3 | 275.7 | 8.3 | 1699.6 | 11.5 | 970.1 | 14.5 |
| 1000 or more persons | 9.2 | 9.6 | 450.4 | 13.6 | 2149.5 | 14.6 | 1002.0 | 15.0 |
| Total 100 or more persons | 41.9 | 43.3 | 1678.7 | 50.8 | 8156.3 | 55.2 | 3743.8 | 55.9 |
| Total | 96.7 | 100.0 | 3304.9 | 100.0 | 14766.9 | 100.0 | 6695.0 | 100.0 |

PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING

| 0-4 persons | 3.0 | 3.3 | 67.0 | 1.8 | 586.7 | 1.8 | 202.3 | 2.2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 4.4 | 4.7 | 119.9 | 3.2 | 723.4 | 2.2 | 223.1 | 2.5 |
| 10-19 persons | 7.3 | 7.8 | 226.8 | 6.0 | 1458.8 | 4.5 | 432.2 | 4.8 |
| 20-49 persons | 14.4 | 15.4 | 477.5 | 12.7 | 3558.4 | 10.9 | 1139.3 | 12.7 |
| 50-99 persons | 17.5 | 18.7 | 707.4 | 18.8 | 5141.6 | 15.8 | 1665.4 | 18.5 |
| Total less than 100 persons | 46.5 | 49.8 | 1598.5 | 42.5 | 11468.9 | 35.2 | 3662.2 | 40.7 |
| 100-199 persons | 19.0 | 20.4 | 810.9 | 21.5 | 5916.9 | 18.2 | 1837.4 | 20.4 |
| 200-499 persons | 23.8 | 25.5 | 1141.1 | 30.3 | 12404.3 | 38.1 | 2722.4 | 30.2 |
| 500-999 persons | 4.0 | 4.3 | 212.7 | 5.7 | 2757.2 | 8.5 | 784.3 | 8.7 |
| 1000 or more persons | - | - | - | - | - | - | - | - |
| Total 100 or more persons | 46.8 | 50.2 | 2164.8 | 57.5 | 21078.4 | 64.8 | 5344.0 | 59.3 |
| Total | 93.4 | 100.0 | 3763.3 | 100.0 | 32547.3 | 100.0 | 9006.3 | 100.0 |


| 0-4 persons | 2.6 | 7.1 | 48.0 | 3.5 | 261.4 | 3.0 | 77.1 | 2.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 2.6 | 7.1 | 65.5 | 4.8 | 347.3 | 4.0 | 94.6 | 3.6 |
| 10-19 persons | 3.7 | 9.8 | 104.1 | 7.6 | 585.3 | 6.8 | 165.7 | 6.3 |
| 20-49 persons | 5.4 | 14.4 | 184.7 | 13.5 | 1124.1 | 13.1 | 333.3 | 12.6 |
| 50-99 persons | 5.3 | 14.2 | 201.9 | 14.8 | 1398.5 | 16.3 | 421.5 | 16.0 |
| Total less than 100 persons | 19.6 | 52.7 | 604.3 | 44.2 | 3716.5 | 43.2 | 1092.1 | 41.4 |
| 100-199 persons | 8.3 | 22.4 | 373.6 | 27.3 | 2726.6 | 31.7 | 822.5 | 31.2 |
| 200-499 persons | 7.5 | 20.1 | 326.3 | 23.8 | 1858.0 | 21.6 | 617.5 | 23.4 |
| 500-999 persons | 1.8 | 4.7 | 64.4 | 4.7 | 296.0 | 3.4 | 105.4 | 4.0 |
| 1000 or more persons | - | - | - | - | - | - | - | - |
| Total 100 or more persons | 17.6 | 47.3 | 764.2 | 55.8 | 4880.6 | 56.8 | 1545.4 | 58.6 |
| Total | 37.1 | 100.0 | 1368.5 | 100.0 | 8597.1 | 100.0 | 2637.5 | 100.0 |

(a) See paragraph 5 of the Explanatory Notes.
(b) See paragraph 21 of the Explanatory Notes for an explanation of the impact of unincorporated joint ventures on these estimates.
(c) Includes working proprietors.
(d) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997. See paragraph 20 of the Explanatory Notes.
(f) See paragraph 19 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a), Summary of Operations-Employment size(b) continued

|  | Employment at end of June(c)........ |  | Wages and salaries(d)(e). |  | Turnover(e).................. |  | Industry gross product(e)..... |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employment size group(f) | '000 | \% | \$m | \% | \$m | \% | \$m |

## METAL PRODUCT MANUFACTURING

| 0-4 persons | 11.2 | 7.5 | 234.3 | 4.2 | 4864.0 | 12.9 | 3233.2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 13.7 | 9.1 | 350.0 | 6.3 | 1533.0 | 4.1 | 567.5 |  |
| 10-19 persons | 17.2 | 11.5 | 495.5 | 8.9 | 2172.7 | 5.8 | 777.2 |  |
| 20-49 persons | 24.0 | 15.9 | 755.1 | 13.6 | 4185.9 | 11.1 | 1309.0 |  |
| 50-99 persons | 19.9 | 13.2 | 699.4 | 12.6 | 4368.0 | 11.6 | 1286.9 |  |
| Total less than 100 persons | 85.9 | 57.2 | 2534.3 | 45.8 | 17123.5 | 45.5 | 7173.9 |  |
| 100-199 persons | 21.0 | 14.0 | 800.7 | 14.5 | 5528.8 | 14.7 | 1480.1 |  |
| 200-499 persons | 15.5 | 10.3 | 679.8 | 12.3 | 5776.4 | 15.3 | 1249.0 |  |
| 500-999 persons | 7.4 | 4.9 | 365.9 | 6.6 | 2116.7 | 5.6 | -84.6 |  |
| 1000 or more persons | 20.5 | 13.6 | 1158.5 | 20.9 | 7111.9 | 18.9 | 1245.9 |  |
| Total 100 or more persons | 64.3 | 42.8 | 3004.9 | 54.2 | 20533.8 | 54.5 | 3890.4 |  |
| Total | 150.2 | 100.0 | 5539.1 | 100.0 | 37657.4 | 100.0 | 11064.3 | 100.0 |


| 0-4 persons | 12.1 | 5.8 | 253.8 | 3.4 | 1150.2 | 2.8 | 440.6 | 3.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 13.5 | 6.5 | 354.7 | 4.8 | 1438.1 | 3.5 | 543.1 | 4.1 |
| 10-19 persons | 17.5 | 8.4 | 513.2 | 6.9 | 2132.2 | 5.2 | 810.0 | 6.1 |
| 20-49 persons | 25.3 | 12.2 | 809.7 | 10.9 | 3674.9 | 8.9 | 1317.9 | 10.0 |
| 50-99 persons | 23.0 | 11.1 | 821.8 | 11.0 | 4339.4 | 10.6 | 1395.8 | 10.6 |
| Total less than 100 persons | 91.4 | 44.1 | 2753.1 | 36.9 | 12734.8 | 31.0 | 4507.3 | 34.1 |
| 100-199 persons | 26.1 | 12.6 | 971.5 | 13.0 | 5162.4 | 12.6 | 1581.2 | 12.0 |
| 200-499 persons | 36.3 | 17.5 | 1442.2 | 19.3 | 7802.4 | 19.0 | 2523.8 | 19.1 |
| 500-999 persons | 17.4 | 8.4 | 706.3 | 9.5 | 3515.0 | 8.6 | 1393.4 | 10.6 |
| 1000 or more persons | 36.3 | 17.5 | 1587.0 | 21.3 | 11895.3 | 28.9 | 3195.3 | 24.2 |
| Total 100 or more persons | 116.0 | 55.9 | 4707.1 | 63.1 | 28375.2 | 69.0 | 8693.6 | 65.9 |
| Total | 207.5 | 100.0 | 7460.1 | 100.0 | 41110.0 | 100.0 | 13200.8 | 100.0 |


| 0-4 persons | 10.7 | 18.5 | 178.6 | 12.8 | 857.5 | 13.5 | 307.1 | 13.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 10.3 | 17.7 | 217.4 | 15.6 | 949.4 | 14.9 | 339.0 | 15.2 |
| 10-19 persons | 11.0 | 18.9 | 267.3 | 19.2 | 1205.8 | 19.0 | 428.3 | 19.2 |
| 20-49 persons | 12.0 | 20.7 | 318.4 | 22.9 | 1423.2 | 22.4 | 512.7 | 23.0 |
| 50-99 persons | 7.8 | 13.4 | 217.2 | 15.6 | 1005.9 | 15.8 | 340.9 | 15.3 |
| Total less than 100 persons | 51.7 | 89.2 | 1198.9 | 86.2 | 5441.7 | 85.5 | 1928.0 | 86.6 |
| 100-199 persons | 4.2 | 7.3 | 127.4 | 9.2 | 639.0 | 10.0 | 206.0 | 9.2 |
| 200-499 persons | 2.0 | 3.5 | 65.2 | 4.7 | 281.2 | 4.4 | 93.4 | 4.2 |
| 500-999 persons | - | - | - | - | - | - | - | - |
| 1000 or more persons | - | - | - | - | - | - | - | - |
| Total 100 or more persons | 6.2 | 10.8 | 192.6 | 13.8 | 920.3 | 14.5 | 299.4 | 13.4 |
| Total | 57.9 | 100.0 | 1391.6 | 100.0 | 6362.0 | 100.0 | 2227.4 | 100.0 |

(a) See paragraph 5 of the Explanatory Notes.
(b) See paragraph 21 of the Explanatory Notes for an explanation of the impact of unincorporated joint ventures on these estimates.
(c) Includes working proprietors.
(d) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997. See paragraph 20 of the Explanatory Notes.
(f) See paragraph 19 of the Explanatory Notes.

MANUFACTURING ESTABLISHMENTS(a), Summary of Operations-Employment size(b) continued
Employment at
end of June(c).......
Wages and salaries(d)(e) $\qquad$
Turnover(e). $\qquad$

Industry gross product(e).
\$m \%

Employment size group(f)
'000
$\%$
\$m \%

TOTAL MANUFACTURING

| 0-4 persons | 66.4 | 7.0 | 1241.7 | 3.8 | 10089.0 | 4.9 | 5116.4 | 8.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-9 persons | 74.3 | 7.9 | 1751.9 | 5.4 | 7999.1 | 3.9 | 2815.8 | 4.4 |
| 10-19 persons | 94.1 | 10.0 | 2543.6 | 7.9 | 12415.6 | 6.0 | 4217.6 | 6.6 |
| 20-49 persons | 134.4 | 14.2 | 4056.0 | 12.5 | 22995.4 | 11.1 | 7333.2 | 11.6 |
| 50-99 persons | 120.8 | 12.8 | 4184.3 | 12.9 | 26746.3 | 12.9 | 8339.1 | 13.1 |
| Total less than 100 persons | 489.9 | 51.8 | 13777.6 | 42.6 | 80245.3 | 38.8 | 27822.2 | 43.9 |
| 100-199 persons | 133.0 | 14.1 | 4983.1 | 15.4 | 32399.8 | 15.7 | 9816.9 | 15.5 |
| 200-499 persons | 174.5 | 18.5 | 7058.5 | 21.8 | 51877.7 | 25.1 | 14365.3 | 22.6 |
| 500-999 persons | 69.4 | 7.3 | 2835.1 | 8.8 | 17693.4 | 8.6 | 5174.1 | 8.2 |
| 1000 or more persons | 78.5 | 8.3 | 3711.2 | 11.5 | 24712.5 | 11.9 | 6249.8 | 9.9 |
| Total 100 or more persons | 455.4 | 48.2 | 18587.9 | 57.4 | 126683.4 | 61.2 | 35606.0 | 56.1 |
| Total | 945.3 | 100.0 | 32365.4 | 100.0 | 206928.7 | 100.0 | 63428.3 | 100.0 |

(a) See paragraph 5 of the Explanatory Notes.
(b) See paragraph 21 of the Explanatory Notes for an explanation of the impact of unincorporated joint ventures on these estimates.
(c) Includes working proprietors.
(d) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.
(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997. See paragraph 20 of the Explanatory Notes.
(f) See paragraph 19 of the Explanatory Notes.

6

| INDUSTR | Y SUBDIVISION | Sales and transfers out of goods produced by this establishment | Amount exported by this business or its agent | Exports as a proportion of sales of goods produced |
| :---: | :---: | :---: | :---: | :---: |
| ANZSIC |  |  |  |  |
| code | Description | \$m | \$m | \% |
| 0-49 PERSONS |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 6832.5 | 990.6 | 14.5 |
| 22 | Textile, clothing, footwear and leather mfg | 3522.6 | 182.0 | 5.2 |
| 23 | Wood and paper product mfg | 3486.3 | 84.6 | 2.4 |
| 24 | Printing, publishing and recorded media | 4080.1 | 75.2 | 1.8 |
| 25 | Petroleum, coal, chemical and associated product mfg | 6011.0 | 560.4 | 9.3 |
| 26 | Non-metallic mineral product mfg | 2142.5 | 43.6 | 2.0 |
| 27 | Metal product mfg | 11821.6 | 3362.8 | 28.4 |
| 28 | Machinery and equipment mfg | 7286.3 | 644.2 | 8.8 |
| 29 | Other manufacturing | 4084.1 | 70.7 | 1.7 |
| 21-29 | Total manufacturing | 49267.1 | 6014.3 | 12.2 |
| 50-99 PERSONS |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 5333.0 | 795.9 | 14.9 |
| 22 | Textile, clothing, footwear and leather mfg | 1318.2 | 198.3 | 15.0 |
| 23 | Wood and paper product mfg | 1413.2 | 350.4 | 24.8 |
| 24 | Printing, publishing and recorded media | 1762.3 | 234.5 | 13.3 |
| 25 | Petroleum, coal, chemical and associated product mfg | 4906.7 | 364.2 | 7.4 |
| 26 | Non-metallic mineral product mfg | 1366.8 | 61.5 | 4.5 |
| 27 | Metal product mfg | 4060.8 | 196.6 | 4.8 |
| 28 | Machinery and equipment mfg | 3891.7 | 669.0 | 17.2 |
| 29 | Other manufacturing | 932.0 | 51.9 | 5.6 |
| 21-29 | Total manufacturing | 24984.5 | 2922.3 | 11.7 |
| 100 OR MORE PERSONS |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 31061.9 | 5986.7 | 19.3 |
| 22 | Textile, clothing, footwear and leather mfg | 4142.2 | 850.6 | 20.5 |
| 23 | Wood and paper product mfg | 6218.5 | 275.2 | 4.4 |
| 24 | Printing, publishing and recorded media | 4654.4 | 107.0 | 2.3 |
| 25 | Petroleum, coal, chemical and associated product mfg | 20594.5 | 2056.1 | 10.0 |
| 26 | Non-metallic mineral product mfg | 4668.0 | 188.7 | 4.0 |
| 27 | Metal product mfg | 20090.0 | 5294.0 | 26.4 |
| 28 | Machinery and equipment mfg | 26306.0 | 4907.4 | 18.7 |
| 29 | Other manufacturing | 856.7 | 48.8 | 5.7 |
| 21-29 | Total manufacturing | 118592.2 | 19714.6 | 16.6 |
| TOTAL |  |  |  |  |
| 21 | Food, beverage and tobacco mfg | 43227.4 | 7773.3 | 18.0 |
| 22 | Textile, clothing, footwear and leather mfg | 8983.0 | 1231.0 | 13.7 |
| 23 | Wood and paper product mfg | 11118.0 | 710.2 | 6.4 |
| 24 | Printing, publishing and recorded media | 10496.8 | 416.8 | 4.0 |
| 25 | Petroleum, coal, chemical and associated product mfg | 31512.2 | 2980.7 | 9.5 |
| 26 | Non-metallic mineral product mfg | 8177.3 | 293.8 | 3.6 |
| 27 | Metal product mfg | 35972.4 | 8853.4 | 24.6 |
| 28 | Machinery and equipment mfg | 37484.0 | 6220.7 | 16.6 |
| 29 | Other manufacturing | 5872.7 | 171.4 | 2.9 |
| 21-29 | Total manufacturing | 192843.9 | 28651.2 | 14.9 |

(a) See paragraph 5 of the Explanatory Notes.
(b) See paragraphs 23-25 of the Explanatory Notes.
(c) This table excludes those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997. See paragraph 20 of the Explanatory Notes. Also, see paragraph 21 of the Explanatory Notes for an explanation of the impact of unincorporated joint ventures on these estimates.

| INDUSTRY SUBDIVISION | Employment at <br> end of June(c) | Wages and <br> salaries(d) | Turnover | Industry gross <br> product |
| :--- | ---: | :---: | :---: | :---: |
| ANZSIC    <br> code Description $\%$ $\%$ | $\%$ | $\%$ |  |  |

## ESTABLISHMENTS THAT DO NOT EXPORT

| 21 | Food, beverage and tobacco mfg | 46.7 | 43.1 | 37.8 | 36.1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 22 | Textile, clothing, footwear and leather mfg | 60.6 | 52.0 | 48.2 | 52.5 |
| 23 | Wood and paper product mfg | 73.0 | 66.9 | 60.9 | 62.0 |
| 24 | Printing, publishing and recorded media | 81.2 | 79.6 | 74.7 | 77.0 |
| 25 | Petroleum, coal, chemical and associated product mfg | 40.6 | 37.7 | 29.1 | 31.0 |
| 26 | Non-metallic mineral product mfg | 66.3 | 63.9 | 68.7 | 63.4 |
| 27 | Metal product mfg | 60.1 | 51.5 | 38.1 | 24.7 |
| $\mathbf{2 8}$ | Machinery and equipment mfg | 45.3 | 43.6 | 32.2 | 37.7 |
| $\mathbf{2 9}$ | Other manufacturing | 81.0 | 77.9 | 76.1 | 77.4 |
| $\mathbf{2 1 - 2 9}$ | Total manufacturing | $\mathbf{5 7 . 2}$ | $\mathbf{5 2 . 1}$ | $\mathbf{4 2 . 2}$ | $\mathbf{4 3 . 1}$ |

ESTABLISHMENTS WITH EXPORTS UP TO AND INCLUDING 50\% OF SALES OF GOODS THAT THEY PRODUCED

| 21 | Food, beverage and tobacco mfg | 38.4 | 41.9 | 45.9 | 51.4 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 22 | Textile, clothing, footwear and leather mfg | 33.8 | 39.5 | 40.4 | 38.9 |
| 23 | Wood and paper product mfg | 26.1 | 32.0 | 36.0 | 34.5 |
| 24 | Printing, publishing and recorded media | 18.5 | 20.0 | 23.1 | 19.2 |
| 25 | Petroleum, coal, chemical and associated product mfg | 57.8 | 60.5 | 68.8 | 66.4 |
| 26 | Non-metallic mineral product mfg | 32.4 | 34.5 | 29.9 | 35.1 |
| 27 | Metal product mfg | 34.4 | 40.9 | 42.6 | 42.9 |
| 28 | Machinery and equipment mfg | 47.6 | 48.6 | 59.4 | 54.6 |
| $\mathbf{2 9}$ | Other manufacturing | 18.0 | 21.0 | 22.7 | 21.6 |
|  |  |  |  |  | $\mathbf{4 5 . 9}$ |
| $\mathbf{2 1 - 2 9}$ | Total manufacturing | $\mathbf{3 7 . 0}$ | $\mathbf{4 1 . 2}$ | $\mathbf{4 7 . 8}$ | $\mathbf{4 5 . 9}$ |

ESTABLISHMENTS WITH EXPORTS OF MORE THAN 50\% OF SALES OF GOODS THAT THEY PRODUCED

| 21 | Food, beverage and tobacco mfg | 14.9 | 15.0 | 16.4 | 12.5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 22 | Textile, clothing, footwear and leather mfg | 5.6 | 8.5 | 11.4 | 8.6 |
| 23 | Wood and paper product mfg | 0.9 | 1.1 | 3.0 | 3.4 |
| 24 | Printing, publishing and recorded media | 0.3 | 0.4 | 2.2 | 3.8 |
| 25 | Petroleum, coal, chemical and associated product mfg | 1.7 | 1.8 | 2.1 | 2.7 |
| 26 | Non-metallic mineral product mfg | 1.3 | 1.6 | 1.4 | 1.4 |
| 27 | Metal product mfg | 5.5 | 7.6 | 19.2 | 32.4 |
| 28 | Machinery and equipment mfg | 7.1 | 7.8 | 8.5 | 7.7 |
| 29 | Other manufacturing | 0.9 | 1.1 | 1.2 | 1.0 |
| 21-29 | Total manufacturing | 5.8 | 6.6 | 10.0 | 11.0 |

(a) See paragraph 5 of the Explanatory Notes.
(b) See paragraphs 23-25 of the Explanatory Notes.
(c) Includes working proprietors.
(d) Excludes the drawings of working proprietors. Now again includes provision expenses for employee entitlements. See paragraph 16 of the Explanatory Notes.

1 This publication presents final statistics compiled from a census of manufacturing establishments for 1996-97, with some comparative statistics relating to preceding years. The emphasis of this publication is on the release of statistics for the main data items included in the census.

2 The manufacturing collection is conducted on an annual basis. For the 1996-97 collection, all manufacturing businesses were requested to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported. Data on IGP are also available from this collection. In addition, a variety of samples was selected to produce data on a range of other variables. The next manufacturing census will be conducted in respect of 2001-02, with sample surveys conducted for the next four years.

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

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

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

6 A small number of manufacturing establishments engage, in a significant way, in a variety of activities which are normally carried out by different industries. For example, a predominantly manufacturing establishment may also undertake significant amounts of wholesaling. Similarly, a manufacturing establishment may produce significant volumes of a variety of goods which are normally produced in different manufacturing industries. In such cases, the original establishment is 'split' into a separate establishment for each significant activity which belongs to a separate industry. For the 1996-97 manufacturing collection, 'significant' was defined as $\$ 7.3$ million or more.

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

## STANDARD UNITS

## RELIABILITY OF ESTIMATES

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

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

11 The majority of businesses affected by these lags and omissions, and to which both types of adjustments apply, are small in size. The effect of these adjustments on 1996-97 turnover is an increase of $2.2 \%$ while the effect on employment is an increase of $4.5 \%$. Most States and Territories and most industries nationally were affected to a similar degree. The exceptions are Other manufacturing (for which the adjustments are $9.5 \%$ and $11.0 \%$ respectively), Textile, clothing, footwear and leather manufacturing (for which the adjustments are $4.1 \%$ and $6.9 \%$ respectively) and Wood and paper product manufacturing (for which the adjustment for employment is $6.2 \%$ ).

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

13 Commencing with the 1993-94 manufacturing collection, manufacturers not employing staff at 30 June of the reference year (such as sole proprietorships or family partnerships) which had registered as group employers with the Australian Taxation Office are included in the manufacturing collection. Data in respect of these 'non-employers' were excluded from the scope of the manufacturing collection for the 1988-89 to 1992-93 (inclusive) reference years. However, the inclusion of these types of businesses has only had a marginal affect on statistical aggregates.
14 Commencing with the 1994-95 manufacturing collection, multi-establishment management units have been 'collapsed' for reporting purposes into single establishment management units, unless they had significant activity in more than one industry and/or State or Territory. The effect of this process is that most manufacturing businesses which previously reported for more than one establishment were asked to combine operations by those establishments into a single reporting unit. The effect of this on manufacturing statistics as contained in this publication has been minimal.

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

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

17 The combining of railway workshop locations (primary to ANZSIC Class 2823) with rail transport locations (primary to ANZSIC Class 6200) to form establishments primary to Division I: Transport and storage (that is, out of scope of this collection) has affected time series statistics for years up to the 1990-91 census for Subdivision 28. However, from the 1992-93 collection, some of these railway workshop locations have once again been classified as separate manufacturing establishments (primary to ANZSIC Class 2823). No further changes have occurred since that time.

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

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

20 Summary of operations data at the industry subdivision level classified by employment size are presented in table 5. Similarly, exports of goods produced data at the industry subdivision level classified by broad employment size are presented in table 6 . The statistics in these two tables relate only to those manufacturing establishments operating at 30 June 1997. As such, the figures presented may differ slightly from those presented in the other tables from the manufacturing collection. These other tables include data for those manufacturing establishments which operated at any time during 1996-97.

21 The treatment of unincorporated joint ventures according to the $\mathrm{ABS}^{\prime}$ s standard units definitions has an effect on the data when the data are classified by employment size. This is because joint venture participants report details of turnover, but often have few or no employees or operating expenses. The labour for such operations is usually employed and paid for by the joint venture operator. Similarly, the operating expenses are usually reported by the joint venture operator. On the other hand, the operator does not report any details of turnover (unless it also happens to be a participant). If each of these joint venture operations were to be treated as a single business unit in the statistics, it is highly probable that the Metal product manufacturing industry and to a lesser extent the Petroleum, coal, chemical and associated product manufacturing industry would reflect a similar dominance pattern to the other manufacturing industries.

22 The two smallest employment size categories used in table 5 in this publication have been changed. See paragraph 19 for details.

23 All establishments included in the manufacturing census were asked whether they exported and, if so, what percentage of their sales of goods produced plus transfers out of goods produced by the establishment for sale were exported by their business or an agent on their behalf. The data presented in table 6 are derived by applying the percentage of exports reported for each exporting unit and then aggregating that figure. The data in table 6 exclude those manufacturing establishments which operated during 1996-97 but were not operating at 30 June 1997.

24 The statistics presented in table 6 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 6 and 7 only include exports directly undertaken by the manufacturer or by its agent.

25 The data in table 6 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 6 and 7. 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 6 and 7 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.

USE OF ANZSIC
26 The 1992-93 manufacturing survey introduced the ANZSIC into the annual manufacturing collection. This classification replaced the Australian Standard Industrial Classification (ASIC) previously used. All time series statistics contained in this publication are ANZSIC-based. Corresponding ANZSIC-based data for years prior to 1989-90 are not available, except for constant prices data (see paragraph 32). Similarly, ASIC-based data are not available from 1992-93.

ACKNOWLEDGMENT

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

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

## RELATED PUBLICATIONS

29 A series of publications Manufacturing Industry, [State], 1996-97
(Cat. nos 8221.1-8221.6) will be produced for each State. The publication for New South Wales (Cat. no. 8221.1) also contains selected data for the Australian Capital Territory. For 1996-97, all of these publications contain a table showing industry subdivision data by Statistical Division. These publications will all be released shortly.

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

- Business Operations and Industry Performance, Australia, 1996-97 (Cat. no. 8140.0), to be released in January 1999—Annual publication
- Business Operations and Industry Performance, Australia, Preliminary, 1996-97 (Cat. no. 8142.0), released on 29 May 1998—Annual publication
- Environment Protection Expenditure, Australia, 1995-96 and 1996-97 (Cat. no. 4603.0), to be released in March 1999—Annual publication
- Indexes of Industrial Production, Australia (Cat. no. 8125.0)—Quarterly publication (Discontinued with release of December quarter 1997 issue)
- Information Paper: Availability of Statistics Related to Manufacturing, 1996 (Cat. no. 8205.0), released on 21 March 1996—Irregular publication
- Information Paper: Availability of Statistics Related to Manufacturing, 1997 (Cat. no. 8205.0), released on 16 January 1998—Irregular publication
- Information Paper: Improvements to ABS Economic Statistics, 1997 (Cat. no. 1357.0), released on 22 August 1997-Irregular publication
■ Labour Force, Australia (Cat. no. 6203.0)—Monthly publication
- Manufacturing, Australia, 1998 (Cat. no. 8225.0), to be released in December 1998—Annual publication
■ Manufacturing Industry, Australia, Preliminary, 1997-98 (Cat. no. 8201.0), to be released in March 1999—Annual publication
- Manufacturing Production, Commodities Produced, Australia, 1996-97 (Cat. no. 8365.0), to be released in December 1998—Annual publication
- Price Indexes of Articles Produced by Manufacturing Industry, Australia (Cat. no. 6412.0)—Quarterly publication


## BACK DATA AND UNPUBLISHED STATISTICS

31 A range of manufacturing industry statistics publications is available for previous years. As well, a considerable amount of data from the annual manufacturing collection exists in unpublished form. More detailed information to satisfy individual user requirements may be available on request. In general, unpublished data consist of finer industry dissections of the published data. A charge is made for providing such information. The Information Paper (Cat. no. 8205.0) referred to in paragraphs 28 and 30 provides more details.
32 In particular, constant price estimates of gross product at factor cost on an ANZSIC basis are available back to 1984-85. However, constant price estimates on a true ANZSIC basis are only available from 1989-90. Nevertheless, an exercise has been undertaken to convert estimates for earlier years onto an ANZSIC basis using the relationships that applied between ASIC and ANZSIC in the years 1990-91 and 1991-92. These estimates are available at both the Australian and State and Territory levels back to 1984-85. It should be noted that the relationships that applied in 1990-91 and 1991-92 are less likely to apply the earlier the reference year. Also, annual constant price estimates of gross product at factor cost for the period 1989-90 to 1996-97 (inclusive) by ANZSIC class are available as unpublished data. All of these data can be purchased from the ABS in Canberra by contacting Paul Curran on 0262526801.

## EXPLANATORY NOTES continued

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

34 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.

## SAMPLE ERROR

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

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

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

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

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

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

While it is not possible to quantify non-sampling error, every effort is made to reduce it to a minimum. Collection forms are designed to be easy to complete and assist businesses to report accurately. Efficient and effective operating procedures and systems are used to compile the statistics. In addition, the ABS has undertaken a program of upgrading the business register. This upgrade has resulted in improvements in the quality of the statistical series whose population frames are drawn from the register.

Amount of goods produced by this establishment (or for it on commission) that are exported by this business or its agent

ANZSIC
ASIC
Capital work done for own use

Change in stocks

## Closing stocks

## Employment at end of June

Enterprise group

Establishment

Establishments that do not export

Establishments with exports of more than $50 \%$ of sales

Establishments with exports up to and including 50\% of sales

## Australian Bureau of Statistics

This represents the sales value of goods produced by an establishment (or for it on commission), including the value of manufactured goods transferred to other establishments of the business for sale, that are exported (or are intended for export) outside Australia by the business or its agent.

Australian and New Zealand Standard Industrial Classification
Australian Standard Industrial Classification
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.

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

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.

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.

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 reported no exports (either by their business or for them by an agent) of goods that they produced.

Establishments that reported exports (either by their business or for them by an agent) of more than $50 \%$ of sales and transfers out of goods for sale that they produced.

Establishments that reported exports (either by their business or for them by an agent) of up to and including $50 \%$ of sales and transfers out of goods for sale that they produced.

Exports as a proportion of sales of goods produced

## (Table 6)

For an individual establishment, this represents the percentage of the total sales and transfers out of goods for sale produced by the establishment (or for it on commission) which are exported (or are intended for export) outside Australia by the business or its agent. In table 6, the ratio is calculated by dividing the total value of goods exported by the total value of sales and transfers out of goods for sale produced by all establishments, not just the aggregated value for those units which exported.

Income from services
Income received from service activities. This income includes: repair, maintenance and service income and fees; income from work done on a commission basis; delivery and/or installation charges separately invoiced to customers; advertising income; and management fees/charges from related and unrelated businesses. Excluded are rent, leasing and hiring income, interest income and royalties income.

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

Industry gross product (IGP) IGP is very similar to the national accounting measure gross product at factor cost which is the official statistical measure of production. IGP for an industry is a measure of the value which is added by the industry's production processes to the raw materials and services which are input to those processes. Another way of describing IGP is the value of an industry's output minus the value of intermediate inputs.

The formula used to calculate IGP is as follows-definitions of the relevant component items also appear in this Glossary.

| Calculation of IGP | $=$ Turnover |
| ---: | :--- |
|  | + Change in stocks |
|  | - Purchases, transfers in and selected expenses |
|  | $=$ Establishment value added |
|  | - Fringe benefits tax |
|  | - Payroll tax |
|  | - Other operating expenses |
|  | $=$ Industry Gross Product |

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

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

## Industry subdivision

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

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

Management unit

Manufacturing establishment

## Manufacturing management

 unitOpening stocks

## Other operating expenses

## Own account capital work

Purchases

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

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
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.

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.

A management unit predominantly engaged in manufacturing activities. The data collected for such management units cover all activities of the management unit (including in respect of non-manufacturing activities). Conversely, there are some management units predominantly engaged in non-manufacturing activities which have establishments engaged in manufacturing activities and which are excluded.

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

Purchase of materials, components, containers, packaging, fuels, electricity and water, and of finished goods for resale. The purchase of parts and fuel for motor vehicles is excluded.

Purchases, transfers in and selected expenses

Purchase of materials, components, containers, packaging, fuels, electricity and water, and of finished goods for resale, plus transfers in of goods from other establishments of the same business for further processing, assembly, installation or for sale or resale, plus commission expenses (including sales commission expenses), repair and maintenance expenses, freight and cartage expenses, motor vehicle running expenses, and rent, leasing and hiring expenses. Transfers in are valued, for statistical purposes, at prices commensurate with the prices which would have been paid if the establishments concerned had been under separate ownership, i.e. at commercial selling price.

Reference period Businesses are asked to report data for the financial year ended 30 June. However, if a business has a different financial year, it is asked to report for the 12 -month period which ends between 1 October of the previous year and 30 September of the current year. This period is then used as a substitute for the financial year ended 30 June. For example, for the 1996-97 collection, a business may have reported data for the year ended 31 December 1996.

Sales and transfers out of goods produced by the establishment

Includes sales of goods produced by the establishment (or for it on commission), sales or transfers to related businesses, progress payments billed for long-term contracts, and delivery and/or installation charges not separately invoiced to customers. Also included are goods transferred out to other establishments of the same business for sale. Transfers out are valued, for statistical purposes, at prices commensurate with the prices which would have been paid if the establishments concerned had been under separate ownership, i.e. at commercial selling price. Excluded are export freight charges, sales of fixed tangible assets, and sales tax, excise and duties received (on behalf of the Government).

Service income Income received from service activities. This income includes: repair, maintenance and service income and fees; income from work done on a commission basis; delivery and/or installation charges separately invoiced to customers; advertising income; and management fees/charges from related and unrelated businesses. Excluded are rent, leasing and hiring income, interest income and royalties income.

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

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

| Turnover per person |
| ---: |
| employed |
| Value added |


| Turnover of manufacturing establishments which operated during the year |
| :--- |
| ended 30 June divided by employment at the end of June in the same year. |
| purchases, transfers in and selected expenses. |

Wages and salaries $\quad$| The gross wages and salaries (including capitalised wages and salaries) of all |
| :--- |
| employees of the establishment. The item includes severance, termination and |
| redundancy payments, but excludes reimbursements or allowances to employees |
| for travel, entertainment, etc. For the $1995-96$ collection only, provisions for |
| employee entitlements (e.g. provisions for annual leave and leave bonus, long |

service leave, sick leave, and severance, termination and redundancy payments)
are excluded. The drawings of working proprietors are also excluded.

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