



MANUFACTURING INDUSTRY AUSTRALIA

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- For further information about these and related statistics, contact John Ridley on Sydney 02 9268 4541 or the National Information and Referral Service on 1300 135 070.

NOTES

ANNUAL MANUFACTURING INDUSTRY COLLECTION

The 2000–01 collection was conducted as a survey of approximately 9,500 manufacturing management units. All selected manufacturing management units were asked to provide data on employment, wages and salaries, detailed structural and performance data, value of sales for commodities produced, and whether their products were exported. In total, over 90 data items were collected, details of which are listed in Appendix 1.

ABOUT THIS ISSUE

This is the first publication in this series to present data for manufacturing management units. In previous years, data related to manufacturing establishments. For more details, see Appendix 2. Appendix 3 provides estimates for selected data items for both manufacturing management units and manufacturing establishments for the latest common year, 1999–2000.

Note that final data included in this publication update preliminary data published in *Manufacturing Industry, Australia, Preliminary, 2000–01* (cat. no. 8201.0), released on 27 March 2002. The difference between these data are generally greater than has occurred in previous years. It is expected that the relationship between preliminary and final data will be closer in future years as collection and processing experience under the new management units model develops. See the Explanatory Notes paragraphs 4–6 for further information about management units and paragraphs 15–20 regarding the comparability of these final data with statistics for previous years.

DATA TO BE RELEASED IN OTHER PUBLICATIONS

State publications (cat. nos 8221.1 to 8221.6) will not be produced for 2000–01; see Appendix 2 for more details.

A wide range of manufacturing related Australian Bureau of Statistics (ABS) data, as well as data from other sources, will be presented in the compendium publication *Manufacturing, Australia, 2002* (cat. no. 8225.0), to be released in February 2003. Management unit data at the total manufacturing level are also included in *Business Operations and Industry Performance, Australia, 2000–01* (cat. no. 8140.0).

Dennis Trewin
Australian Statistician

SUMMARY OF FINDINGS

OVERVIEW

Sales and service income for the year 2000–01 by manufacturing management units operating in Australia was \$251,759m, which resulted in an industry value added (IVA) for the year of \$71,946m. In current price terms, this represents a 4.8% increase in sales and service income from the \$240,145m recorded for 1999–2000 and an increase of 0.8% in IVA. Manufacturing management units employed 945,900 persons at the end of June 2001 and paid \$38,746m in wages and salaries in 2000–01.

Comparison across industry

Manufacturing continued to contribute more to Australian production in 2000–01 than any other industry (see the following table on Industry shares of total production), even though manufacturing's share of total Australian production remained steady at 12.8% for 1999–2000 and 2000–01. Manufacturing remained the largest industry in Victoria, Queensland, South Australia and Tasmania and again accounted for a higher proportion of the Victorian economy than in any other state and territory.

INDUSTRY SHARES OF TOTAL PRODUCTION (a), 2000–01

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
Industry	%	%	%	%	%	%	%	%	%
Agriculture, forestry and fishing	2.6	3.5	4.8	4.9	4.1	6.5	3.5	0.1	3.6
Mining	1.5	1.9	6.1	2.6	23.1	2.1	31.4	—	5.3
Manufacturing	13.1	16.0	10.4	15.0	9.5	14.9	3.5	1.9	12.8
Electricity, gas and water supply	2.3	3.0	2.5	3.2	2.9	6.2	1.6	2.5	2.7
Construction	5.5	5.0	6.3	5.4	6.1	4.6	3.2	5.9	5.5
Wholesale trade	5.1	5.5	5.3	4.3	3.8	3.5	2.2	2.0	4.9
Retail trade	5.1	5.3	7.0	5.7	4.8	6.4	4.2	4.5	5.5
Accommodation, cafes and restaurants	2.9	2.0	3.8	2.9	1.8	3.1	2.9	2.5	2.7
Transport and storage	4.5	4.6	5.5	4.5	4.7	4.6	4.5	3.0	4.7
Communication services	3.2	3.8	3.1	2.9	2.6	3.0	2.9	2.4	3.2
Finance and insurance	8.7	7.6	4.9	6.2	3.9	4.7	2.5	4.2	6.8
Property and business services	14.3	13.5	10.0	10.1	9.7	5.3	7.3	14.3	12.4
Government administration and defence	2.9	2.4	3.8	3.1	2.3	5.1	7.6	25.4	3.4
Education	4.1	4.9	4.8	5.2	3.4	5.2	4.6	5.8	4.5
Health and community services	5.5	6.3	6.1	7.4	5.6	9.0	5.7	5.9	6.0
Cultural and recreational services	2.1	1.9	1.5	1.6	1.3	1.4	2.4	2.7	1.8
Personal and other services	2.1	2.2	2.6	2.9	2.1	2.4	2.4	3.2	2.3
Ownership of dwellings	12.2	8.8	8.7	9.7	6.8	8.8	4.9	8.3	9.7
General government(b)	2.1	1.8	2.9	2.4	1.8	3.2	2.6	5.3	2.2

— nil or rounded to zero (including null cells)

(a) Gross factor incomes.

(b) State details for general government gross operating surplus by industry are not available.

Source: Australian National Accounts: State Accounts, 2000–01 (cat. no. 5220.0).

Nationally, the Property and business services industry is now only marginally behind Manufacturing as the largest contributor to production volumes and has been growing at a much faster rate than Manufacturing for many years (see the following table on Production volumes).

Manufacturing was ranked second last in terms of the average annual growth rate over the past 10 years and last over the past 25 years, with increases of 1.2% and 1.8% respectively. By comparison, the highest growth rates were recorded by the Communication services industry with annualised rates of 9.2% and 8.0% for the 10 year and 25 year periods.

SUMMARY OF FINDINGS *continued*

PRODUCTION VOLUMES (a)

	CHAIN VOLUME MEASURES		Change from 1999–2000 to 2000–01	AVERAGE ANNUAL CHANGE FROM . . .	
	1999–2000	2000–01		1990–91 to 2000–01	1975–76 to 2000–01
<i>Industry</i>	\$m	\$m	%	%	%
Agriculture, forestry and fishing	21 491	21 647	0.7	3.8	3.3
Mining	29 285	31 768	8.5	7.8	4.4
Manufacturing	78 924	78 560	-0.5	1.2	1.8
Electricity, gas and water supply	15 953	16 454	3.1	3.0	3.5
Construction	40 551	33 719	-16.8	-5.7	2.9
Wholesale trade	31 434	31 546	0.4	2.9	2.7
Retail trade	33 774	34 091	0.9	2.7	2.8
Accommodation, cafes and restaurants	15 987	16 447	2.9	4.7	3.0
Transport and storage	32 186	32 611	1.3	2.6	3.9
Communication services	18 370	19 836	8.0	9.2	8.0
Finance and insurance	42 164	44 165	4.7	3.8	4.5
Property and business services	69 383	75 057	8.2	6.5	4.9
Government administration and defence	23 378	24 054	2.9	1.6	2.5
Education	28 861	29 287	1.5	1.6	3.5
Health and community services	34 949	37 467	7.2	4.8	3.9
Cultural and recreational services	10 359	11 640	12.4	7.9	3.3
Personal and other services	13 738	14 598	6.3	7.9	3.0
Total all industries	540 787	552 947	2.2	3.3	3.3

(a) Reference year for chain volume measures is 2000–01.

Source: Australian National Accounts: National Income, Expenditure and Product, June Quarter 2002 (cat. no. 5206.0).

Note: The volume estimates contained in this table are derived from quarterly Business Surveys. Therefore, the estimates for Manufacturing are different to volume estimates based on the Annual Manufacturing Survey used elsewhere in this publication.

INDUSTRY VALUE ADDED

Industry value added (at current prices) was \$71,946m for 2000–01.

In volume measure terms (i.e. after removal of the effects of price changes — see paragraphs 21 and 22 of the Explanatory Notes), there was a 2.6% decrease over 1999–2000 but a 9.5% increase over the five year period from 1995–96. Since 1995–96, IVA per person employed has risen 15.8%, indicating an increase in labour productivity over the period.

VOLUME MEASURES OF IVA



SUMMARY OF FINDINGS *continued*

INDUSTRY VALUE ADDED

continued

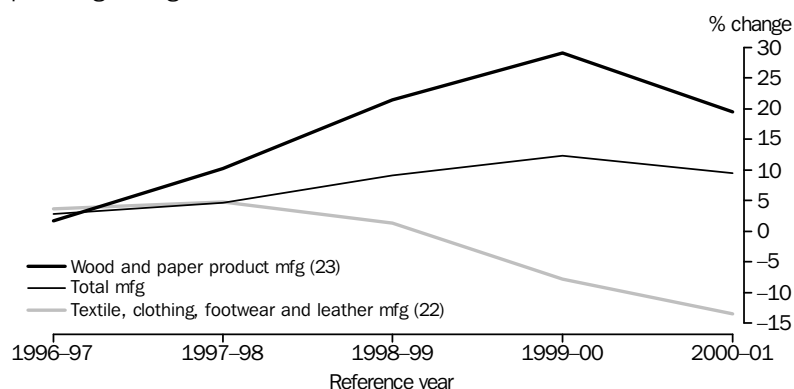
Seven of the nine industry subdivisions recorded a decrease in volume measures of IVA over the period 1999–2000 to 2000–01. The largest decreases were recorded by PRINTING, PUBLISHING AND RECORDED MEDIA (down 11.8%) closely followed by NON-METALLIC MINERAL PRODUCT MANUFACTURING (down 11.6%). Other significant decreases were recorded by WOOD AND PAPER PRODUCT MANUFACTURING (down 7.4%) and TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down 6.1%). The two percentage increases were recorded by MACHINERY AND EQUIPMENT MANUFACTURING (up 3.2%) and PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (up 2.3%).

Longer-term trends

(1995–96 to 2000–01)—*volume measures*

Over the period 1995–96 to 2000–01, volume measures of IVA increased by 9.5%. Eight industry subdivisions recorded increases while the other recorded a decrease. The largest percentage increases were recorded by WOOD AND PAPER PRODUCT MANUFACTURING (up 19.5%), FOOD, BEVERAGE AND TOBACCO MANUFACTURING (up 17.4%), PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (up 15.0%) and MACHINERY AND EQUIPMENT MANUFACTURING (up 12.5%). The only decrease was recorded by TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down 13.5%).

VOLUME MEASURES OF IVA — GREATEST AND LEAST GROWTH, percentage change from 1995–96



Over the period 1995–96 to 2000–01, there was an increase of 15.8% in volume measures of IVA per person employed. All nine industry subdivisions recorded an increase, with the largest percentage increases being for NON-METALLIC MINERAL PRODUCT MANUFACTURING (up 30.4%), PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (up 22.5%), TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (up 19.9%) and MACHINERY AND EQUIPMENT MANUFACTURING (up 19.6%). The smallest increase was recorded by PRINTING, PUBLISHING AND RECORDED MEDIA (up 5.1%).

Since 1995–96, growth in IVA per person employed for the total manufacturing industry was 6.3 percentage points higher than growth in IVA, although this is not a consistent pattern across the industry subdivisions.

SUMMARY OF FINDINGS *continued*

Current year analysis



For 2000–01, FOOD, BEVERAGE AND TOBACCO MANUFACTURING, METAL PRODUCT MANUFACTURING, MACHINERY AND EQUIPMENT MANUFACTURING, and PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING were the subdivisions with the largest contribution to IVA in the manufacturing industry. However, METAL PRODUCT MANUFACTURING has now replaced MACHINERY AND EQUIPMENT MANUFACTURING as the second largest contributor. In aggregate, these four industry subdivisions accounted for 72% of total IVA in the manufacturing industry, up from 69% the year before.

The contribution of these industry subdivisions to total manufacturing IVA and the most notable industry groups within those subdivisions (as a percentage of total manufacturing IVA) were:

- FOOD, BEVERAGE AND TOBACCO MANUFACTURING (20.4%), where the industry groups BEVERAGE AND MALT MANUFACTURING (ANZSIC Group 218 at 4.4%), MEAT AND MEAT PRODUCT MANUFACTURING (ANZSIC Group 211 at 3.9%) and OTHER FOOD MANUFACTURING (ANZSIC Group 217 at 3.6%) were the most substantial.
- METAL PRODUCT MANUFACTURING (19.0%), where the industry groups BASIC NON-FERROUS METAL MANUFACTURING (ANZSIC Group 272 at 7.2%), IRON AND STEEL MANUFACTURING (ANZSIC Group 271 at 3.6%) and FABRICATED METAL PRODUCT MANUFACTURING (ANZSIC Group 276 at 3.2%) were the most substantial.
- MACHINERY AND EQUIPMENT MANUFACTURING (18.7%), where the industry groups MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC Group 281 at 6.5%) and INDUSTRIAL MACHINERY AND EQUIPMENT MANUFACTURING (ANZSIC Group 286 at 4.2%) were the most substantial.
- PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (13.8%), where the industry groups OTHER CHEMICAL PRODUCT MANUFACTURING (ANZSIC Group 254 at 5.0%), PLASTIC PRODUCT MANUFACTURING (ANZSIC Group 256 at 3.2%) and BASIC CHEMICAL MANUFACTURING (ANZSIC Group 253 at 3.0%) were the most substantial.

Industry groups making a notable contribution to IVA and not included in the subdivisions listed above included PUBLISHING (ANZSIC Group 242 at 4.9%), PRINTING AND SERVICES TO PRINTING (ANZSIC Group 241 at 3.9%) and PAPER AND PAPER PRODUCT MANUFACTURING (ANZSIC Group 233 at 3.4%).

SUMMARY OF FINDINGS *continued*

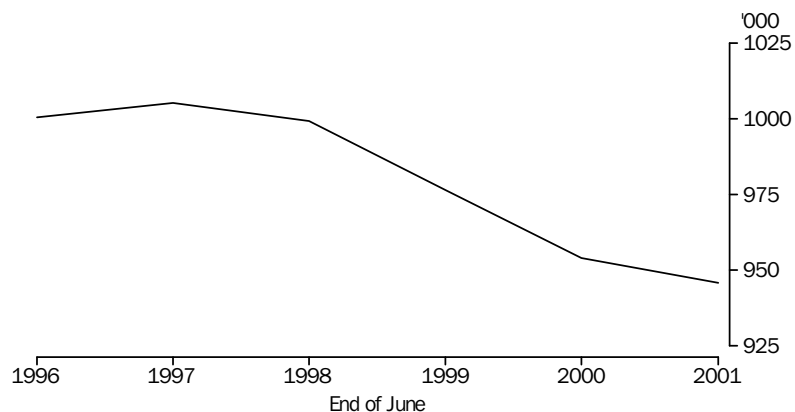
EMPLOYMENT

The Australian manufacturing industry employed 945,900 persons at the end of June 2001. As in previous years, MACHINERY AND EQUIPMENT MANUFACTURING (21.4%), FOOD, BEVERAGE AND TOBACCO MANUFACTURING (20.0%) and METAL PRODUCT MANUFACTURING (15.5%) were the major contributors to employment at the end of June 2001. NON-METALLIC MINERAL PRODUCT MANUFACTURING (3.9%) and OTHER MANUFACTURING (5.7%) remain the smallest contributors.

Although employment rose in five of the nine manufacturing industry subdivisions, total manufacturing employment decreased by 0.9% between June 2000 and June 2001. The industry subdivisions to record a decrease were TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down 9.6% from 63,900 persons to 57,800 persons), PRINTING, PUBLISHING AND RECORDED MEDIA (down 9.0% from 100,700 persons to 91,600 persons), NON-METALLIC MINERAL PRODUCT MANUFACTURING (down 5.0% from 39,100 persons to 37,200 persons) and PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (down 1.3% from 102,500 persons to 101,300 persons). The largest percentage increases were recorded by METAL PRODUCT MANUFACTURING (up 3.0% from 142,800 persons to 147,000 persons) and FOOD, BEVERAGE AND TOBACCO MANUFACTURING (up 2.2% from 185,600 persons to 189,600 persons).

Longer-term trends (June 1996 to June 2001)

EMPLOYMENT



SUMMARY OF FINDINGS *continued*

*Longer-term trends (June 1996 to June 2001)
continued*

Employment in the Australian manufacturing industry decreased by 54,600 persons (down 5.5% from 1,000,500 persons to 945,900 persons) over the period June 1996 to June 2001. The June 2001 employment figure is the lowest figure for which management unit data are available, i.e. from June 1996 onwards.

Between June 1996 and June 2001, six industry subdivisions recorded a decrease in their level of employment while three recorded an increase. The largest percentage and absolute decrease was recorded by TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down 27.9% from 80,100 persons to 57,800 persons). The next largest percentage decrease in employment was for NON-METALLIC MINERAL PRODUCT MANUFACTURING (down 22.1% from 47,700 persons to 37,200 persons) followed by METAL PRODUCT MANUFACTURING (down 8.0% from 159,800 persons to 147,000 persons), PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (down 6.1% from 107,800 persons to 101,300 persons) and MACHINERY AND EQUIPMENT MANUFACTURING (down 5.9% from 214,900 persons to 202,200 persons).

Increases in employment between June 1996 and June 2001 were recorded by FOOD, BEVERAGE AND TOBACCO MANUFACTURING (up 4.3% from 181,800 persons to 189,600 persons), OTHER MANUFACTURING (up 4.0% from 52,100 persons to 54,200 persons) and WOOD AND PAPER PRODUCT MANUFACTURING (up 2.4% from 63,500 persons to 65,000 persons).

WAGES AND SALARIES

The Australian manufacturing industry paid \$38,746m in wages and salaries in 2000–01. This represents an average of \$41,000 paid in annual wages and salaries per person employed, an increase of 2.7% on the \$39,900 recorded twelve months earlier. (Readers should note that the employment figure in this average measures the number of persons employed at the end of June and includes working proprietors. The wages and salaries figure excludes the drawings of working proprietors.)

Average wages and salaries paid per person employed at the end of June rose in seven of the nine manufacturing industry subdivisions between 1999–2000 and 2000–01 and fell in the other two. OTHER MANUFACTURING (up 9.8%) had the largest percentage increase in wages and salaries paid per person employed, with rises in both employment (up 0.2%) and wages and salaries (up 10.1%). The two industry subdivisions to record a fall were: FOOD, BEVERAGE AND TOBACCO MANUFACTURING (down 3.5%) resulting from a rise in employment (up 2.2%) and a fall in wages and salaries (down 1.4%); and WOOD AND PAPER PRODUCT MANUFACTURING (down 1.8%) also resulting from a rise in employment (up 0.9%) and a fall in wages and salaries (down 1.0%).

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

- OTHER MANUFACTURING (up 9.8% — from \$26,500 to \$29,100), where all three industry groups recorded an increase, with the largest being:
 - FURNITURE MANUFACTURING (ANZSIC Group 292) (up 11.3% — from \$26,400 to \$29,300)
 - MISCELLANEOUS MANUFACTURING (ANZSIC Group 294) (up 5.6% — from \$25,900 to \$27,400).
- PRINTING, PUBLISHING AND RECORDED MEDIA (up 8.4% — from \$38,800 to \$42,100), where all three industry groups recorded an increase, with the largest being:
 - PUBLISHING (ANZSIC Group 242) (up 11.8% — from \$42,700 to \$47,700)

SUMMARY OF FINDINGS *continued*

WAGES AND SALARIES

continued

- RECORDED MEDIA MANUFACTURING AND PUBLISHING (ANZSIC Group 243) (up 9.1% — from \$38,300 to \$41,800).
- PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (up 8.1% — from \$46,500 to \$50,200), where 5 (out of 6) industry groups recorded an increase, the other recording a decrease. The largest increases were recorded by:
 - PETROLEUM REFINING (ANZSIC Group 251) (up 37.7% — from \$71,800 to \$98,900)
 - BASIC CHEMICAL MANUFACTURING (ANZSIC Group 253) (up 8.7% — from \$58,100 to \$63,100); while
 - PETROLEUM AND COAL PRODUCT MANUFACTURING N.E.C. (ANZSIC Group 252) (down 5.1% — from \$59,300 to \$56,300) was the industry group to record a decrease.

The industry groups which had the highest wages and salaries paid per person employed in 2000–01 were PETROLEUM REFINING (ANZSIC Group 251) (\$98,900), BASIC NON-FERROUS METAL MANUFACTURING (ANZSIC Group 272) (\$66,100) and TOBACCO PRODUCT MANUFACTURING (ANZSIC Group 219) (\$65,000). The industry groups which had the lowest wages and salaries paid per person employed in 2000–01 were CLOTHING MANUFACTURING (ANZSIC Group 224) (\$25,300), MISCELLANEOUS MANUFACTURING (ANZSIC Group 294) (\$27,400) and TEXTILE PRODUCT MANUFACTURING (ANZSIC Group 222) (\$29,100).

SALES AND SERVICE INCOME

Sales and service income rose, in current price terms, by \$11,614m to \$251,759m for 2000–01. This represents a 4.8% increase on the \$240,145m recorded for 1999–2000.

Five of the nine manufacturing industry subdivisions recorded an increase in sales and service income between 1999–2000 and 2000–01. FOOD, BEVERAGE AND TOBACCO MANUFACTURING remained the largest contributor to total manufacturing sales and service income, while PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING recorded the largest increase in both percentage and dollar terms (up 18.3% or \$7,299m). The other industry subdivisions to record an increase between 1999–2000 and 2000–01 were MACHINERY AND EQUIPMENT MANUFACTURING (up 8.2%), METAL PRODUCT MANUFACTURING (up 4.6%), FOOD, BEVERAGE AND TOBACCO MANUFACTURING (up 3.8%) and OTHER MANUFACTURING (up 1.6%). The industry subdivisions to record a decrease between 1999–2000 and 2000–01 were NON-METALLIC MINERAL PRODUCT MANUFACTURING (down 11.7%), PRINTING, PUBLISHING AND RECORDED MEDIA (down 9.0%), WOOD AND PAPER PRODUCT MANUFACTURING (down 2.7%) and TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down 2.0%).

The industry group to record both the largest percentage and dollar increase in sales and service income between 1999–2000 and 2000–01 was PETROLEUM REFINING (ANZSIC Group 251) (up 72.3% or \$6,719m), while BASIC NON-FERROUS METAL MANUFACTURING (ANZSIC Group 272) (up 32.1% or \$3,112m) recorded the second largest percentage increase and the third largest dollar increase.

Other industry groups with large percentage increases between 1999–2000 and 2000–01 were:

- LEATHER AND LEATHER PRODUCT MANUFACTURING (ANZSIC Group 226) (up 31.1% or \$209m)
- PREFABRICATED BUILDING MANUFACTURING (ANZSIC Group 291) (up 25.2% or \$147m)
- RECORDED MEDIA MANUFACTURING AND PUBLISHING (ANZSIC Group 243) (up 22.2% or \$118m).

Other industry groups with large dollar increases between 1999–2000 and 2000–01 were:

- MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC Group 281) (up \$3,533m or 17.5%)

SUMMARY OF FINDINGS *continued*

SALES AND SERVICE

INCOME *continued*

- MEAT AND MEAT PRODUCT MANUFACTURING (ANZSIC Group 211) (up \$1,882m or 16.9%)
- PAPER AND PAPER PRODUCT MANUFACTURING (ANZSIC Group 233) (up \$1,000m or 14.4%).

The industry groups with the largest percentage decreases between 1999–2000 and 2000–01 were:

- PETROLEUM AND COAL PRODUCT MANUFACTURING N.E.C. (ANZSIC Group 252) (down 57.5% or \$247m)
- KNITTING MILLS (ANZSIC Group 223) (down 24.5% or \$276m)
- CERAMIC MANUFACTURING (ANZSIC Group 262) (down 22.5% or \$341m).

The industry groups with the largest dollar decreases between 1999–2000 and 2000–01 were:

- STRUCTURAL METAL PRODUCT MANUFACTURING (ANZSIC Group 274) (down \$1,437m or 19.7%)
- PUBLISHING (ANZSIC Group 242) (down \$1,134m or 12.8%)
- CEMENT, LIME, PLASTER AND CONCRETE PRODUCT MANUFACTURING (ANZSIC Group 263) (down \$1,001m or 13.9%).

STATE/TERRITORY

COMPARISON

The highest contribution to Australian sales and service income for 2000–01 was by Victorian manufacturers. Victoria contributed \$80,580m (32.0%) to Australian sales and service income followed by New South Wales with \$78,659m (31.2%) and Queensland with \$40,292m (16.0%).

Industry value added

Victoria (at 32.3%) has exceeded New South Wales (at 32.1%) as the major contributor to total manufacturing IVA for Australia in 2000–01. The contribution of the other states and territories in 2000–01 was: Queensland (14.3%), Western Australia (9.4%), South Australia (8.6%), Tasmania (2.4%), Northern Territory (0.4%) and Australian Capital Territory (0.4%). In 1999–2000, the order was New South Wales (33.8%), Victoria (32.3%), Queensland (13.6%), South Australia (8.7%), Western Australia (8.3%), Tasmania (2.5%), Northern Territory (0.4%) and Australian Capital Territory (0.4%).

The industry subdivision where IVA was most heavily concentrated in a state or territory was TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING in Victoria (at 50.4%). This was followed by PRINTING, PUBLISHING AND RECORDED MEDIA in New South Wales (at 40.4%) and, for Victoria, both MACHINERY AND EQUIPMENT MANUFACTURING (at 39.4%) and PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (at 37.0%).

The industry subdivision where IVA was heavily concentrated in a state relative to the state's proportion of total Australian manufacturing industry value added was WOOD AND PAPER PRODUCT MANUFACTURING in Tasmania. These manufacturers contributed 6.6% of IVA for this industry in Australia, compared to the total Tasmanian contribution to Australian manufacturing IVA of 2.4%. This was followed by METAL PRODUCT MANUFACTURING in Western Australia (16.6% compared to 9.4%), TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING in Victoria (50.4% compared to 32.3%) and MACHINERY AND EQUIPMENT MANUFACTURING in South Australia (13.3% compared to 8.6%).

Employment

Victoria and New South Wales were also the states in which manufacturing employment was concentrated at the end of June 2001 with Victoria contributing 31.9% of Australian manufacturing employment and New South Wales 31.3%.

SUMMARY OF FINDINGS *continued*

Employment continued

Employment in the Victorian manufacturing industry, at the end of June 2001, has again exceeded that for New South Wales. There was, however, a marginal decrease of 0.1 percentage points for Victoria and a decrease of 0.6 percentage points for New South Wales on their contribution to total Australian employment recorded 12 months earlier. Western Australia decreased its contribution by 0.2 percentage points (to 7.9%), while both Queensland and South Australia increased their contribution, by 0.6 percentage points (to 16.1%) and 0.4 percentage points (to 9.8%) respectively. The contribution of Tasmania and the territories remained steady over this period.

Between June 2000 and June 2001, five of the states and territories recorded decreases in employment, two an increase and one remained steady. The decreases were recorded in the Australian Capital Territory (down 5.1% from 4,300 persons to 4,100 persons), Western Australia (down 3.3% from 77,000 persons to 74,500 persons), New South Wales (down 2.8% from 304,100 persons to 295,600 persons), Tasmania (down 2.0% from 21,100 persons to 20,600 persons) and Victoria (down 1.3% from 306,000 persons to 302,200 persons). The increases were recorded in Queensland (up 3.1% from 148,000 persons to 152,700 persons) and South Australia (up 2.9% from 90,200 persons to 92,900 persons). The Northern Territory remained steady at 3,300 persons.

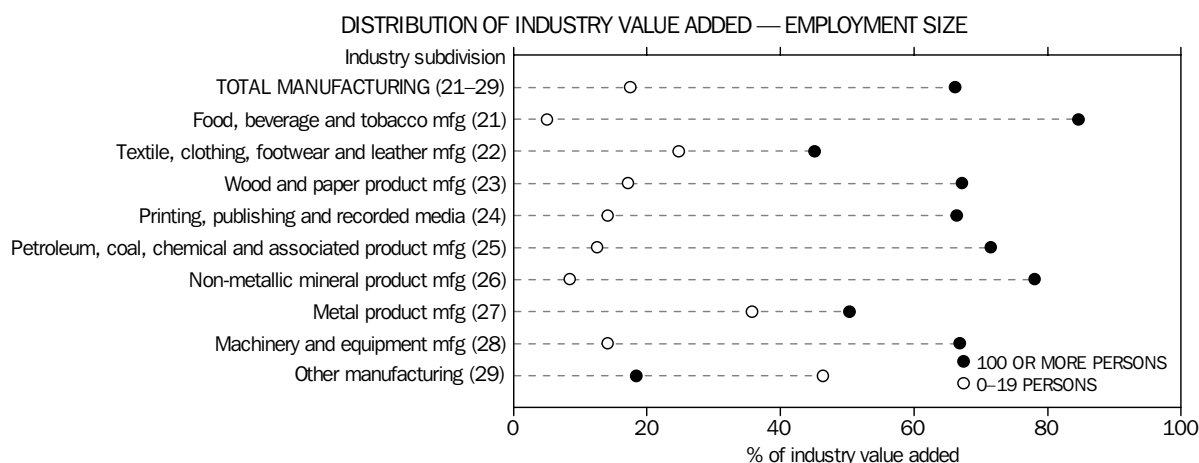
EMPLOYMENT SIZE

Note: In interpreting the commentary by employment size, reference should be made to paragraphs 23 and 24 of the Explanatory Notes. This particularly affects the smallest size categories.

Management units employing 100 or more persons accounted for 54.1% of employment at the end of June 2001 and 66.1% of IVA for 2000–01. Management units employing 20–99 persons accounted for 22.0% of employment and 16.3% of IVA. Small management units (i.e. those employing 0–19 persons) accounted for 23.9% of employment and 17.5% of IVA. Manufacturing management units employing 1,000 or more persons at the end of June 2001 employed 21.0% of all persons working in the manufacturing industry in Australia and contributed 30.1% to IVA.

These proportions were reflected in the ratios of IVA per person employed at the end of June 2001. Management units employing 0–19 persons and 20–99 persons had a lower ratio (\$55,600 and \$56,200 respectively) than management units in the larger size categories. Management units employing 100 or more persons recorded an average IVA per person employed of \$92,700, with management units employing 1,000 or more persons having a ratio of \$108,800.

SUMMARY OF FINDINGS *continued*



EMPLOYMENT SIZE

continued

Omitting METAL PRODUCT MANUFACTURING (see paragraph 24 of the Explanatory Notes), six of the remaining eight industry subdivisions had more than 65% of IVA contributed by management units employing 100 or more persons. The industries where these larger management units contributed most significantly to IVA were FOOD, BEVERAGE AND TOBACCO MANUFACTURING (84.7%), NON-METALLIC MINERAL PRODUCT MANUFACTURING (78.1%), PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (71.5%), WOOD AND PAPER PRODUCT MANUFACTURING (67.3%), MACHINERY AND EQUIPMENT MANUFACTURING (66.8%) and PRINTING, PUBLISHING AND RECORDED MEDIA (66.4%).

Small management units (employing 0-19 persons) made relatively significant contributions to IVA for OTHER MANUFACTURING (46.4%) and TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (24.8%).

EXPORTS

For 2000-01, Australian manufacturers directly exported \$41,871m of the goods that they produced. Exports as a percentage of the total sales of goods produced was 19.2% for 2000-01. Exports as a percentage of sales of goods produced for management units employing 0-49 persons was 15.2%, 50-99 persons was 14.7% and 100 or more persons was 20.7%.

Excluding METAL PRODUCT MANUFACTURING (see paragraph 24 of the Explanatory Notes), the industry subdivisions with the largest dollar contribution to direct exports, in all three employment size ranges (i.e. 0-49 persons, 50-99 persons and 100 or more persons) were FOOD, BEVERAGE AND TOBACCO MANUFACTURING (\$881m, \$786m and \$10,872m respectively), MACHINERY AND EQUIPMENT MANUFACTURING (\$856m, \$505m and \$6,505m respectively) and PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (\$708m, \$387m and \$4,615m respectively).

The industry subdivisions with the highest proportion of exports compared to sales of goods produced, within the subdivision, were METAL PRODUCT MANUFACTURING (at 34.2%), FOOD, BEVERAGE AND TOBACCO MANUFACTURING (at 23.4%) and TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (at 20.3%).

MANUFACTURING MANAGEMENT UNITS(a), Summary of Operations(b)

Reference year	Employment at end of June(c)	Wages and salaries(d)(e)	Sales and service income(e)	Industry gross product(e)	Industry value added(e)	Wages and salaries to sales and service income (e)	Sales and service income per person employed (e)(f)	Industry value added per person employed (e)(g)
'000		\$m	\$m	\$m	\$m	ratio	\$'000	\$'000
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
2000-01	189.6	7 390.7	56 626.4	..	14 708.9	0.13	298.7	77.6
1999-2000	185.6	7 492.5	54 562.0	..	14 773.8	0.14	294.0	79.6
1998-99	188.7	7 287.1	51 731.7	..	13 894.4	0.14	274.2	73.6
1997-98	187.7	6 888.5	(h)49 199.5	(i)12 810.6	(i)13 216.4	0.14	262.1	70.4
1996-97	183.0	6 393.4	45 711.5	11 569.3	..	0.14	249.8	..
1995-96	181.8	(j)5 829.4	44 350.2	11 128.6	..	0.13	243.9	..
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
2000-01	57.8	1 753.9	9 110.8	..	2 583.3	0.19	157.7	44.7
1999-2000	63.9	1 840.1	9 298.6	..	2 835.4	0.20	145.5	44.4
1998-99	73.8	2 147.4	10 096.7	..	3 248.2	0.21	136.7	44.0
1997-98	73.8	2 152.9	(h)10 600.7	(i)3 186.9	(i)3 291.9	0.20	143.6	44.6
1996-97	77.9	2 094.3	10 288.2	3 167.4	..	0.20	132.0	..
1995-96	80.1	(j)1 862.4	9 921.2	3 006.8	..	0.19	123.9	..
WOOD AND PAPER PRODUCT MANUFACTURING								
2000-01	65.0	2 456.3	15 077.1	..	4 929.4	0.16	231.9	75.8
1999-2000	64.4	2 480.1	15 489.9	..	5 202.9	0.16	240.4	80.7
1998-99	65.3	2 370.2	14 435.6	..	4 971.0	0.16	221.1	76.1
1997-98	67.1	2 321.7	(h)12 796.4	(i)4 499.9	(i)4 656.9	0.18	190.7	69.4
1996-97	66.4	2 296.7	11 889.8	4 239.6	..	0.19	179.2	..
1995-96	63.5	(j)2 033.5	11 845.0	3 986.7	..	0.17	186.5	..
PRINTING, PUBLISHING AND RECORDED MEDIA								
2000-01	91.6	3 855.1	15 928.6	..	6 599.2	0.24	173.8	72.0
1999-2000	100.7	3 905.7	17 508.0	..	7 560.2	0.22	173.9	75.1
1998-99	100.6	3 802.2	16 052.6	..	6 591.0	0.24	159.6	65.5
1997-98	108.5	3 653.5	(h)15 341.9	(i)6 854.9	(i)6 492.3	0.24	141.3	59.8
1996-97	100.8	3 394.7	14 893.2	6 419.0	..	0.23	147.7	..
1995-96	92.8	(j)3 204.3	13 685.0	6 199.1	..	0.23	147.5	..
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
2000-01	101.3	5 085.0	47 115.1	..	9 959.6	0.11	465.3	98.4
1999-2000	102.5	4 765.7	39 815.8	..	9 842.2	0.12	388.3	96.0
1998-99	103.5	4 876.4	36 808.3	..	9 389.4	0.13	355.6	90.7
1997-98	103.3	4 698.2	(h)37 913.1	(i)8 908.7	(i)9 352.5	0.12	367.1	90.6
1996-97	104.6	4 394.6	37 491.7	8 969.1	..	0.12	358.5	..
1995-96	107.8	(j)4 224.0	35 448.1	8 733.7	..	0.12	328.8	..

.. not applicable

(a) See paragraph 4 of the Explanatory Notes.

(b) For factors affecting comparability of data over the time period shown, see paragraphs 15-20 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) Sales and service income divided by the number of persons employed at the end of June.

(g) Industry value added divided by the number of persons employed at the end of June.

(h) From the 1997-98 manufacturing collection, new international standards apply to the calculation of sales and service income — see paragraph 16 of the Explanatory Notes.

(i) From the 1997-98 manufacturing collection, industry value added (IVA) replaces industry gross product (IGP) as the measure of an industry's contribution to gross domestic product (GDP). IGP has also been shown for 1997-98. For more details, see paragraphs 17 and 18 of the Explanatory Notes.

(j) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 19 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Summary of Operations(b) *continued*

Reference year	Employment at end of June(c)	Wages and salaries(d)(e)	Sales and service income(e)	Industry gross product(e)	Industry value added(e)	Wages and salaries to sales and service income (e)	Sales and service income per person employed (e)(f)	Industry value added per person employed (e)(g)
'000		\$m	\$m	\$m	\$m	ratio	\$'000	\$'000
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
2000-01	37.2	1 719.6	9 776.6	..	3 606.1	0.18	263.1	97.0
1999-2000	39.1	1 772.8	11 075.0	..	4 024.5	0.16	283.0	102.9
1998-99	39.2	1 788.7	10 911.0	..	3 772.6	0.16	278.1	96.1
1997-98	41.5	1 721.4	(h)10 364.3	(i)3 442.1	(i)3 604.5	0.17	250.0	86.9
1996-97	44.3	1 781.7	9 832.1	3 447.7	..	0.18	221.8	..
1995-96	47.7	(j)1 684.4	9 523.8	3 478.1	..	0.18	199.6	..
METAL PRODUCT MANUFACTURING								
2000-01	147.0	6 177.5	40 516.9	..	13 655.2	0.15	275.5	92.9
1999-2000	142.8	5 950.3	38 718.1	..	11 768.4	0.15	271.2	82.4
1998-99	147.3	6 074.0	36 303.9	..	11 348.6	0.17	246.4	77.0
1997-98	148.8	5 884.7	(h)34 748.5	(i)11 565.1	(i)12 013.4	0.17	233.5	80.7
1996-97	155.0	5 765.3	34 560.8	10 438.6	..	0.17	223.0	..
1995-96	159.8	(j)5 445.7	35 325.3	10 583.5	..	0.15	221.1	..
MACHINERY AND EQUIPMENT MANUFACTURING								
2000-01	202.2	8 726.5	50 644.9	..	13 487.3	0.17	250.5	66.7
1999-2000	201.0	8 405.1	46 824.6	..	13 167.1	0.18	233.0	65.5
1998-99	202.2	8 249.2	46 472.8	..	13 312.0	0.18	229.9	65.9
1997-98	212.5	8 010.9	(h)43 645.3	(i)12 504.5	(i)12 956.3	0.18	205.4	61.0
1996-97	218.4	7 654.3	42 398.5	12 387.7	..	0.18	194.2	..
1995-96	214.9	(j)7 141.4	41 564.2	12 453.7	..	0.17	193.4	..
OTHER MANUFACTURING								
2000-01	54.2	1 580.9	6 962.6	..	2 416.7	0.23	128.4	44.6
1999-2000	54.1	1 435.9	6 853.3	..	2 228.2	0.21	126.7	41.2
1998-99	55.9	1 536.5	6 790.9	..	2 354.2	0.23	121.5	42.1
1997-98	56.1	1 458.4	(h)6 528.3	(i)2 168.4	(i)2 245.7	0.22	116.4	40.0
1996-97	55.0	1 409.4	6 264.3	2 076.2	..	0.22	113.8	..
1995-96	52.1	(j)1 269.6	5 699.7	1 962.0	..	0.22	109.3	..
TOTAL MANUFACTURING								
2000-01	945.9	38 745.5	251 758.9	..	71 945.8	0.15	266.2	76.1
1999-2000	954.1	38 048.2	240 145.2	..	71 402.8	0.16	251.7	74.8
1998-99	976.5	38 131.7	229 603.4	..	68 881.5	0.17	235.1	70.5
1997-98	999.4	36 790.1	(h)221 138.1	(i)65 941.2	(i)67 830.0	0.17	221.3	67.9
1996-97	1 005.3	35 184.4	213 330.0	62 714.6	..	0.16	212.2	..
1995-96	1 000.5	(j)32 694.7	207 362.5	61 532.1	..	0.16	207.3	..

.. not applicable

(a) See paragraph 4 of the Explanatory Notes.

(b) For factors affecting comparability of data over the time period shown, see paragraphs 15-20 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) Sales and service income divided by the number of persons employed at the end of June.

(g) Industry value added divided by the number of persons employed at the end of June.

(h) From the 1997-98 manufacturing collection, new international standards apply to the calculation of sales and service income — see paragraph 16 of the Explanatory Notes.

(i) From the 1997-98 manufacturing collection, industry value added (IVA) replaces industry gross product (IGP) as the measure of an industry's contribution to gross domestic product (GDP). IGP has also been shown for 1997-98. For more details, see paragraphs 17 and 18 of the Explanatory Notes.

(j) For 1995-96, excludes provision expenses for employee entitlements. See paragraph 19 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Industry Class

INDUSTRY CLASS	Description	Employment at end of June(b)	Wages and salaries(c)	Sales and service income	Industry value added	Sales and service income per person employed(d)	Industry value added per person employed(e)
ANZSIC code		no.	\$m	\$m	\$m	\$'000	\$'000
FOOD, BEVERAGE AND TOBACCO MFG							
211	Meat and meat product mfg						
2111	Meat processing	27 926	1 001.4	8 378.0	1 641.2	300.0	58.8
2112	Poultry processing	16 245	543.9	2 902.7	792.8	178.7	48.8
2113	Bacon, ham and smallgood mfg	8 381	267.0	1 758.2	394.6	209.8	47.1
	<i>Total</i>	52 552	1 812.3	13 038.9	2 828.7	248.1	53.8
212	Dairy product mfg						
2121	Milk and cream processing	5 155	226.4	2 061.8	446.9	400.0	86.7
2122	Ice cream mfg	2 150	70.0	572.5	113.8	266.3	52.9
2129	Dairy product mfg n.e.c.	12 094	535.3	5 823.3	1 068.4	481.5	88.3
	<i>Total</i>	19 399	831.7	8 457.6	1 629.1	436.0	84.0
213	Fruit and vegetable processing	15 613	638.0	4 484.4	1 101.7	287.2	70.6
214	Oil and fat mfg	4 228	217.7	2 087.6	465.0	493.8	110.0
215	Flour mill and cereal food mfg						
2151	Flour mill product mfg	3 151	151.9	1 514.3	348.3	480.6	110.5
2152	Cereal food and baking mix mfg	7 049	292.3	2 222.7	619.2	315.3	87.8
	<i>Total</i>	10 200	444.2	3 736.9	967.5	366.4	94.8
216	Bakery product mfg						
2161	Bread mfg	11 830	442.1	1 503.0	684.2	127.1	57.8
2162	Cake and pastry mfg	9 338	226.8	876.5	328.2	93.9	35.1
2163	Biscuit mfg	6 635	207.6	1 086.0	398.1	163.7	60.0
	<i>Total</i>	27 803	876.6	3 465.5	1 410.5	124.6	50.7
217	Other food mfg						
2171	Sugar mfg	5 670	228.0	1 688.2	252.9	297.7	44.6
2172	Confectionery mfg	6 288	288.1	1 486.7	625.8	236.4	99.5
2173	Seafood processing	4 074	83.5	1 168.2	184.9	286.7	45.4
2174	Prepared animal and bird feed mfg	4 048	190.0	1 886.0	330.4	465.9	81.6
2179	Food mfg n.e.c.	15 093	610.7	4 037.6	1 230.1	267.5	81.5
	<i>Total</i>	35 173	1 400.4	10 266.7	2 624.1	291.9	74.6
218	Beverage and malt mfg						
2181	Soft drink, cordial and syrup mfg	5 881	215.0	2 505.4	808.0	426.0	137.4
2182	Beer and malt mfg	3 639	257.6	3 066.4	1 082.1	842.6	297.4
2183	Wine mfg	12 337	np	np	np	np	np
2184	Spirit mfg	473	np	np	np	np	np
	<i>Total</i>	22 329	1 020.1	9 753.9	3 184.7	436.8	142.6
219	Tobacco product mfg	2 305	149.8	1 334.8	497.6	579.1	215.9
21	Total food, beverage and tobacco mfg	189 603	7 390.7	56 626.4	14 708.9	298.7	77.6
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG							
221	Textile fibre, yarn and woven fabric mfg						
2211	Wool scouring	1 792	82.1	745.6	171.6	416.1	95.8
2212	Synthetic fibre textile mfg	2 960	114.1	601.8	191.0	203.3	64.5
2213	Cotton textile mfg	2 172	93.5	358.9	112.3	165.2	51.7
2214	Wool textile mfg	1 628	56.7	187.7	82.0	115.3	50.4
2215	Textile finishing	1 215	*46.3	168.9	72.9	139.0	60.0
	<i>Total</i>	9 766	392.6	2 062.9	629.9	211.2	64.5

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

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

(a) See paragraph 4 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Sales and service income divided by the number of persons employed at the end of June.

(e) Industry value added divided by the number of persons employed at the end of June.

INDUSTRY CLASS	Description	Employment at end of June(b)	Wages and salaries(c)	Sales and service income	Industry value added	Sales and service income per person employed(d)	Industry value added per person employed(e)
ANZSIC code		no.	\$m	\$m	\$m	\$'000	\$'000
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG <i>cont.</i>							
222	Textile product mfg						
2221	Made-up textile product mfg	8 447	210.5	1 018.1	320.8	120.5	38.0
2222	Textile floor covering mfg	3 307	130.2	823.3	226.7	248.9	68.6
2223	Rope, cordage and twine mfg	407	17.3	92.1	*26.9	226.4	**66.0
2229	Textile product mfg n.e.c.	2 003	54.0	213.6	78.4	106.7	39.1
	<i>Total</i>	<i>14 164</i>	<i>412.0</i>	<i>2 147.2</i>	<i>652.8</i>	<i>151.6</i>	<i>46.1</i>
223	Knitting mills						
2231	Hosiery mfg	2 121	67.9	277.3	47.9	130.7	22.6
2232	Cardigan and pullover mfg	1 126	31.3	151.0	39.1	134.1	34.7
2239	Knitting mill product mfg n.e.c.	2 246	94.4	422.1	124.0	187.9	55.2
	<i>Total</i>	<i>5 493</i>	<i>193.6</i>	<i>850.5</i>	<i>211.0</i>	<i>154.8</i>	<i>38.4</i>
224	Clothing mfg						
2241	Men's and boys' wear mfg	5 970	168.4	728.8	224.6	122.1	37.6
2242	Women's and girls' wear mfg	7 780	181.6	1 032.8	250.5	132.7	32.2
2243	Sleepwear, underwear and infant clothing mfg	1 384	43.8	268.1	74.3	193.7	53.7
2249	Clothing mfg n.e.c.	5 797	136.1	581.3	191.1	100.3	33.0
	<i>Total</i>	<i>20 931</i>	<i>530.0</i>	<i>2 611.0</i>	<i>740.4</i>	<i>124.7</i>	<i>35.4</i>
225	Footwear mfg	4 223	125.1	557.5	181.7	132.0	43.0
226	Leather and leather product mfg						
2261	Leather tanning and fur dressing	2 787	93.8	842.9	156.0	302.4	56.0
2262	Leather and leather substitute product mfg	399	6.8	38.9	11.5	97.5	28.8
	<i>Total</i>	<i>3 187</i>	<i>100.5</i>	<i>881.8</i>	<i>167.5</i>	<i>276.7</i>	<i>52.6</i>
22	Total textile, clothing, footwear and leather mfg	57 764	1 753.9	9 110.8	2 583.3	157.7	44.7
WOOD AND PAPER PRODUCT MFG							
231	Log sawmilling and timber dressing						
2311	Log sawmilling	5 334	134.4	693.5	275.8	130.0	51.7
2312	Wood chipping	622	19.4	242.6	71.4	390.0	114.8
2313	Timber resawing and dressing	7 909	297.5	1 633.0	613.6	206.5	77.6
	<i>Total</i>	<i>13 866</i>	<i>451.2</i>	<i>2 569.1</i>	<i>960.8</i>	<i>185.3</i>	<i>69.3</i>
232	Other wood product mfg						
2321	Plywood and veneer mfg	971	34.3	157.7	66.3	162.4	68.3
2322	Fabricated wood mfg	4 538	190.8	1 158.1	346.1	255.2	76.3
2323	Wooden structural component mfg	20 216	562.2	2 623.8	873.3	129.8	43.2
2329	Wood product mfg n.e.c.	5 701	147.9	617.4	218.0	108.3	38.2
	<i>Total</i>	<i>31 425</i>	<i>935.1</i>	<i>4 557.1</i>	<i>1 503.7</i>	<i>145.0</i>	<i>47.9</i>
233	Paper and paper product mfg						
2331	Pulp, paper and paperboard mfg	5 050	296.1	2 662.5	827.5	527.2	163.9
2332	Solid paperboard container mfg	2 887	140.3	713.5	270.1	247.1	93.6
2333	Corrugated paperboard container mfg	5 852	352.5	2 628.5	766.9	449.2	131.1
2334	Paper bag and sack mfg	1 345	42.6	260.7	76.4	193.8	56.8
2339	Paper product mfg n.e.c.	4 582	238.3	1 685.7	523.8	367.9	114.3
	<i>Total</i>	<i>19 717</i>	<i>1 069.9</i>	<i>7 950.9</i>	<i>2 464.8</i>	<i>403.3</i>	<i>125.0</i>
23	Total wood and paper product mfg	65 008	2 456.3	15 077.1	4 929.4	231.9	75.8

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

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

(a) See paragraph 4 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Sales and service income divided by the number of persons employed at the end of June.

(e) Industry value added divided by the number of persons employed at the end of June.

INDUSTRY CLASS	Description	Employment at end of June(b)	Wages and salaries(c)	Sales and service income	Industry value added	Sales and service income per person employed(d)	Industry value added per person employed(e)
ANZSIC code		no.	\$m	\$m	\$m	\$'000	\$'000
PRINTING, PUBLISHING AND RECORDED MEDIA							
241	Printing and services to printing						
2411	Paper stationery mfg	9 759	328.4	1 579.1	557.3	161.8	57.1
2412	Printing	33 594	1 329.4	5 375.5	1 984.8	160.0	59.1
2413	Services to printing	6 012	199.6	575.2	249.5	95.7	41.5
	<i>Total</i>	<i>49 364</i>	<i>1 857.4</i>	<i>7 529.8</i>	<i>2 791.6</i>	<i>152.5</i>	<i>56.6</i>
242	Publishing						
2421	Newspaper printing or publishing	28 761	1 376.3	5 649.6	2 904.4	196.4	101.0
2422	Other periodical publishing	6 396	322.4	1 242.0	355.2	194.2	55.5
2423	Book and other publishing	3 727	157.6	859.3	293.9	230.5	78.8
	<i>Total</i>	<i>38 885</i>	<i>1 856.3</i>	<i>7 750.8</i>	<i>3 553.4</i>	<i>199.3</i>	<i>91.4</i>
243	Recorded media manufacturing and publishing	3 381	141.4	647.9	254.2	191.6	75.2
24	Total printing, publishing and recorded media	91 630	3 855.1	15 928.6	6 599.2	173.8	72.0
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG							
251	Petroleum refining	4 547	449.6	16 015.5	1 330.8	3 522.2	292.7
252	Petroleum and coal product mfg n.e.c.	335	18.9	182.4	58.4	544.5	174.2
253	Basic chemical mfg						
2531	Fertiliser mfg	2 807	np	np	np	np	np
2532	Industrial gas mfg	2 075	np	np	np	np	np
2533	Synthetic resin mfg	4 771	296.9	2 488.6	482.5	521.6	101.1
2534	Organic industrial chemical mfg n.e.c.	1 687	100.1	849.0	163.3	503.3	96.8
2535	Inorganic industrial chemical mfg n.e.c.	3 868	247.1	2 436.8	*875.4	630.0	**226.3
	<i>Total</i>	<i>15 208</i>	<i>959.8</i>	<i>8 615.2</i>	<i>2 186.8</i>	<i>566.5</i>	<i>143.8</i>
254	Other chemical product mfg						
2541	Explosive mfg	980	np	np	np	np	np
2542	Paint mfg	6 774	336.2	1 753.1	530.5	258.8	78.3
2543	Medicinal and pharmaceutical product mfg	15 072	833.5	6 287.6	1 682.3	417.2	111.6
2544	Pesticide mfg	1 454	94.3	1 224.3	189.2	842.0	130.1
2545	Soap and other detergent mfg	4 307	190.6	1 614.4	411.8	374.8	95.6
2546	Cosmetic and toiletry preparation mfg	3 991	150.3	858.9	243.0	215.2	60.9
2547	Ink mfg	690	np	np	np	np	np
2549	Chemical product mfg n.e.c.	3 726	167.0	1 115.2	329.3	299.3	88.4
	<i>Total</i>	<i>36 994</i>	<i>1 889.0</i>	<i>13 764.1</i>	<i>3 569.2</i>	<i>372.1</i>	<i>96.5</i>
255	Rubber product mfg						
2551	Rubber tyre mfg	3 404	193.5	835.9	234.4	245.6	68.9
2559	Rubber product mfg n.e.c.	4 714	190.3	791.4	273.3	167.9	58.0
	<i>Total</i>	<i>8 118</i>	<i>383.8</i>	<i>1 627.4</i>	<i>507.6</i>	<i>200.5</i>	<i>62.5</i>
256	Plastic product mfg						
2561	Plastic blow moulded product mfg	3 783	156.4	719.4	280.6	190.2	74.2
2562	Plastic extruded product mfg	4 120	166.7	1 007.0	305.5	244.4	74.1
2563	Plastic bag and film mfg	5 980	279.8	1 645.7	509.1	275.2	85.1
2564	Plastic product rigid fibre reinforced mfg	3 716	116.1	610.9	181.2	164.4	48.8
2565	Plastic foam product mfg	3 728	142.3	694.1	227.5	186.2	61.0
2566	Plastic injection moulded product mfg	14 727	522.7	2 233.5	802.9	151.7	54.5
	<i>Total</i>	<i>36 055</i>	<i>1 383.9</i>	<i>6 910.6</i>	<i>2 306.8</i>	<i>191.7</i>	<i>64.0</i>
25	Total petroleum, coal, chemical and associated product mfg	101 256	5 085.0	47 115.1	9 959.6	465.3	98.4

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

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

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

(a) See paragraph 4 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Sales and service income divided by the number of persons employed at the end of June.

(e) Industry value added divided by the number of persons employed at the end of June.

INDUSTRY CLASS	Description	Employment at end of June(b)	Wages and salaries(c)	Sales and service income	Industry value added	Sales and service income per person employed(d)	Industry value added per person employed(e)
ANZSIC code		no.	\$m	\$m	\$m	\$'000	\$'000
NON-METALLIC MINERAL PRODUCT MFG							
261	Glass and glass product mfg	6 376	311.5	1 493.8	662.6	234.3	103.9
262	Ceramic mfg						
2621	Clay brick mfg	3 284	154.2	665.5	349.6	202.6	106.5
2622	Ceramic product mfg	776	40.2	199.2	62.7	256.7	80.8
2623	Ceramic tile and pipe mfg	528	25.3	64.3	35.1	121.9	66.4
2629	Ceramic product mfg n.e.c.	1 747	67.1	243.0	125.9	139.1	72.0
	<i>Total</i>	6 335	286.8	1 172.0	573.3	185.0	90.5
263	Cement, lime, plaster and concrete product mfg						
2631	Cement and lime mfg	2 780	159.0	1 401.5	513.0	504.1	184.5
2632	Plaster product mfg	3 041	170.8	1 142.6	492.6	375.7	162.0
2633	Concrete slurry mfg	7 874	384.3	2 491.7	652.4	316.4	82.9
2634	Concrete pipe and box culvert mfg	852	21.0	130.2	45.6	152.8	53.5
2635	Concrete product mfg n.e.c.	5 521	199.7	1 025.7	349.7	185.8	63.3
	<i>Total</i>	20 068	934.8	6 191.7	2 053.4	308.5	102.3
264	Non-metallic mineral product mfg n.e.c.	4 387	186.6	919.1	316.8	209.5	72.2
26	Total non-metallic mineral product mfg	37 166	1 719.6	9 776.6	3 606.1	263.1	97.0
METAL PRODUCT MFG							
271	Iron and steel mfg						
2711	Basic iron and steel mfg	19 123	965.1	8 134.1	1 874.1	425.4	98.0
2712	Iron and steel casting and forging	5 326	222.1	1 018.3	400.4	191.2	75.2
2713	Steel pipe and tube mfg	4 133	178.2	1 230.5	299.8	297.7	72.5
	<i>Total</i>	28 582	1 365.4	10 382.8	2 574.3	363.3	90.1
272	Basic non-ferrous metal mfg						
2721	Alumina production	7 844	573.9	5 287.3	2 800.2	674.1	357.0
2722	Aluminium smelting	4 885	296.3	5 306.3	1 862.6	1 086.3	381.3
2723	Copper, silver, lead and zinc smelting, refining	2 712	156.2	1 583.3	354.6	583.8	130.8
2729	Basic non-ferrous metal mfg n.e.c.	1 019	61.8	629.6	139.7	617.9	137.0
	<i>Total</i>	16 460	1 088.3	12 806.6	5 157.1	778.0	313.3
273	Non-ferrous basic metal product mfg						
2731	Aluminium rolling, drawing, extruding	3 048	143.5	1 311.2	272.4	430.2	89.4
2732	Non-ferrous metal rolling, drawing, extruding n.e.c.	1 632	94.1	909.3	157.0	557.1	96.2
2733	Non-ferrous metal casting	1 931	63.0	250.7	91.8	129.8	47.5
	<i>Total</i>	6 612	300.6	2 471.2	521.2	373.7	78.8
274	Structural metal product mfg						
2741	Structural steel fabricating	17 295	674.1	2 884.9	935.2	166.8	54.1
2742	Architectural aluminium product mfg	13 871	467.6	2 097.6	650.9	151.2	46.9
2749	Structural metal product mfg n.e.c.	5 683	171.9	869.6	304.8	153.0	53.6
	<i>Total</i>	36 849	1 313.6	5 852.1	1 890.9	158.8	51.3
275	Sheet metal product mfg						
2751	Metal container mfg	4 563	212.7	1 360.3	468.1	298.1	102.6
2759	Sheet metal product mfg n.e.c.	13 599	456.6	1 877.6	766.3	138.1	56.3
	<i>Total</i>	18 162	669.3	3 237.9	1 234.4	178.3	68.0

(a) See paragraph 4 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Sales and service income divided by the number of persons employed at the end of June.

(e) Industry value added divided by the number of persons employed at the end of June.

MANUFACTURING MANAGEMENT UNITS (a), Industry Class *continued*

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Sales and service income	Industry value added	Sales and service income per person employed(d)	Industry value added per person employed(e)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
METAL PRODUCT MFG <i>cont.</i>							
276	Fabricated metal product mfg						
2761	Hand tool and general hardware mfg	1 900	61.4	218.8	92.9	115.2	48.9
2762	Spring and wire product mfg	4 418	204.5	1 020.9	299.8	231.1	67.8
2763	Nut, bolt, screw and rivet mfg	2 420	101.2	431.1	167.4	178.1	69.2
2764	Metal coating and finishing	8 795	259.9	847.2	415.7	96.3	47.3
2765	Non-ferrous pipe fitting mfg	2 570	106.2	411.4	163.4	160.1	63.6
2769	Fabricated metal product mfg n.e.c.	20 275	707.2	2 837.0	1 138.2	139.9	56.1
	<i>Total</i>	40 379	1 440.4	5 766.4	2 277.4	142.8	56.4
27	Total metal product mfg	147 045	6 177.5	40 516.9	13 655.2	275.5	92.9
MACHINERY AND EQUIPMENT MFG							
281	Motor vehicle and part mfg						
2811	Motor vehicle mfg	23 243	1 335.9	16 322.6	2 174.3	702.3	93.5
2812	Motor vehicle body mfg	9 908	325.2	1 433.5	444.3	144.7	44.8
2813	Automotive electrical and instrument mfg	5 085	248.4	1 613.0	357.1	317.2	70.2
2819	Automotive component mfg n.e.c.	24 424	999.5	4 395.3	1 681.4	180.0	68.8
	<i>Total</i>	62 661	2 909.1	23 764.3	4 657.2	379.3	74.3
282	Other transport equipment mfg						
2821	Shipbuilding	6 079	339.2	1 410.0	524.0	232.0	86.2
2822	Boatbuilding	4 326	118.6	584.9	202.4	135.2	46.8
2823	Railway equipment mfg	5 873	233.0	1 053.7	298.9	179.4	50.9
2824	Aircraft mfg	5 849	268.8	951.2	394.4	162.6	67.4
2829	Transport equipment mfg n.e.c.	337	10.2	42.5	16.4	126.2	48.5
	<i>Total</i>	22 465	969.9	4 042.4	1 436.0	179.9	63.9
283	Photographic and scientific equipment mfg						
2831	Photographic and optical good mfg	3 368	169.5	1 268.3	360.0	376.6	106.9
2832	Medical and surgical equipment mfg	6 653	193.5	738.9	333.1	111.1	50.1
2839	Professional and scientific equipment mfg n.e.c.	4 548	202.3	836.1	346.0	183.8	76.1
	<i>Total</i>	14 570	565.4	2 843.2	1 039.1	195.1	71.3
284	Electronic equipment mfg						
2841	Computer and business machine mfg	4 091	166.2	1 244.6	230.1	304.2	56.3
2842	Telecommunication, broadcasting and transceiving equipment mfg	9 114	578.9	2 471.3	739.3	271.2	81.1
2849	Electronic equipment mfg n.e.c.	8 928	367.6	1 603.1	588.5	179.6	65.9
	<i>Total</i>	22 134	1 112.7	5 318.9	1 558.0	240.3	70.4
285	Electrical equipment and appliance mfg						
2851	Household appliance mfg	9 765	364.1	2 086.3	671.3	213.7	68.7
2852	Electric cable and wire mfg	2 979	155.3	1 136.0	265.9	381.3	89.3
2853	Battery mfg	910	37.3	203.0	70.0	223.1	76.9
2854	Electric light and sign mfg	4 098	135.6	608.9	194.4	148.6	47.4
2859	Electrical equipment mfg n.e.c.	12 646	470.1	2 230.5	607.0	176.4	48.0
	<i>Total</i>	30 397	1 162.5	6 264.7	1 808.6	206.1	59.5

(a) See paragraph 4 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Sales and service income divided by the number of persons employed at the end of June.

(e) Industry value added divided by the number of persons employed at the end of June.

INDUSTRY CLASS		Employment at end of June(b)	Wages and salaries(c)	Sales and service income	Industry value added	Sales and service income per person employed(d)	Industry value added per person employed(e)
ANZSIC code	Description	no.	\$m	\$m	\$m	\$'000	\$'000
MACHINERY AND EQUIPMENT MFG <i>cont.</i>							
286	Industrial machinery and equipment mfg						
2861	Agricultural machinery mfg	5 331	172.5	900.9	237.7	169.0	44.6
2862	Mining and construction machinery mfg	8 789	360.1	1 596.5	531.7	181.6	60.5
2863	Food processing machinery mfg	2 748	103.7	598.4	172.0	217.7	62.6
2864	Machine tool and part mfg	6 344	232.7	768.3	335.1	121.1	52.8
2865	Lifting and material handling equipment mfg	8 512	433.7	1 704.5	635.6	200.2	74.7
2866	Pump and compressor mfg	3 449	148.5	675.7	242.5	195.9	70.3
2867	Commercial space heating and cooling equipment mfg	2 548	103.5	442.5	156.3	173.7	61.4
2869	Industrial machinery and equipment mfg n.e.c.	12 223	452.2	1 724.7	677.4	141.1	55.4
	<i>Total</i>	<i>49 944</i>	<i>2 007.0</i>	<i>8 411.4</i>	<i>2 988.5</i>	<i>168.4</i>	<i>59.8</i>
28	Total machinery and equipment mfg	202 170	8 726.5	50 644.9	13 487.3	250.5	66.7
OTHER MANUFACTURING							
291	Prefabricated building mfg						
2911	Prefabricated metal building mfg	2 295	75.6	617.5	158.1	269.0	68.9
2919	Prefabricated building mfg n.e.c.	667	21.3	113.8	32.5	170.6	48.8
	<i>Total</i>	<i>2 962</i>	<i>96.8</i>	<i>731.2</i>	<i>190.6</i>	<i>246.9</i>	<i>64.4</i>
292	Furniture mfg						
2921	Wooden furniture and upholstered seat mfg	28 520	772.8	2 907.8	1 102.1	102.0	38.6
2922	Sheet metal furniture mfg	3 109	114.8	459.2	155.0	147.7	49.8
2923	Mattress mfg (except rubber)	2 487	81.5	442.6	141.2	178.0	56.8
2929	Furniture mfg n.e.c.	7 015	237.2	1 085.2	363.0	154.7	51.8
	<i>Total</i>	<i>41 131</i>	<i>1 206.3</i>	<i>4 894.8</i>	<i>1 761.3</i>	<i>119.0</i>	<i>42.8</i>
294	Miscellaneous mfg						
2941	Jewellery and silverware mfg	2 658	74.5	426.3	123.9	160.4	46.6
2942	Toy and sporting good mfg	2 386	55.0	303.0	112.1	127.0	47.0
2949	Manufacturing n.e.c.	5 104	148.4	607.3	228.8	119.0	44.8
	<i>Total</i>	<i>10 148</i>	<i>277.8</i>	<i>1 336.6</i>	<i>464.7</i>	<i>131.7</i>	<i>45.8</i>
29	Total other manufacturing	54 241	1 580.9	6 962.6	2 416.7	128.4	44.6
21-29	TOTAL MANUFACTURING	945 882	38 745.5	251 758.9	71 945.8	266.2	76.1

(a) See paragraph 4 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Sales and service income divided by the number of persons employed at the end of June.

(e) Industry value added divided by the number of persons employed at the end of June.

MANUFACTURING MANAGEMENT UNITS(a), States, Territories and Australia(b)

INDUSTRY SUBDIVISION		Employment at end of June (c)	Wages and salaries(d)	Sales and service income	Industry value added	Sales and service income per person employed (e)	Industry value added per person employed (f)
ANZSIC code	Description	'000	\$m	\$m	\$m	\$'000	\$'000
NEW SOUTH WALES							
21	Food, beverage and tobacco mfg	53.0	2 269.1	17 177.8	4 681.3	324.2	88.3
22	Textile, clothing, footwear and leather mfg	15.2	476.1	2 525.6	681.1	166.1	44.8
23	Wood and paper product mfg	19.8	743.4	4 762.0	1 510.8	240.3	76.3
24	Printing, publishing and recorded media	35.3	1 633.7	6 863.0	2 668.2	194.4	75.6
25	Petroleum, coal, chemical and associated product mfg	34.1	1 573.8	14 878.5	3 104.6	436.1	91.0
26	Non-metallic mineral product mfg	11.0	534.5	3 021.3	1 175.5	274.9	106.9
27	Metal product mfg	52.0	2 189.5	14 104.8	4 339.8	271.1	83.4
28	Machinery and equipment mfg	58.7	2 559.6	13 163.1	4 115.4	224.1	70.1
29	Other manufacturing	16.4	525.9	2 162.9	790.7	131.8	48.2
21-29	<i>Total manufacturing</i>	295.6	12 505.7	78 659.1	23 067.4	266.1	78.0
VICTORIA							
21	Food, beverage and tobacco mfg	53.7	2 281.5	16 897.8	4 571.2	314.7	85.1
22	Textile, clothing, footwear and leather mfg	27.3	873.4	4 467.1	1 301.6	163.9	47.8
23	Wood and paper product mfg	18.6	722.0	4 463.5	1 404.5	240.4	75.6
24	Printing, publishing and recorded media	28.9	1 185.8	5 045.4	1 975.8	174.8	68.4
25	Petroleum, coal, chemical and associated product mfg	38.9	2 112.7	16 755.1	3 687.9	430.6	94.8
26	Non-metallic mineral product mfg	10.7	465.0	2 391.3	933.7	222.8	87.0
27	Metal product mfg	37.8	1 540.9	9 471.2	3 273.0	250.7	86.6
28	Machinery and equipment mfg	68.7	3 259.0	18 680.5	5 311.0	272.0	77.3
29	Other manufacturing	17.7	508.9	2 407.9	792.7	135.9	44.7
21-29	<i>Total manufacturing</i>	302.2	12 949.2	80 579.7	23 251.3	266.6	76.9
QUEENSLAND							
21	Food, beverage and tobacco mfg	41.9	1 412.2	12 313.6	2 559.1	293.9	61.1
22	Textile, clothing, footwear and leather mfg	5.7	142.8	686.6	211.1	120.4	37.0
23	Wood and paper product mfg	12.6	446.4	2 490.5	807.4	197.1	63.9
24	Printing, publishing and recorded media	11.8	451.7	1 675.7	799.3	142.4	67.9
25	Petroleum, coal, chemical and associated product mfg	12.3	587.5	7 288.4	1 198.6	593.1	97.5
26	Non-metallic mineral product mfg	6.9	292.1	1 891.5	601.7	272.5	86.7
27	Metal product mfg	24.4	963.4	7 281.9	2 361.8	298.8	96.9
28	Machinery and equipment mfg	27.3	960.2	5 535.3	1 367.6	202.6	50.1
29	Other manufacturing	9.8	276.8	1 128.9	416.6	115.6	42.7
21-29	<i>Total manufacturing</i>	152.7	5 533.1	40 292.3	10 323.2	263.9	67.6
SOUTH AUSTRALIA							
21	Food, beverage and tobacco mfg	19.7	709.0	4 630.7	1 491.9	235.2	75.8
22	Textile, clothing, footwear and leather mfg	4.2	115.9	847.5	176.7	199.6	41.6
23	Wood and paper product mfg	6.2	253.7	1 236.6	539.8	200.1	87.4
24	Printing, publishing and recorded media	5.4	193.1	869.6	389.8	159.8	71.6
25	Petroleum, coal, chemical and associated product mfg	7.4	342.8	1 815.9	580.1	244.1	78.0
26	Non-metallic mineral product mfg	2.9	134.7	822.5	290.6	285.5	100.9
27	Metal product mfg	12.0	453.0	2 593.4	763.9	215.4	63.4
28	Machinery and equipment mfg	31.0	1 270.9	10 334.2	1 797.6	333.8	58.1
29	Other manufacturing	4.0	104.2	472.7	162.0	118.1	40.5
21-29	<i>Total manufacturing</i>	92.9	3 577.1	23 623.0	6 192.3	254.4	66.7

(a) See paragraph 4 of the Explanatory Notes.

(b) See paragraph 6 of Appendix 2.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(e) Sales and service income divided by the number of persons employed at the end of June.

(f) Industry value added divided by the number of persons employed at the end of June.

INDUSTRY SUBDIVISION		Employment at end of June (c)	Wages and salaries(d)	Sales and service income	Industry value added	Sales and service income per person employed (e)	Industry value added per person employed (f)
ANZSIC code	Description	'000	\$m	\$m	\$m	\$'000	\$'000
WESTERN AUSTRALIA							
21	Food, beverage and tobacco mfg	14.1	479.6	4 189.7	933.6	296.9	66.2
22	Textile, clothing, footwear and leather mfg	3.8	101.3	411.1	149.7	106.9	38.9
23	Wood and paper product mfg	4.4	155.7	846.1	323.9	191.4	73.3
24	Printing, publishing and recorded media	6.9	262.5	1 037.0	539.6	150.7	78.4
25	Petroleum, coal, chemical and associated product mfg	7.4	409.6	5 914.5	1 237.0	800.5	167.4
26	Non-metallic mineral product mfg	4.6	227.3	1 232.6	451.5	268.0	98.2
27	Metal product mfg	15.3	778.2	5 051.4	2 268.6	330.0	148.2
28	Machinery and equipment mfg	12.4	515.3	2 325.3	650.9	187.0	52.4
29	Other manufacturing	5.5	144.3	694.6	224.9	126.9	41.1
21-29	<i>Total manufacturing</i>	74.5	3 073.8	21 702.3	6 779.7	291.5	91.1
TASMANIA							
21	Food, beverage and tobacco mfg	6.3	203.7	1 199.8	409.4	191.8	65.5
22	Textile, clothing, footwear and leather mfg	1.4	40.9	158.9	58.3	117.3	43.1
23	Wood and paper product mfg	2.9	121.2	1 201.9	322.9	409.4	110.0
24	Printing, publishing and recorded media	1.3	49.2	156.3	76.3	117.5	57.3
25	Petroleum, coal, chemical and associated product mfg	0.9	52.3	405.7	140.3	433.0	149.7
26	Non-metallic mineral product mfg	0.7	37.2	243.1	102.6	338.0	142.8
27	Metal product mfg	3.9	158.2	1 332.0	469.5	342.6	120.7
28	Machinery and equipment mfg	2.7	102.2	297.3	161.9	109.2	59.4
29	Other manufacturing	0.5	11.3	48.5	15.4	97.9	31.1
21-29	<i>Total manufacturing</i>	20.6	776.2	5 043.6	1 756.6	244.4	85.1
NORTHERN TERRITORY							
21	Food, beverage and tobacco mfg	0.4	18.4	118.6	33.5	308.8	87.3
22	Textile, clothing, footwear and leather mfg	0.1	np	np	np	np	np
23	Wood and paper product mfg	0.1	3.8	17.0	5.3	126.1	39.0
24	Printing, publishing and recorded media	0.4	13.1	55.3	31.5	123.4	70.3
25	Petroleum, coal, chemical and associated product mfg	0.1	4.7	44.8	8.1	342.1	62.1
26	Non-metallic mineral product mfg	0.2	16.1	94.1	27.2	553.7	160.2
27	Metal product mfg	1.2	np	np	np	np	np
28	Machinery and equipment mfg	0.6	20.5	190.9	33.8	308.9	54.7
29	Other manufacturing	0.1	np	np	np	np	np
21-29	<i>Total manufacturing</i>	3.3	158.7	1 138.2	301.3	345.3	91.4
AUSTRALIAN CAPITAL TERRITORY							
21	Food, beverage and tobacco mfg	0.6	17.3	98.5	29.1	170.1	50.2
22	Textile, clothing, footwear and leather mfg	0.1	np	np	np	np	np
23	Wood and paper product mfg	0.3	10.1	59.4	14.9	184.6	46.3
24	Printing, publishing and recorded media	1.6	66.1	226.3	118.5	142.3	74.6
25	Petroleum, coal, chemical and associated product mfg	—	1.6	12.2	3.1	369.8	93.1
26	Non-metallic mineral product mfg	0.1	12.6	80.2	23.3	598.4	173.7
27	Metal product mfg	0.4	np	np	np	np	np
28	Machinery and equipment mfg	0.7	38.9	118.3	49.1	168.0	69.7
29	Other manufacturing	0.3	np	np	np	np	np
21-29	<i>Total manufacturing</i>	4.1	171.7	720.8	274.0	174.9	66.5

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

— nil or rounded to zero (including null cells)

(a) See paragraph 4 of the Explanatory Notes.

(b) See paragraph 6 of Appendix 2.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(e) Sales and service income divided by the number of persons employed at the end of June.

(f) Industry value added divided by the number of persons employed at the end of June.

INDUSTRY SUBDIVISION		Employment at end of June (c)	Wages and salaries(d)	Sales and service income	Industry value added	Sales and service income per person employed (e)	Industry value added per person employed (f)
ANZSIC code	Description	'000	\$m	\$m	\$m	\$'000	\$'000
AUSTRALIA							
21	Food, beverage and tobacco mfg	189.6	7 390.7	56 626.4	14 708.9	298.7	77.6
22	Textile, clothing, footwear and leather mfg	57.8	1 753.9	9 110.8	2 583.3	157.7	44.7
23	Wood and paper product mfg	65.0	2 456.3	15 077.1	4 929.4	231.9	75.8
24	Printing, publishing and recorded media	91.6	3 855.1	15 928.6	6 599.2	173.8	72.0
25	Petroleum, coal, chemical and associated product mfg	101.3	5 085.0	47 115.1	9 959.6	465.3	98.4
26	Non-metallic mineral product mfg	37.2	1 719.6	9 776.6	3 606.1	263.1	97.0
27	Metal product mfg	147.0	6 177.5	40 516.9	13 655.2	275.5	92.9
28	Machinery and equipment mfg	202.2	8 726.5	50 644.9	13 487.3	250.5	66.7
29	Other manufacturing	54.2	1 580.9	6 962.6	2 416.7	128.4	44.6
21-29	Total manufacturing	945.9	38 745.5	251 758.9	71 945.8	266.2	76.1

(a) See paragraph 4 of the Explanatory Notes.

(b) See paragraph 6 of Appendix 2.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(e) Sales and service income divided by the number of persons employed at the end of June.

(f) Industry value added divided by the number of persons employed at the end of June.

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MANUFACTURING MANAGEMENT UNITS(a), Change in Industry Value Added—Chain Volume Measures(b)

INDUSTRY SUBDIVISION		1995-96 TO		2000-01	
		1995-96 to 1999-2000	1999-2000 to 2000-01	Change in IVA per person employed(c)	
ANZSIC code	Description	%	%	%	%
21	Food, beverage and tobacco mfg	17.6	-0.1	17.4	12.6
22	Textile, clothing, footwear and leather mfg	-7.8	-6.1	-13.5	19.9
23	Wood and paper product mfg	29.1	-7.4	19.5	16.8
24	Printing, publishing and recorded media	17.7	-11.8	3.8	5.1
25	Petroleum, coal, chemical and associated product mfg	12.4	2.3	15.0	22.5
26	Non-metallic mineral product mfg	14.9	-11.6	1.6	30.4
27	Metal product mfg	6.0	-3.6	2.2	11.0
28	Machinery and equipment mfg	9.1	3.2	12.5	19.6
29	Other manufacturing	13.7	-3.6	9.5	5.3
21-29	Total manufacturing	12.4	-2.6	9.5	15.8

(a) See paragraph 4 of the Explanatory Notes.

(c) Based on the employment at the end of June of the reference

(b) See paragraphs 21 and 22 of the Explanatory Notes.

year. Includes working proprietors.

MANUFACTURING MANAGEMENT UNITS(a), Employment Size(b)

Employment size group	Employment at end of June(c)		Wages and salaries(d)(e)		Sales and service income(e)		Industry value added(e)	
	'000	%	\$m	%	\$m	%	\$m	%
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
0-4 persons	3.9	2.1	63.5	0.9	469.5	0.8	108.7	0.7
5-9 persons	5.6	3.0	103.1	1.4	539.9	1.0	165.5	1.1
10-19 persons	11.2	5.9	267.2	3.6	1 516.0	2.7	471.4	3.2
20-49 persons	17.2	9.1	473.2	6.4	3 402.1	6.0	805.9	5.5
50-99 persons	11.0	5.8	368.3	5.0	3 269.5	5.8	696.7	4.7
<i>Total less than 100 persons</i>	<i>48.8</i>	<i>25.8</i>	<i>1 275.2</i>	<i>17.3</i>	<i>9 197.1</i>	<i>16.3</i>	<i>2 248.1</i>	<i>15.3</i>
100-199 persons	13.4	7.1	503.2	6.8	4 029.1	7.1	966.3	6.6
200-499 persons	31.3	16.5	1 281.6	17.4	10 340.7	18.3	2 631.8	17.9
500-999 persons	21.6	11.4	951.6	12.9	7 561.6	13.4	1 815.1	12.4
1 000 or more persons	74.5	39.3	3 350.2	45.5	25 349.7	44.9	7 011.9	47.8
<i>Total 100 or more persons</i>	<i>140.8</i>	<i>74.2</i>	<i>6 086.6</i>	<i>82.7</i>	<i>47 281.2</i>	<i>83.7</i>	<i>12 425.1</i>	<i>84.7</i>
<i>Total</i>	<i>189.6</i>	<i>100.0</i>	<i>7 361.8</i>	<i>100.0</i>	<i>56 478.3</i>	<i>100.0</i>	<i>14 673.3</i>	<i>100.0</i>
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
0-4 persons	8.0	13.8	124.7	7.3	713.4	7.9	228.7	9.0
5-9 persons	5.5	9.6	128.8	7.5	575.9	6.4	179.4	7.0
10-19 persons	6.3	10.9	148.1	8.6	635.4	7.1	223.1	8.8
20-49 persons	8.6	14.8	220.0	12.8	1 034.2	11.5	309.6	12.1
50-99 persons	8.2	14.2	295.1	17.2	1 605.9	17.9	458.1	18.0
<i>Total less than 100 persons</i>	<i>36.6</i>	<i>63.3</i>	<i>916.8</i>	<i>53.4</i>	<i>4 564.9</i>	<i>50.8</i>	<i>1 398.8</i>	<i>54.9</i>
100-199 persons	5.7	9.9	215.1	12.5	1 226.7	13.7	334.1	13.1
200-499 persons	7.2	12.5	270.4	15.7	1 269.0	14.1	387.5	15.2
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	np	np	np	np	np	np	np	np
<i>Total 100 or more persons</i>	<i>21.2</i>	<i>36.7</i>	<i>801.0</i>	<i>46.6</i>	<i>4 419.4</i>	<i>49.2</i>	<i>1 149.5</i>	<i>45.1</i>
<i>Total</i>	<i>57.8</i>	<i>100.0</i>	<i>1 717.7</i>	<i>100.0</i>	<i>8 984.3</i>	<i>100.0</i>	<i>2 548.4</i>	<i>100.0</i>
WOOD AND PAPER PRODUCT MANUFACTURING								
0-4 persons	6.1	9.4	100.0	4.1	509.4	3.4	216.2	4.4
5-9 persons	6.7	10.4	170.3	6.9	707.8	4.7	263.7	5.4
10-19 persons	8.3	12.8	239.9	9.8	1 033.2	6.9	364.5	7.4
20-49 persons	9.7	14.9	299.4	12.2	1 412.8	9.4	501.7	10.2
50-99 persons	4.4	6.8	148.7	6.1	751.5	5.0	267.4	5.4
<i>Total less than 100 persons</i>	<i>35.3</i>	<i>54.2</i>	<i>958.4</i>	<i>39.1</i>	<i>4 414.7</i>	<i>29.3</i>	<i>1 613.6</i>	<i>32.7</i>
100-199 persons	4.3	6.6	172.9	7.0	1 018.0	6.8	333.2	6.8
200-499 persons	4.5	6.9	188.8	7.7	1 264.4	8.4	470.3	9.5
500-999 persons	7.0	10.8	326.3	13.3	2 269.8	15.1	653.8	13.3
1 000 or more persons	14.0	21.5	807.8	32.9	6 107.8	40.5	1 856.1	37.7
<i>Total 100 or more persons</i>	<i>29.7</i>	<i>45.8</i>	<i>1 495.8</i>	<i>60.9</i>	<i>10 659.9</i>	<i>70.7</i>	<i>3 313.4</i>	<i>67.3</i>
<i>Total</i>	<i>65.0</i>	<i>100.0</i>	<i>2 454.2</i>	<i>100.0</i>	<i>15 074.6</i>	<i>100.0</i>	<i>4 927.0</i>	<i>100.0</i>

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

(a) See paragraph 4 of the Explanatory Notes.

(b) Data in this table reflect the employment size of individual manufacturing management units. For an example (relating to unincorporated joint ventures) of why caution should be used in interpreting these data, see paragraph 24 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing management units which operated during 2000-01 but were not operating at 30 June 2001. See paragraph 23 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Employment Size(b) *continued*

Employment size group	Employment at end of June(c)		Wages and salaries(d)(e)		Sales and service income(e)		Industry value added(e)	
	'000	%	\$m	%	\$m	%	\$m	%
PRINTING, PUBLISHING AND RECORDED MEDIA								
0-4 persons	6.7	7.3	155.4	4.1	603.2	3.9	243.5	3.7
5-9 persons	6.3	6.9	181.2	4.8	683.9	4.4	289.6	4.4
10-19 persons	7.3	8.0	252.9	6.7	992.2	6.4	386.8	5.9
20-49 persons	15.7	17.1	538.7	14.3	1 954.3	12.5	777.0	11.9
50-99 persons	8.2	8.9	342.3	9.1	1 313.2	8.4	497.7	7.6
<i>Total less than 100 persons</i>	<i>44.2</i>	<i>48.2</i>	<i>1 470.5</i>	<i>38.9</i>	<i>5 546.7</i>	<i>35.6</i>	<i>2 194.5</i>	<i>33.6</i>
100-199 persons	8.5	9.3	365.7	9.7	1 647.9	10.6	626.2	9.6
200-499 persons	11.9	13.0	576.7	15.3	2 416.2	15.5	977.4	15.0
500-999 persons	7.8	8.5	358.3	9.5	1 389.7	8.9	622.4	9.5
1 000 or more persons	19.2	21.0	1 009.0	26.7	4 581.5	29.4	2 111.5	32.3
<i>Total 100 or more persons</i>	<i>47.5</i>	<i>51.8</i>	<i>2 309.7</i>	<i>61.1</i>	<i>10 035.3</i>	<i>64.4</i>	<i>4 337.6</i>	<i>66.4</i>
<i>Total</i>	<i>91.6</i>	<i>100.0</i>	<i>3 780.2</i>	<i>100.0</i>	<i>15 581.9</i>	<i>100.0</i>	<i>6 532.2</i>	<i>100.0</i>
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
0-4 persons	3.8	3.7	85.1	1.7	806.9	1.7	598.7	6.0
5-9 persons	5.5	5.4	162.0	3.2	877.1	1.9	307.7	3.1
10-19 persons	6.5	6.5	216.0	4.3	1 248.3	2.7	335.2	3.4
20-49 persons	11.2	11.1	372.1	7.4	2 187.4	4.7	669.9	6.8
50-99 persons	11.6	11.4	489.3	9.7	3 322.9	7.1	910.4	9.2
<i>Total less than 100 persons</i>	<i>38.6</i>	<i>38.1</i>	<i>1 324.6</i>	<i>26.2</i>	<i>8 442.7</i>	<i>18.0</i>	<i>2 821.9</i>	<i>28.5</i>
100-199 persons	11.2	11.1	542.2	10.7	4 066.0	8.7	1 046.4	10.6
200-499 persons	17.5	17.3	938.6	18.6	6 742.9	14.4	1 798.0	18.1
500-999 persons	19.3	19.0	1 168.6	23.1	17 111.6	36.4	2 449.4	24.7
1 000 or more persons	14.7	14.5	1 078.7	21.3	10 608.7	22.6	1 798.0	18.1
<i>Total 100 or more persons</i>	<i>62.6</i>	<i>61.9</i>	<i>3 728.1</i>	<i>73.8</i>	<i>38 529.2</i>	<i>82.0</i>	<i>7 091.8</i>	<i>71.5</i>
<i>Total</i>	<i>101.3</i>	<i>100.0</i>	<i>5 052.6</i>	<i>100.0</i>	<i>46 971.9</i>	<i>100.0</i>	<i>9 913.7</i>	<i>100.0</i>
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
0-4 persons	1.6	4.4	29.9	1.7	149.8	1.5	44.9	1.2
5-9 persons	2.6	7.0	68.4	4.0	336.0	3.4	102.2	2.8
10-19 persons	3.1	8.3	103.7	6.0	411.3	4.2	156.9	4.4
20-49 persons	3.7	9.8	139.1	8.1	752.6	7.7	217.7	6.0
50-99 persons	3.7	9.9	139.0	8.1	825.6	8.4	268.0	7.4
<i>Total less than 100 persons</i>	<i>14.7</i>	<i>39.5</i>	<i>480.1</i>	<i>27.9</i>	<i>2 475.4</i>	<i>25.3</i>	<i>789.7</i>	<i>21.9</i>
100-199 persons	4.0	10.7	197.6	11.5	1 165.2	11.9	433.5	12.0
200-499 persons	4.5	12.2	232.4	13.5	1 401.4	14.3	492.2	13.6
500-999 persons	np	np	np	np	np	np	np	np
1 000 or more persons	np	np	np	np	np	np	np	np
<i>Total 100 or more persons</i>	<i>22.5</i>	<i>60.5</i>	<i>1 238.8</i>	<i>72.1</i>	<i>7 297.4</i>	<i>74.7</i>	<i>2 816.2</i>	<i>78.1</i>
<i>Total</i>	<i>37.2</i>	<i>100.0</i>	<i>1 718.8</i>	<i>100.0</i>	<i>9 772.7</i>	<i>100.0</i>	<i>3 605.8</i>	<i>100.0</i>

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

(a) See paragraph 4 of the Explanatory Notes.

(b) Data in this table reflect the employment size of individual manufacturing management units. For an example (relating to unincorporated joint ventures) of why caution should be used in interpreting these data, see paragraph 24 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing management units which operated during 2000-01 but were not operating at 30 June 2001. See paragraph 23 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Employment Size(b) *continued*

Employment size group	Employment at end of June(c)		Wages and salaries(d)(e)		Sales and service income(e)		Industry value added(e)	
	'000	%	\$m	%	\$m	%	\$m	%
METAL PRODUCT MANUFACTURING								
0-4 persons	12.1	8.2	267.6	4.3	4 467.1	11.0	2 729.8	20.0
5-9 persons	16.6	11.3	502.1	8.1	2 978.4	7.4	1 247.1	9.1
10-19 persons	17.3	11.8	569.0	9.2	2 321.8	5.7	895.6	6.6
20-49 persons	22.4	15.2	762.3	12.4	3 321.4	8.2	1 136.4	8.3
50-99 persons	11.2	7.6	451.8	7.3	2 425.8	6.0	770.5	5.7
<i>Total less than 100 persons</i>	<i>79.6</i>	<i>54.1</i>	<i>2 552.8</i>	<i>41.4</i>	<i>15 514.5</i>	<i>38.4</i>	<i>6 779.4</i>	<i>49.7</i>
100-199 persons	10.9	7.4	462.2	7.5	2 814.5	7.0	755.8	5.5
200-499 persons	15.7	10.7	828.0	13.4	4 928.2	12.2	1 213.2	8.9
500-999 persons	16.3	11.1	850.4	13.8	5 314.8	13.1	999.0	7.3
1 000 or more persons	24.6	16.7	1 469.0	23.8	11 873.0	29.4	3 887.7	28.5
<i>Total 100 or more persons</i>	<i>67.5</i>	<i>45.9</i>	<i>3 609.7</i>	<i>58.6</i>	<i>24 930.4</i>	<i>61.6</i>	<i>6 855.7</i>	<i>50.3</i>
<i>Total</i>	<i>147.0</i>	<i>100.0</i>	<i>6 162.4</i>	<i>100.0</i>	<i>40 445.0</i>	<i>100.0</i>	<i>13 635.1</i>	<i>100.0</i>
MACHINERY AND EQUIPMENT MANUFACTURING								
0-4 persons	15.5	7.7	370.4	4.3	1 533.9	3.0	567.5	4.2
5-9 persons	13.9	6.9	425.1	4.9	1 677.8	3.3	622.5	4.6
10-19 persons	16.2	8.0	521.9	6.0	2 003.1	4.0	710.8	5.3
20-49 persons	26.2	12.9	969.4	11.1	4 004.4	7.9	1 476.3	11.0
50-99 persons	18.0	8.9	717.0	8.2	3 421.4	6.8	1 087.3	8.1
<i>Total less than 100 persons</i>	<i>89.8</i>	<i>44.4</i>	<i>3 003.8</i>	<i>34.5</i>	<i>12 640.5</i>	<i>25.0</i>	<i>4 464.4</i>	<i>33.2</i>
100-199 persons	16.6	8.2	699.5	8.0	4 040.1	8.0	1 124.7	8.4
200-499 persons	28.4	14.0	1 345.9	15.5	6 608.8	13.1	2 122.1	15.8
500-999 persons	27.6	13.6	1 385.2	15.9	6 919.1	13.7	2 199.4	16.3
1 000 or more persons	39.8	19.7	2 264.3	26.0	20 344.3	40.2	3 548.6	26.4
<i>Total 100 or more persons</i>	<i>112.4</i>	<i>55.6</i>	<i>5 694.9</i>	<i>65.5</i>	<i>37 912.3</i>	<i>75.0</i>	<i>8 994.9</i>	<i>66.8</i>
<i>Total</i>	<i>202.2</i>	<i>100.0</i>	<i>8 698.7</i>	<i>100.0</i>	<i>50 552.8</i>	<i>100.0</i>	<i>13 459.2</i>	<i>100.0</i>
OTHER MANUFACTURING								
0-4 persons	9.6	17.7	203.0	12.9	1 003.6	14.5	343.7	14.3
5-9 persons	8.4	15.4	210.1	13.3	803.0	11.6	311.4	12.9
10-19 persons	11.5	21.2	315.7	20.0	1 228.0	17.7	462.7	19.2
20-49 persons	11.0	20.2	332.9	21.1	1 506.0	21.7	493.1	20.5
50-99 persons	6.5	11.9	216.7	13.7	1 048.1	15.1	357.1	14.8
<i>Total less than 100 persons</i>	<i>46.9</i>	<i>86.5</i>	<i>1 278.3</i>	<i>81.1</i>	<i>5 588.7</i>	<i>80.5</i>	<i>1 968.0</i>	<i>81.6</i>
100-199 persons	3.9	7.2	135.6	8.6	651.0	9.4	203.8	8.5
200-499 persons	3.4	6.4	162.0	10.3	704.1	10.1	239.2	9.9
500-999 persons	—	—	—	—	—	—	—	—
1 000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>7.3</i>	<i>13.5</i>	<i>297.5</i>	<i>18.9</i>	<i>1 355.1</i>	<i>19.5</i>	<i>443.0</i>	<i>18.4</i>
<i>Total</i>	<i>54.2</i>	<i>100.0</i>	<i>1 575.9</i>	<i>100.0</i>	<i>6 943.8</i>	<i>100.0</i>	<i>2 411.1</i>	<i>100.0</i>

— nil or rounded to zero (including null cells)

(a) See paragraph 4 of the Explanatory Notes.

(b) Data in this table reflect the employment size of individual manufacturing management units. For an example (relating to unincorporated joint ventures) of why caution should be used in interpreting these data, see paragraph 24 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing management units which operated during 2000-01 but were not operating at 30 June 2001. See paragraph 23 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Employment Size(b) *continued*

Employment size group	Employment at end of June(c)		Wages and salaries(d)(e)		Sales and service income(e)		Industry value added(e)	
	'000	%	\$m	%	\$m	%	\$m	%
TOTAL MANUFACTURING								
0-4 persons	67.2	7.1	1 399.6	3.6	10 256.9	4.1	5 081.5	7.1
5-9 persons	71.2	7.5	1 951.1	5.1	9 179.9	3.7	3 489.1	4.9
10-19 persons	87.8	9.3	2 634.4	6.8	11 389.2	4.5	4 006.9	5.6
20-49 persons	125.5	13.3	4 107.1	10.7	19 575.2	7.8	6 387.6	8.9
50-99 persons	82.7	8.7	3 168.2	8.2	17 983.8	7.2	5 313.4	7.4
<i>Total less than 100 persons</i>	<i>434.4</i>	<i>45.9</i>	<i>13 260.4</i>	<i>34.4</i>	<i>68 385.1</i>	<i>27.3</i>	<i>24 278.5</i>	<i>33.9</i>
100-199 persons	78.6	8.3	3 293.9	8.6	20 658.5	8.2	5 824.0	8.1
200-499 persons	124.4	13.2	5 824.3	15.1	35 675.7	14.2	10 331.8	14.4
500-999 persons	110.0	11.6	5 509.5	14.3	43 640.5	17.4	9 679.6	13.5
1 000 or more persons	198.4	21.0	10 634.2	27.6	82 445.5	32.9	21 591.9	30.1
<i>Total 100 or more persons</i>	<i>511.5</i>	<i>54.1</i>	<i>25 262.0</i>	<i>65.6</i>	<i>182 420.3</i>	<i>72.7</i>	<i>47 427.3</i>	<i>66.1</i>
Total	945.9	100.0	38 522.4	100.0	250 805.3	100.0	71 705.8	100.0

(a) See paragraph 4 of the Explanatory Notes.

(b) Data in this table reflect the employment size of individual manufacturing management units. For an example (relating to unincorporated joint ventures) of why caution should be used in interpreting these data, see paragraph 24 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

(e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing management units which operated during 2000-01 but were not operating at 30 June 2001. See paragraph 23 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Exported Production(b)—Employment Size(c)

INDUSTRY SUBDIVISION		Sales of goods produced	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	5 412.7	881.4	16.3
22	Textile, clothing, footwear and leather mfg	2 432.0	245.8	10.1
23	Wood and paper product mfg	3 509.1	55.2	1.6
24	Printing, publishing and recorded media	3 476.2	29.4	0.8
25	Petroleum, coal, chemical and associated product mfg	4 647.0	708.0	15.2
26	Non-metallic mineral product mfg	1 531.8	28.4	1.9
27	Metal product mfg	11 666.3	3 870.7	33.2
28	Machinery and equipment mfg	7 672.1	856.1	11.2
29	Other manufacturing	3 998.7	82.1	2.1
21-29	<i>Total manufacturing</i>	44 346.0	6 757.0	15.2
50-99 PERSONS				
21	Food, beverage and tobacco mfg	2 981.9	785.7	26.3
22	Textile, clothing, footwear and leather mfg	1 407.2	218.7	15.5
23	Wood and paper product mfg	691.2	84.8	12.3
24	Printing, publishing and recorded media	1 044.0	49.9	4.8
25	Petroleum, coal, chemical and associated product mfg	2 957.8	387.2	13.1
26	Non-metallic mineral product mfg	753.2	29.0	3.8
27	Metal product mfg	2 136.9	170.6	8.0
28	Machinery and equipment mfg	2 899.4	505.5	17.4
29	Other manufacturing	946.8	98.4	10.4
21-29	<i>Total manufacturing</i>	15 818.3	2 329.8	14.7
100 OR MORE PERSONS				
21	Food, beverage and tobacco mfg	45 155.4	10 871.9	24.1
22	Textile, clothing, footwear and leather mfg	3 716.3	1 066.6	28.7
23	Wood and paper product mfg	10 051.6	785.6	7.8
24	Printing, publishing and recorded media	5 792.6	138.0	2.4
25	Petroleum, coal, chemical and associated product mfg	34 149.2	4 615.2	13.5
26	Non-metallic mineral product mfg	6 771.1	318.5	4.7
27	Metal product mfg	22 694.3	8 427.1	37.1
28	Machinery and equipment mfg	28 936.9	6 504.6	22.5
29	Other manufacturing	1 196.2	56.3	4.7
21-29	<i>Total manufacturing</i>	158 463.6	32 783.8	20.7
TOTAL				
21	Food, beverage and tobacco mfg	53 550.1	12 539.0	23.4
22	Textile, clothing, footwear and leather mfg	7 555.5	1 531.1	20.3
23	Wood and paper product mfg	14 252.0	925.6	6.5
24	Printing, publishing and recorded media	10 312.7	217.2	2.1
25	Petroleum, coal, chemical and associated product mfg	41 754.0	5 710.5	13.7
26	Non-metallic mineral product mfg	9 056.1	375.8	4.1
27	Metal product mfg	36 497.5	12 468.4	34.2
28	Machinery and equipment mfg	39 508.5	7 866.1	19.9
29	Other manufacturing	6 141.7	236.8	3.9
21-29	Total manufacturing	218 627.9	41 870.6	19.2

(a) See paragraph 4 of the Explanatory Notes.

(b) See paragraphs 25-27 of the Explanatory Notes.

(c) Data in this table reflect the employment size of individual manufacturing management units. For an example (relating to unincorporated joint ventures) of why caution should be used in interpreting these data, see paragraph 24 of the Explanatory Notes. Also, this table excludes those manufacturing management units which operated during 2000-01 but were not operating at 30 June 2001. See paragraph 23 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Summary Data—Proportion of Exports(b)

INDUSTRY SUBDIVISION		Employment at end of June(c)	Wages and salaries(d)	Sales and service income	Industry value added
ANZSIC code	Description	%	%	%	%
DO NOT EXPORT					
21	Food, beverage and tobacco mfg	42.3	35.1	29.1	32.8
22	Textile, clothing, footwear and leather mfg	58.6	50.0	42.2	49.2
23	Wood and paper product mfg	65.5	56.5	49.5	52.2
24	Printing, publishing and recorded media	79.3	78.2	74.5	80.4
25	Petroleum, coal, chemical and associated product mfg	37.3	31.8	20.7	28.0
26	Non-metallic mineral product mfg	62.7	55.9	57.9	50.1
27	Metal product mfg	57.9	48.3	29.3	24.0
28	Machinery and equipment mfg	47.5	43.5	33.3	39.3
29	Other manufacturing	79.4	75.7	72.4	73.5
21–29	Total manufacturing	54.4	47.5	35.3	40.2
EXPORTS UP TO AND INCLUDING 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	43.3	50.8	51.6	53.5
22	Textile, clothing, footwear and leather mfg	34.7	42.0	41.1	40.7
23	Wood and paper product mfg	33.4	42.4	48.8	46.6
24	Printing, publishing and recorded media	20.4	21.4	25.2	19.3
25	Petroleum, coal, chemical and associated product mfg	56.7	62.8	73.7	62.7
26	Non-metallic mineral product mfg	36.0	42.6	40.9	49.1
27	Metal product mfg	33.0	36.9	37.4	30.3
28	Machinery and equipment mfg	42.2	44.5	55.2	46.0
29	Other manufacturing	19.5	23.3	25.9	24.5
21–29	Total manufacturing	37.8	43.4	50.8	43.7
EXPORTS OF MORE THAN 50% OF SALES OF GOODS THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	14.4	14.2	19.3	13.6
22	Textile, clothing, footwear and leather mfg	6.7	8.0	16.6	10.2
23	Wood and paper product mfg	1.2	1.1	1.8	1.1
24	Printing, publishing and recorded media	0.3	0.3	0.3	0.3
25	Petroleum, coal, chemical and associated product mfg	6.1	5.4	5.5	9.3
26	Non-metallic mineral product mfg	1.4	1.4	1.2	0.8
27	Metal product mfg	9.0	14.8	33.3	45.7
28	Machinery and equipment mfg	10.4	12.0	11.5	14.7
29	Other manufacturing	1.1	1.1	1.7	2.0
21–29	Total manufacturing	7.8	9.0	13.9	16.1

(a) See paragraph 4 of the Explanatory Notes.

(b) See paragraphs 25–27 of the Explanatory Notes.

(c) Includes working proprietors.

(d) Excludes the drawings of working proprietors.

8

MANUFACTURING MANAGEMENT UNITS(a), Components of Industry Value Added(b)

INDUSTRY SUBDIVISION		Sales and service income	Other components of income(c)	Change in inventories	Purchases	Other intermediate input expenses	Industry value added
ANZSIC code	Description	\$m	\$m	\$m	\$m	\$m	\$m
21	Food, beverage and tobacco mfg	56 626.4	425.6	617.0	31 602.2	11 357.8	14 708.9
22	Textile, clothing, footwear and leather mfg	9 110.8	56.7	35.4	4 614.1	2 005.3	2 583.3
23	Wood and paper product mfg	15 077.1	56.2	383.0	7 950.2	2 636.8	4 929.4
24	Printing, publishing and recorded media	15 928.6	43.2	44.0	5 217.9	4 198.7	6 599.2
25	Petroleum, coal, chemical and associated product mfg	47 115.1	486.4	861.8	31 324.2	7 179.5	9 959.6
26	Non-metallic mineral product mfg	9 776.6	33.4	147.4	3 971.6	2 379.8	3 606.1
27	Metal product mfg	40 516.9	456.8	199.8	20 204.7	7 313.6	13 655.2
28	Machinery and equipment mfg	50 644.9	222.8	637.7	30 537.8	7 480.3	13 487.3
29	Other manufacturing	6 962.6	20.7	40.1	3 403.2	1 203.6	2 416.7
21-29	Total manufacturing	251 758.9	1 801.8	2 966.3	138 825.9	45 755.3	71 945.8

(a) See paragraph 4 of the Explanatory Notes.

(c) Funding by federal, state or local governments for operational costs and own account capital work.

(b) For the derivation of industry value added, see paragraph 18 of the Explanatory Notes.

9

MANUFACTURING MANAGEMENT UNITS(a), Acquisition and Disposal of Assets

ACQUISITION OF

INDUSTRY SUBDIVISION		Plant, machinery and equipment	Dwellings, other buildings and structures	Other (including land and intangible assets)	Total capital expenditure	Disposal of assets — total	Net capital expenditure
ANZSIC code	Description	\$m	\$m	\$m	\$m	\$m	\$m
21	Food, beverage and tobacco mfg	1 867.1	337.6	331.8	2 536.5	427.0	2 109.5
22	Textile, clothing, footwear and leather mfg	220.4	30.1	27.9	278.5	104.9	173.6
23	Wood and paper product mfg	481.9	38.2	69.8	589.9	69.0	520.9
24	Printing, publishing and recorded media	615.7	81.6	229.3	926.5	102.3	824.2
25	Petroleum, coal, chemical and associated product mfg	1 484.2	171.8	551.2	2 207.2	258.8	1 948.4
26	Non-metallic mineral product mfg	405.9	28.3	145.1	579.3	79.3	500.0
27	Metal product mfg	1 742.4	114.8	158.2	2 015.3	131.0	1 884.3
28	Machinery and equipment mfg	1 052.6	270.9	401.2	1 724.7	189.3	1 535.3
29	Other manufacturing	105.4	13.3	54.7	173.4	36.3	137.0
21-29	Total manufacturing	7 975.5	1 086.6	1 969.2	11 031.3	1 397.9	9 633.3

(a) See paragraph 4 of the Explanatory Notes.

MANUFACTURING MANAGEMENT UNITS(a), Selected Labour Costs

AS A RATIO OF WAGES AND SALARIES(b)

INDUSTRY SUBDIVISION		Employer contributions into superannuation	Workers' compensation premiums/costs	Fringe benefits tax	Payroll tax	Total
ANZSIC code	Description	%	%	%	%	%
21	Food, beverage and tobacco mfg	7.4	4.2	1.7	5.5	18.8
22	Textile, clothing, footwear and leather mfg	7.8	4.2	1.0	4.6	17.6
23	Wood and paper product mfg	7.5	4.6	0.9	4.8	17.8
24	Printing, publishing and recorded media	7.7	1.8	1.5	5.0	16.0
25	Petroleum, coal, chemical and associated product mfg	7.3	2.8	2.1	4.5	16.6
26	Non-metallic mineral product mfg	6.5	4.5	1.3	5.0	17.3
27	Metal product mfg	8.1	5.7	1.3	4.7	19.7
28	Machinery and equipment mfg	7.4	3.2	1.2	4.9	16.7
29	Other manufacturing	8.4	4.1	0.8	3.3	16.6
21-29	Total manufacturing	7.6	3.8	1.4	4.8	17.6

(a) See paragraph 4 of the Explanatory Notes.
 (b) This table shows the value of selected labour costs per \$1.00 of wages and salaries.

EXPLANATORY NOTES

INTRODUCTION

1 This publication, *Manufacturing Industry, Australia, 2000–01* (cat. no. 8221.0), is the first to present final manufacturing industry data compiled from the 2000–01 collection and where the management unit was the sole statistical unit used to collect data, together with some comparative statistics for preceding years. Prior to the 2000–01 survey, the annual manufacturing collection was primarily based on manufacturing establishments with some information collected from a relatively small sample of manufacturing management units. For more information about these fundamental changes to the annual manufacturing collection and how they affect data outputs, see Appendix 2.

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

3 The manufacturing collection is conducted on an annual basis. For the 2000–01 collection, a sample of approximately 9,500 manufacturing management units were asked to provide data on employment, wages and salaries, detailed structural and performance data, value of sales for commodities produced, and whether their products were exported. Data on industry value added (IVA) are also available from this collection. Approximately 400 of these management units were also asked for details of their operations by state and territory, enabling the production of the state/territory estimates contained in table 3. The next manufacturing census will be conducted in respect of 2001–02.

SCOPE AND COVERAGE

4 The business unit for which statistics are presented in this publication is the management unit. A manufacturing management unit is one predominantly engaged in manufacturing activities, but the data collected for it cover all activities of the management unit (including non-manufacturing activities). Conversely, there are some management units predominantly engaged in non-manufacturing activities which also undertake limited manufacturing activities; these are excluded from the collection.

5 Some manufacturing management units engage, in a significant way, in activities which are normally carried out by different industries. For example, a predominantly manufacturing management unit may also undertake significant amounts of wholesaling. Similarly, a manufacturing management unit may produce significant volumes of goods which are normally produced in different manufacturing industries. For 2000–01 and prior years, no management units have been 'split' to allocate significant secondary activities in another industry to a separate unit.

6 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 with the Australian Taxation Office's (ATO's) pay as you go withholding (PAYGW) scheme and for years prior to 1 July 2000, its group employer (GE) scheme. 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

7 For the definition of management units and establishments, see the Glossary. However, fundamental changes have been made to the annual manufacturing collection, starting with the 2000–01 survey. For further information, see Appendix 2.

EXPLANATORY NOTES *continued*

RELIABILITY OF ESTIMATES

8 For information on this subject, see Technical Note 1.

DATA ADJUSTED

9 The annual manufacturing industry collection, like most ABS economic collections, takes its frame from the ABS business register. The register provides a list of employing businesses and is primarily based on registrations to the ATO's PAYGW scheme (and prior to 1 July 2000, its GE scheme). The register is updated regularly to take account of new businesses, businesses which have ceased employing, changes in employment levels, changes in industry and other general business changes.

10 Businesses which have ceased employing are identified when the ATO cancels their PAYGW registration (or previously their GE registration). In addition, from 1998–99, businesses which did not remit under the GE scheme for the previous five quarters were removed from the register. A similar process has been adopted to remove businesses from the register which do not remit under the PAYGW scheme.

11 This process of using the ATO's GE information to delete businesses from the ABS business register was introduced for the 1998–99 manufacturing survey. The result was that a large number of businesses were removed from the business register and, therefore, from the population for the 1998–99 manufacturing survey. Estimates for the previous three manufacturing surveys (covering 1995–96 to 1997–98 inclusive) were slightly adjusted in such a way as to phase in the impact over this time. For periods before 1995–96, the impact is estimated to have been negligible.

12 The same process for removing businesses from the ABS business register has occurred for the 1999–2000 (GE information) and 2000–01 (PAYGW information) collections. The impact of the ongoing process is estimated to be negligible.

13 The introduction of The New Tax System has had a number of significant implications for ABS economic collections. These are discussed in *Information Paper: ABS Statistics And The New Tax System* (cat. no. 1358.0). The replacement of the GE registration process by PAYGW registration resulted in a number of changes to the population frames used for most economic collections. However, adjustments have been made to the estimates so that these changes do not affect the statistics in this publication.

14 As in past years, data in this issue continue to be adjusted to allow for lags in processing new businesses to the ABS business register, i.e. adjustments have been made to allow for new businesses which had commenced operations but for which details had not been processed to the ABS business register in time for inclusion in the annual manufacturing industry collection. Adjustments of this type will continue to be applied in future periods. The majority of businesses affected by these lags are small in size. The effect of these adjustments on 2000–01 Australian estimates are increases of 2.6% for employment and 1.1% for sales and service income. Most states and territories and most industries were affected to a similar degree.

COMPARABILITY WITH PREVIOUS STATISTICS

15 For the 2000–01 manufacturing collection, the statistical unit from which data are collected has changed from manufacturing establishments to manufacturing management units. As a consequence, the previously published turnover data item has been replaced by the data item sales and service income. That is, conceptually, turnover is more relevant to establishment based data than management unit based data as turnover includes transfers out of goods between establishments of the same business (i.e. same management unit). On the other

EXPLANATORY NOTES *continued*

COMPARABILITY WITH PREVIOUS STATISTICS *continued*

hand, a management unit, in almost all cases, coincides with the legal entity that owns the business, for example, a sole proprietor, partnership, company, trust etc. (however, large diversified businesses may contain more than one management unit, each coinciding with a 'division' or 'line of business' and where separate and comprehensive accounts are compiled) and, as such, the concept of transfers out of goods for management units does not exist. The data item sales and service income is conceptually more relevant to management unit based data; hence, the change from turnover to sales and service income within this publication.

16 Commencing with estimates for 1997–98, the definition of sales and service income has changed in line with new international standards for measuring economic variables. The composition of sales and service income estimates under the current standards is as follows:

	Sales and service income (as previously defined)
<i>plus</i>	Income from rent, leasing and hiring
<i>plus</i>	Royalty income from intellectual property
<i>equals</i>	Sales and service income (new standards)

17 Commencing with estimates for 1997–98, under current international standards, contribution to gross domestic product (GDP) by manufacturing industries is being measured by the variable 'Industry value added' (IVA). Estimates for IVA measure the value added by an industry to the intermediate inputs used by that industry. Previously, the corresponding contribution to GDP was measured by the variable 'Industry gross product' (IGP).

18 Composition of IVA estimates and their relationship to IGP estimates are:

	Sales and service income (new standards)
<i>plus</i>	Funding by federal, state or local governments for operational costs
<i>plus</i>	Own account capital work
<i>plus</i>	Closing inventories
<i>less</i>	Opening inventories
<i>less</i>	Intermediate input expenses (see the operating expenses entry in the Glossary)
<i>equals</i>	IVA
	IVA
<i>plus</i>	Intellectual property royalty expenses
<i>less</i>	Intellectual property royalty income
<i>less</i>	Computer software expenses not capitalised by the business
<i>less</i>	Selected indirect taxes (for manufacturing industries, the main types are fringe benefits tax, payroll tax, land rates and land taxes)
<i>equals</i>	IGP

19 For the 1995–96 collection only, provision expenses for employee entitlements were excluded from wages and salaries. For all other years, these provision expenses are included in wages and salaries.

20 Periodic collections of the Retail and Wholesale Divisions of ANZSIC, conducted for the 1998–99 reference year, identified a number of businesses which were predominately manufacturers. A small number of these cases were determined to be significant in some manufacturing industries and were therefore added into the manufacturing collection for 1998–99. The effect of these additional units in published aggregates have been calculated as adding 0.6% to estimates for Australia for 1998–99. These businesses have been included in subsequent manufacturing collections if they remained classified as manufacturers on the ABS business register.

EXPLANATORY NOTES *continued*

CHAIN VOLUME MEASURES

21 The chain volume measures appearing in this publication are annually reweighted chain Laspeyres indexes referenced to current price values in the chosen reference year (currently 2000–01). The current price values may be thought of as being the product of a price and quantity. The value in chain volume terms can be derived by linking together movements in volumes, calculated using the average prices of the previous financial year and applying compound movements to the current price estimates of the reference year. Each year's growth rates in the chain volume series are based on the prices of the previous financial year. With each release of this publication, a new base year is introduced and the reference year is advanced one year. This means that for this issue of this publication, the chain volume measures for 2000–01 have 1999–2000 (the previous financial year) as their base year, and the reference year is 2000–01. A change in the reference year changes levels but not growth rates for all periods. A change in the base year can result in revisions, small in most cases, to growth rates for the last year.

22 Chain volume measures are not generally additive. In other words, component chain volume measures do not, in general, sum to a total in the way original current price components do. This means that the chain volume estimates for industry groups will not add to the total for Australia. In order to minimise the impact of this, the ABS ensures additivity does exist for the reference year and non-additivity is relatively small for the earlier years. For further information on chain volume measures, refer to the *Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts* (cat. no. 5248.0).

EMPLOYMENT SIZE DATA

23 Summary of operations data at the industry subdivision level classified by the employment size of individual manufacturing management units (see the Glossary for its definition) are presented in table 5. Similarly, exports of goods produced data at the industry subdivision level classified by the broad employment size of individual manufacturing management units are presented in table 6. The statistics in these two tables relate only to those manufacturing management units operating at 30 June 2001. As such, the figures presented represent a slightly different population from those presented in the other tables from the manufacturing collection. These other tables include data for those manufacturing management units which operated at any time during 2000–01.

24 The treatment of unincorporated joint ventures under the ABS's standard units definitions has an effect on the data when classified by employment size. This is because joint venture participants report details of sales of goods and services, 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 sales of goods and services (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. In other words, in the statistics in tables 5 and 6, the participants in unincorporated joint ventures are recorded in the 0–4 persons employment size category, whereas the operators of the unincorporated joint ventures are recorded in larger employment size categories. This treatment affects the relative contribution of the various employment size categories for these two industries.

EXPLANATORY NOTES *continued*

EXPORTS BY MANUFACTURERS

25 All management units included in the manufacturing collection were asked whether they exported and, if so, what percentage of their sales of goods produced 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 management units which operated during 2000–01 but were not operating at 30 June 2001.

26 The statistics presented in table 6 for the value of exports by manufacturers or their agents are not intended to be directly comparable with 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.

27 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.

REGIONAL DATA

28 Regional or sub-state data will not be available from the 2000–01 manufacturing survey. This is a direct result of moving to a manufacturing management unit based collection for 2000–01; for further information, see Appendix 2. For further details about the availability of sub-state data, please contact John Ridley on Sydney 02 9268 4541.

ACKNOWLEDGEMENT

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

RELATED PUBLICATIONS

30 State publications, *Manufacturing Industry, [state]*, (cat. nos 8221.1–8221.6), will not be produced for 2000–01; for further information, see Appendix 2. However, it is intended that they next be produced for 2001–02, that is, for the next census year. This and future issues of the publication *Manufacturing Industry, Australia* (cat. no. 8221.0) will continue to publish state and territory data for employment, wages and salaries, sales and service income and IVA at the industry subdivision level.

EXPLANATORY NOTES *continued*

RELATED PUBLICATIONS

continued

31 The ABS produces industry estimates for a range of selected industries (including Manufacturing) and these results are available in *Australian Industry, 2000–01* (cat. no. 8155.0). State and territory estimates of these data have recently been published in *Experimental Estimates, Australian Industry, a State Perspective, 1999–2000* (cat. no. 8156.0). For the 2000–01 reference year, the analysis previously presented in the latter publication will be included in the publication *Australian Industry, 2000–01* (cat. no. 8155.0), which is due for release in December 2002. These data are considered experimental at this stage while the methodology used to produce them is reviewed and improved. The estimates are available at the ANZSIC industry subdivision level for total operating income, total operating expenses, operating profit before tax (OPBT) and labour costs.

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

- *Australian National Accounts: National Income, Expenditure and Product*, cat. no. 5206.0 — Quarterly publication
- *Australian National Accounts: State Accounts, 2000–01*, cat. no. 5220.0, released on 16 November 2001— Annual publication
- *Australian System of National Accounts: Concepts, Sources and Methods, 2000*, cat. no. 5216.0, released on 21 December 2000
- *Business Indicators, Australia*, cat. no. 5676.0 — Quarterly publication
- *Business Operations and Industry Performance, Australia, 2000–01*, cat. no. 8140.0, to be released on 31 October 2002— Annual publication
- *Business Operations and Industry Performance, Australia, Preliminary, 2000–2001*, cat. no. 8142.0, released on 16 May 2002 — Annual publication
- *Environment Protection, Mining and Manufacturing Industries, Australia, 2000–2001*, cat. no. 4603.0, released on 4 September 2002 — Biennial publication
- *Information Paper: ABS Statistics and The New Tax System*, cat. no. 1358.0, released on 26 April 2000 — Irregular publication
- *Information Paper: Improvements to ABS Economic Statistics, 1997*, cat. no. 1357.0, released on 22 August 1997 — Irregular publication
- *Information Paper: Improvements in ABS Economic Statistics [Arising from The New Tax System], 2002*, cat. no. 1372.0, released on 6 May 2002 — Irregular publication
- *Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts, 1997*, cat. no. 5248.0, released on 19 March 1998 — Irregular publication
- *Labour Costs, Australia, 1996–97*, cat. no. 6348.0, released on 2 July 1998 — Quinquennial publication
- *Labour Force, Australia*, cat. no. 6203.0 — Monthly publication
- *Manufacturing, Australia, 2002*, cat. no. 8225.0, to be released in February 2003 — Annual publication
- *Manufacturing Industry, Australia, Preliminary, 2001–02*, cat. no. 8201.0, to be released in March 2003 — Annual publication
- *Private New Capital Expenditure and Expected Expenditure, Australia*, cat. no. 5625.0 — Quarterly publication
- *Producer Price Indexes, Australia*, cat. no. 6427.0 — Quarterly publication
- *Wage Cost Index, Australia*, cat. no. 6345.0 — Quarterly publication

BACK SERIES AND ADDITIONAL DATA

33 The 1999–2000 manufacturing collection was the last to collect information primarily from manufacturing establishments as well as collecting limited data from a relatively small sample of manufacturing management units. For the

EXPLANATORY NOTES *continued*

BACK SERIES AND ADDITIONAL DATA *continued*

2000–01 manufacturing collection, information was solely collected from manufacturing management units.

34 A considerable volume of data (primarily manufacturing establishment based data but some manufacturing management unit based data) is available from past annual manufacturing collections. Firstly, a range of manufacturing industry statistics publications is available for previous years. In addition, more detailed information to satisfy individual user requirements may be available on request and for a charge. In general, this consists of finer industry dissections of manufacturing establishment data than that previously presented in the manufacturing series of publications. For more information about the availability of management unit data for previous years, see paragraph 3 of Appendix 2. Additional data may also be available from the 2000–01 collection. As a guide, a list of data items included on the 2000–01 manufacturing survey forms and a selection of data variables that can be derived from them are shown in Appendix 1.

35 For management units, chain volume measures of IVA are available from 1995–96. For establishments, chain volume measures on a true ANZSIC basis are only available from 1989–90; however, chain volume measures of IVA on an ANZSIC basis are available back to 1984–85. They were compiled by converting estimates for earlier years onto an ANZSIC basis using the relationships that applied between the previous Australian Standard Industrial Classification (ASIC) and ANZSIC in the years 1990–91 and 1991–92. These estimates are available for Australia 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.

ROUNDING

36 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 14), this 'rounding rule' also applies to employment counts.

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

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASIC	Australian Standard Industrial Classification
ATO	Australian Taxation Office
f.o.b.	free on board
GDP	gross domestic product
GE	group employer
GST	goods and services tax
IGP	industry gross product
IVA	industry value added
mfg	manufacturing
n.e.c.	not elsewhere classified
OPBT	operating profit before tax
PAYGW	pay as you go withholding

APPENDIX 1 DATA ITEMS 2000–01

INTRODUCTION

1 This Appendix lists items included in the 2000–01 manufacturing collection, and selected items derived from those directly collected.

AVAILABILITY OF DATA

2 Due to the nature of the collection, the vast majority of information available from the 2000–01 collection will be at the Australian level, with limited information available for states and territories. The following restrictions apply to the availability of data for dissemination:

- Australian level industry class data estimates (are available) for the data items listed below. However, the industry level at which these items are disseminated will be decided on a case by case basis conditional upon confidentiality and data quality constraints.
- Management units do not normally apportion activity by state/territory. However, approximately 400 management units (i.e. those with significant operations in more than one state or territory) were requested to provide additional details on employment, wages and salaries, and sales of goods and services for each state and/or territory in which they operated. This has enabled the production of state/territory data for employment, wages and salaries, sales and service income and IVA at the industry subdivision level. However, it is not possible to produce state/territory data by employment size or data relating to exported production.

3 Selected management unit data from the manufacturing collection as well as data from other collections are included in the compendium publication *Manufacturing, Australia, 2002* (cat. no. 8225.0).

DATA ITEMS COLLECTED AND SELECTED DERIVED DATA ITEMS, 2000–01

Employment

Total employment at the end of June

Income items

Sales of goods

Produced by this business (or for it on commission)

Not produced by this business

Income from services

Income from work done on a commission basis (excluding sales and agency commissions)

Repair, maintenance and service income and fees

Delivery charges separately invoiced to customers

Advertising income

Other income (including sales and agency commissions)

Income from rent, leasing and hiring

Land, buildings and other structures

Other income from rent, leasing and hiring

Interest income

Funding from federal, state and/or local governments

Funding for operational costs (e.g. wages and salaries, rent)

Funding provided for specific capital items

Income items *continued*

Dividend income

Royalties income

Natural resource royalties income

Other royalties income

Other income

Total income

Expense items

Labour costs

Wages and salaries including provisions for employee entitlements

Employer contributions into superannuation including salary sacrifice

Workers' compensation premiums/costs

Fringe benefits tax

Payroll tax

Payments to employment agencies for staff

Land tax and land rates

Insurance premiums

Interest expenses

Bank charges other than interest

Depreciation and amortisation

Bad and doubtful debts

APPENDIX 1 DATA ITEMS 2000–01 *continued*

DATA ITEMS COLLECTED AND SELECTED DERIVED DATA ITEMS, 2000–01 *continued*

Expense items *continued*

Purchases
 Materials, components, containers, packaging materials,
 electricity, fuels and water
 Finished goods for resale

Royalties expenses
 Natural resource royalties expenses
 Other royalties expenses

Motor vehicle running expenses
 Freight and cartage expenses
 Repair and maintenance expenses
 Rent, leasing and hiring expenses

Commission expenses
 Sales commission expenses
 Commission expenses for work done on materials
 provided by this business
 Ex-house printing expenses for material published by this
 business

Computer software expensed
 Other operating expenses
 Total expenses

Assets and liabilities

Trade debtors
 Gross trade debtors
 Beginning of reporting period
 End of reporting period
 Provision for doubtful debt of trade debtors
 Beginning of reporting period
 End of reporting period
 Net trade debtors
 Beginning of reporting period
 End of reporting period

Inventories
 Opening inventories
 Raw materials, fuels, containers, etc.
 Work-in-progress less progress payments billed
 Finished goods (including inventories for resale)
 Total opening inventories

Closing inventories
 Raw materials, fuels, containers, etc.
 Work-in-progress less progress payments billed
 Finished goods (including inventories for resale)
 Total closing inventories

Current assets (including inventories and net trade debtors)
 Patents, licences and goodwill
 Non-current assets (including patents, licences and goodwill)

Trade creditors
 Beginning of reporting period
 End of reporting period

Total provisions for employee entitlements
 Beginning of reporting period
 End of reporting period

Current liabilities (including trade creditors and provisions for
 employee entitlements)
 Non-current liabilities (including provisions for employee
 entitlements)
 Owner's equity

Capital expenditure and disposal of assets

Capitalised work done by own employees for own use or for
 rental or lease
 Capitalised wages and salaries
 Capitalised purchases of materials

Capital expenditure (including capitalised work done by own
 employees as listed above)
 Plant, machinery and equipment
 Computer software capitalised
 Land
 Dwellings, other buildings and structures
 Intangible assets

Total disposal of plant, machinery, equipment, land,
 dwellings, other buildings and structures, and intangible
 assets

Sales of goods produced

Data have been collected for 960 separately identified
 commodities

Selected derived data items

Sales and service income (including rent, leasing and hiring
 income and income from intellectual property royalties)
 Sales and service income (including rent, leasing and hiring
 income and income from intellectual property royalties)
 per person employed at the end of June
 Amount exported by the business or by its agent
 Exports as a proportion of sales of goods produced
 Purchases
 Other intermediate input expenses
 Change in inventories
 Cost of goods sold
 Cost of inputs
 Net capital expenditure
 Total capital expenditure
 Operating profit before tax
 Turnover
 Industry value added
 Industry value added per person employed at the end of June
 Ratio of wages and salaries to industry value added
 Ratio of wages and salaries to sales and service income
 (including rent, leasing and hiring income and income from
 intellectual property royalties)

APPENDIX 2

FUNDAMENTAL CHANGES TO THE ANNUAL MANUFACTURING COLLECTION

2000–01 SURVEY CHANGES

- 1** This publication, *Manufacturing Industry, Australia, 2000–01* (cat. no. 8221.0), is the first to present final manufacturing industry data based on information collected solely from manufacturing businesses (i.e. manufacturing management units). Prior to the 2000–01 survey, data were primarily collected from manufacturing establishments.
- 2** The move from an establishment based collection to a management unit based collection represents the initial stage in a fundamental shift (see paragraph 12 below) in the statistical unit from which data are primarily being sought and published (for the definitions of management units and establishments, see the Glossary). *As such, the publication of data for manufacturing management units represents a break in series from the data previously published for manufacturing establishments.*
- 3** Although, prior to 2000–01, the annual manufacturing collection has primarily collected data from manufacturing establishments, it has also collected data from a relatively small sample of manufacturing management units. This annual sample of approximately 5,000 manufacturing businesses has provided data on employment, wages and salaries, sales and service income, purchases, inventories, capital expenditure and detailed information required to derive OPBT. Information from this sample of manufacturing management units has generally been available at the Australian level for industry groups and selected industry classes on request and for a charge.
- 4** This publication draws on summary of operations data collected previously from manufacturing management units to provide a time series, at the industry subdivision level, from 1995–96. It also contains all of the previously published tables but now on a management unit basis. The approximately 9,500 businesses included provide a sample large enough to support manufacturing management unit based data at the industry class level for Australia.
- 5** Appendix 3 contains tables for 1999–2000 showing manufacturing establishment data and manufacturing management unit data for employment, wages and salaries, turnover, sales and service income and IVA. These tables are designed to provide a bridge between the previous establishment based series and the new manufacturing management unit based series.
- 6** Management units do not normally apportion activity by state and territory, as was the case for establishments. However, in order to ensure that reliable data by state and territory are available, approximately 400 businesses (i.e. those that have significant operations in more than one state and/or territory) have been requested to provide additional details on employment, wages and salaries and sales of goods and services for each state and/or territory in which they operate. This information was used to synthesise on a pro-rata basis all other data reported for the whole business to each state and/or territory in which they operate. This enabled the production of state/territory data for employment, wages and salaries, sales and service income and IVA at the industry subdivision level. However, it is not possible to produce data by employment size or data relating to exported production.
- 7** State publications, *Manufacturing Industry, [state]*, (cat. nos 8221.1–8221.6), will not be produced for 2000–01.
- 8** Regional or sub-state data are not available from the 2000–01 manufacturing survey. This is a direct result of moving to a manufacturing management unit based collection for 2000–01; see paragraphs 1 and 2.

APPENDIX 2 *continued*

2001–02 SURVEY CHANGES

9 In April 2000, the ABS released an information paper, *ABS Statistics and The New Tax System* (cat. no. 1358.0), which foreshadowed changes in the statistical infrastructure supporting the compilation of ABS economic series. The changes will allow better use of data available from the taxation system to improve efficiency, coverage and sample design.

10 This publication presents the last release of estimates from the annual manufacturing collection compiled using the old infrastructure.

11 In the 2001–02 suite of publications, estimates for the latest period will be compiled on the new basis. To facilitate comparisons over time, the next release of this publication will include estimates of the impact on statistical series of the infrastructure changes.

12 An information paper, *Improvements in ABS Economic Statistics [Arising from The New Tax System]* (cat. no. 1372.0), was released on 6 May 2002. That paper described the changes in more detail and provided information about the treatment of statistical impacts of the changes across ABS economic series.

13 Every fifth year, the annual ABS manufacturing collection is expanded from a survey to a census. It is proposed to retain this cycle with the shift to the new statistical infrastructure. Therefore, the next manufacturing census will be conducted in respect of 2001–02.

14 Regional or sub-state data will be produced for 2001–02, and it is proposed to produce state publications for 2001–02. Further investigations will be undertaken to decide if it is possible to produce some sub-state estimates in survey collection years from 2002–03.

APPENDIX 3

BRIDGING MANAGEMENT UNITS AND ESTABLISHMENT DATA

INTRODUCTION

1 For the 2000–01 manufacturing collection, the statistical unit from which data are collected has changed from manufacturing establishments to manufacturing management units. A manufacturing management unit is one predominately engaged in manufacturing activities, but the data collected for it cover all activities of the management unit. Some manufacturing management units engage in significant non-manufacturing activities, for example, wholesaling. For 1999–2000 and prior years, a management unit consists of one or more establishments.

2 For the 1999–2000 manufacturing collection, the statistical unit from which data were primarily collected was manufacturing establishments. Data were also collected from a limited number of manufacturing management units.

BRIDGING MANUFACTURING MANAGEMENT UNITS AND MANUFACTURING ESTABLISHMENTS

3 The following table shows estimates for manufacturing establishments and manufacturing management units separately for 1999–2000 for the five data items employment, wages and salaries, turnover, sales and service income and industry value added.

INDUSTRY SUBDIVISION		Employment at end of June(a)	Wages and salaries(b)	Turnover	Sales and service income	Industry value added
ANZSIC code	Description	'000	\$m	\$m	\$m	\$m
MANUFACTURING ESTABLISHMENTS						
21	Food, beverage and tobacco mfg	164.8	6 174.6	51 661.0	41 732.2	14 633.1
22	Textile, clothing, footwear and leather mfg	63.6	1 859.7	9 214.8	8 757.7	3 080.9
23	Wood and paper product mfg	63.6	2 274.1	13 629.1	11 842.2	4 622.2
24	Printing, publishing and recorded media	98.9	3 861.6	17 268.0	17 046.6	7 213.5
25	Petroleum, coal, chemical and associated product mfg	94.6	4 304.1	35 957.0	25 755.2	9 778.5
26	Non-metallic mineral product mfg	34.9	1 494.4	10 487.6	9 664.9	3 714.4
27	Metal product mfg	141.8	5 722.9	40 598.2	36 453.7	10 649.1
28	Machinery and equipment mfg	195.6	7 977.9	43 578.7	41 295.2	13 085.5
29	Other manufacturing	53.0	1 431.3	6 876.8	6 759.1	2 213.0
21–29	Total manufacturing	910.8	35 100.5	229 271.2	199 306.7	68 990.1
MANUFACTURING MANAGEMENT UNITS						
21	Food, beverage and tobacco mfg	185.6	7 492.5	54 927.0	54 562.0	14 773.8
22	Textile, clothing, footwear and leather mfg	63.9	1 840.1	9 346.1	9 298.6	2 835.4
23	Wood and paper product mfg	64.4	2 480.1	15 550.4	15 489.9	5 202.9
24	Printing, publishing and recorded media	100.7	3 905.7	17 529.2	17 508.0	7 560.2
25	Petroleum, coal, chemical and associated product mfg	102.5	4 765.7	39 970.8	39 815.8	9 842.2
26	Non-metallic mineral product mfg	39.1	1 772.8	11 133.1	11 075.0	4 024.5
27	Metal product mfg	142.8	5 950.3	39 408.5	38 718.1	11 768.4
28	Machinery and equipment mfg	201.0	8 405.1	47 089.0	46 824.6	13 167.1
29	Other manufacturing	54.1	1 435.9	6 865.5	6 853.3	2 228.2
21–29	Total manufacturing	954.1	38 048.2	241 819.4	240 145.2	71 402.8

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

APPENDIX 3 *continued*

BRIDGING MANUFACTURING
MANAGEMENT UNITS AND
MANUFACTURING
ESTABLISHMENTS *continued*

4 The following table shows the percentage difference between the estimates for manufacturing management units and manufacturing establishments as shown in the previous table.

DIFFERENCE BETWEEN MANAGEMENT UNIT AND ESTABLISHMENT ESTIMATES FOR

INDUSTRY SUBDIVISION	<i>Employment at end of June(a)</i>	<i>Wages and salaries(b)</i>	<i>Turnover</i>	<i>Sales and service income</i>	<i>Industry value added</i>	
<i>ANZSIC code Description</i>	%	%	%	%	%	
21	Food, beverage and tobacco mfg	12.6	21.3	6.3	30.7	1.0
22	Textile, clothing, footwear and leather mfg	0.5	-1.1	1.4	6.2	-8.0
23	Wood and paper product mfg	1.3	9.1	14.1	30.8	12.6
24	Printing, publishing and recorded media	1.8	1.1	1.5	2.7	4.8
25	Petroleum, coal, chemical and associated product mfg	8.4	10.7	11.2	54.6	0.7
26	Non-metallic mineral product mfg	12.1	18.6	6.2	14.6	8.4
27	Metal product mfg	0.7	4.0	-2.9	6.2	10.5
28	Machinery and equipment mfg	2.7	5.4	8.1	13.4	0.6
29	Other manufacturing	2.1	0.3	-0.2	1.4	0.7
21-29	Total manufacturing	4.8	8.4	5.5	20.5	3.5

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

BRIDGING MANUFACTURING
MANAGEMENT UNITS AND
MANUFACTURING
ESTABLISHMENTS *continued*

5 The following 5 examples are provided to assist in understanding the different ways in which establishments and management units contribute to manufacturing estimates at the division, subdivision and data item levels.

- (1) A manufacturing establishment may be part of a non-manufacturing management unit — the establishment contributes to the manufacturing establishment estimates but the management unit does not contribute to the manufacturing management unit estimates.
- (2) A manufacturing management unit, with two or more establishments, has establishments classified to different manufacturing subdivisions. In almost all cases, the establishments contribute only to the estimates for their respective subdivisions. The management unit contributes to the estimates for only one subdivision, which (in almost all cases) will be the same subdivision as at least one of its establishments.
- (3) Following on from (2), 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 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 1999–2000 manufacturing collection, 'significant' was defined as turnover of \$7.3m or more.

APPENDIX 3 *continued*

BRIDGING MANUFACTURING
MANAGEMENT UNITS AND
MANUFACTURING
ESTABLISHMENTS *continued*

(4) A manufacturing management unit may consist of several establishments, only some of which are manufacturing establishments — the management unit contributes its whole value to the manufacturing management unit estimates but only the manufacturing establishments contribute to the manufacturing establishment estimates.

(5) Following on from (4), a manufacturing management unit which consists of several establishments, only some of which are manufacturing establishments, may transfer some or all of the goods it produced to a wholesale establishment of the management unit, for sale. In the establishment based collections, the value of the goods transferred out for sale was captured and contributed to estimates of turnover (but not sales and service income) and the calculation of IVA. The manufacturing management unit will contribute the sale value from the wholesale establishment to the estimates of turnover, sales and service income and IVA.

6 For further details, please contact John Ridley on Sydney (02) 9268 4541.

TECHNICAL NOTE 1 DATA RELIABILITY

SAMPLE ERROR

1 The 2000–01 manufacturing survey was designed primarily to deliver industry class estimates for Australia and industry subdivision estimates for states and territories for the data items employment, wages and salaries, sales and service income and IVA.

2 All 2000–01 data contained in this publication have been obtained from a sample of manufacturers (as were data for 1995–96, 1997–98, 1998–99 and 1999–2000). As such, these data are subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all manufacturers in the population. The measure of the likely difference as used by the ABS is given by the standard error, which indicates the extent to which an estimate might have varied by chance because the data were obtained from only a sample of units. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if the data had been obtained from all units, and about 19 chances in 20 that the difference will be less than two standard errors.

3 The standard error can also be expressed as a percentage of the estimate, and this is known as the relative standard error. The relative standard errors for the 2000–01 employment, wages and salaries, sales and service income and IVA Australian data presented in this publication are all 3% or less for industry subdivisions (see Technical Note 2) and most are 6% or less for industry classes. The relative standard errors for the industry subdivision estimates for the states are mainly 3% or less, whilst those for the territories are mainly 5% or less.

4 Relative standard errors at the industry subdivision level for Australia for selected data items representing the full range of data contained in this publication are shown in Technical Note 2. Detailed relative standard errors can be made available on request.

NON-SAMPLE ERROR

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

6 While it is not possible to quantify non-sampling error, every effort is made to reduce it to a minimum. Collection forms are designed to be easy to complete and assist businesses to report accurately. Efficient and effective operating procedures and systems are used to compile the statistics.

TECHNICAL NOTE 2 RELATIVE STANDARD ERRORS

SELECTED DATA ITEMS

INDUSTRY SUBDIVISION		Employment at end of June (a)	Wages and salaries(b)	Sales and service income	Purchases	Industry value added	Amount exported by this business or by its agent	Acquisition of plant, machinery and equipment
ANZSIC code	Description	%	%	%	%	%	%	%
21	Food, beverage and tobacco mfg	1.2	0.9	0.8	1.2	0.9	3.2	2.2
22	Textile, clothing, footwear and leather mfg	2.1	1.7	1.1	1.3	1.7	2.0	5.7
23	Wood and paper product mfg	1.9	1.3	1.0	1.2	1.2	1.7	3.8
24	Printing, publishing and recorded media	2.7	1.4	1.3	2.2	1.4	6.5	5.4
25	Petroleum, coal, chemical and associated product mfg	1.8	1.3	0.4	0.5	2.3	1.3	3.1
26	Non-metallic mineral product mfg	2.2	1.1	0.9	1.0	0.9	2.2	2.4
27	Metal product mfg	1.6	1.7	0.7	1.8	2.9	0.4	1.8
28	Machinery and equipment mfg	1.1	0.9	0.6	0.6	0.9	1.5	2.5
29	Other manufacturing	2.5	2.4	2.0	2.3	2.2	6.9	6.1
21-29	Total manufacturing	0.6	0.5	0.3	0.4	0.7	1.0	1.1

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

GLOSSARY

ABS	Australian Bureau of Statistics
Acquisition of dwellings, other buildings and structures	Capital expenditure incurred acquiring dwellings, other buildings and structures, including roads, factories, warehouses, offices, bridges, etc.
Acquisition of other assets (including land and intangible assets)	Capital expenditure incurred acquiring other assets (including land and intangible assets). Intangible asset purchases may include items such as patents, licences and goodwill. Also included is computer software capitalised, including installation costs, the purchase or development of large data bases and software developed in-house (but excluded is software maintenance expenditure). Note that if the cost of software and hardware cannot be separated, the total cost is included in acquisition of plant, machinery and equipment.
Acquisition of plant, machinery and equipment	Capital expenditure incurred acquiring plant, machinery and other equipment. Note that this category includes the acquisition of motor vehicles.
Amount exported by this business or its agent	This represents the sales value of goods produced by the management unit (or for it on commission) that are exported (or are intended for export) outside Australia by the business or by its agent.
ASIC	Australian Standard Industrial Classification
ANZSIC	Australian and New Zealand Standard Industrial Classification
billion	One thousand million.
Capitalised work done by own employees for own use or for rental or lease	<p>Work done by the employees or proprietors of a management unit for use by the business or for rental or lease to other businesses that is capitalised. The main types of work included are the manufacturing, constructing, installing or repairing of assets and the in-house development of computer software. This work is valued at the capitalised costs of the materials and the wages and salaries involved.</p> <p>Conceptually, under the current international standards, this item should also include own account mineral exploration and own account production of literary, entertainment or artistic originals. However, these activities are relatively unimportant for manufacturers and have not been measured for manufacturing industries.</p>
Change in inventories	The value of total closing inventories minus total opening inventories.
Closing inventories	The value of all inventories of finished goods, work-in-progress, raw materials, fuels, containers and packaging at the end of the reporting period.
Commission manufacturing	<p>Significant amounts of manufacturing are undertaken on a commission basis by one manufacturer on behalf of another or on behalf of a non-manufacturer for a fee. Typically, commission manufacturing involves a client commissioning the production of goods utilising materials provided by the client. Ownership of these materials remains with the client. Similarly, the goods made using these materials are owned by the client.</p> <p>For the purposes of the estimates in this publication, the producing business (i.e. management unit) reports the commission fee as service income and the wages and salaries and any other expenses incurred.</p> <p>If the client is also a manufacturing business then in addition to data for their own manufacturing operations, the client reports the sales and inventories of the commissioned goods, the cost of the materials provided to the producing business, the commission fee paid and the value of any other intermediate inputs related to the commission transaction. If the client is not a manufacturing business, no data are reported by the client as they are excluded from the manufacturing collection.</p>

GLOSSARY *continued*

Employer contributions into superannuation including salary sacrifice	Included in this item are all employer contributions to superannuation funds (including the employer productivity contribution) and provisions for employer contributions to superannuation funds. Employee contributions are excluded.
Employment at end of June	<p>The number of working proprietors and partners, plus all employees during the last pay period ending in June each year. Non-salaried directors, self-employed persons such as consultants and contractors, persons paid by commission only and volunteers are excluded.</p> <p>Management units with significant activities in more than one state/territory were asked to report employment at the end of June for each state/territory in which the business operated.</p>
Enterprise group	A unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law. These may be legal entities such as trusts and partnerships as well as companies. Majority ownership is not required for control to be exercised.
Establishment	The establishment is the smallest accounting unit of a business, within a state or territory, controlling its productive activities and maintaining a specified range of detailed data i.e. the data needed to compile turnover, opening and closing inventories, purchases and transfers in, motor vehicle running expenses, freight and cartage expenses, commission expenses, rent, leasing and hiring expenses, and repair and maintenance expenses. In general, an establishment covers all operations at a physical location, but may consist of groups of locations provided they are within the same state or territory. The majority of establishments operate at one location only.
Exports as a proportion of sales of goods produced (table 6)	For an individual management unit, this represents the percentage of sales of goods produced by the business (or for it on commission) which are exported (or are intended for export) outside Australia by the business or by its agent. In table 6, the ratio is calculated by dividing the value of goods exported by the value of sales of goods produced by all businesses (i.e. management units) not just the aggregated value for those units which exported. (The data in table 6 exclude those manufacturing management units which operated during 2000–01 but were not operating at 30 June 2001.)
Funding by federal, state or local governments for operational costs	Funding by federal, state or local governments for operational costs (e.g. wages and salaries, rent). Included are bounties, subsidies, export grants, and apprenticeship and traineeship schemes.
Industry class	Within ANZSIC, there is a structure comprising four levels ranging from industry division (broadest level) to the industry class (finest level). At the industry class level, the activities are narrowly defined and recognised by a four-digit code, e.g. Industry Class 2331 for PULP, PAPER AND PAPERBOARD MANUFACTURING. Usually, an activity is primarily confined to one class. However, some activities may be primary to more than one class.
Industry division	Within ANZSIC, there is a structure comprising four levels ranging from industry division (broadest level) to the industry class (finest level). The main purpose of the industry division level is to provide a limited number of categories which give a broad overall picture of the economy. There are 17 divisions within ANZSIC each identified by an alphabetical letter, that is 'A' for Agriculture, forestry and fishing, 'B' for Mining, 'C' for Manufacturing, etc.
Industry gross product (IGP)	For periods prior to 1997–98, estimates of IGP represented the measure of the contribution by manufacturing industries to gross domestic product (GDP). However, commencing with estimates for 1997–98 following the introduction of new international standards for measuring economic variables, IGP has been

GLOSSARY *continued*

Industry gross product (IGP) *continued* replaced by the variable industry value added (IVA) for the purpose of measuring industry contribution to GDP.

The relationship between IVA estimates and IGP estimates is:

IVA

plus Intellectual property royalty expenses

less Intellectual property royalty income

less Computer software expenses not capitalised by the business

less Selected indirect taxes (for manufacturing industries, the main types are fringe benefits tax, payroll tax, land rates and land taxes)

equals IGP

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

Industry subdivision This is the broadest level category within the manufacturing industry division of ANZSIC and is recognised by a two-digit code, e.g. Industry Subdivision 23 for 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

Industry value added (IVA) IVA represents the value added by an industry to the intermediate inputs used by the industry. Commencing with estimates for 1997–98, IVA has replaced industry gross product (IGP) as the measure of the contribution by manufacturing industries to GDP. See the entry for IGP for an explanation of the differences between IVA and IGP.

The derivation of IVA is as follows:

Sales and service income (new standards)

plus Funding by federal, state or local governments for operational costs

plus Own account capital work

plus Closing inventories

less Opening inventories

less Intermediate input expenses (for details, see the entry for operating expenses)

equals IVA

However, it should be noted that IVA is not a measure of OPBT. Wage and salary expenses and most other labour costs are not taken into account in its calculation and nor are most insurance premiums, interest expenses or depreciation and a number of lesser expenses (see the entry for operating expenses for further detail).

Industry value added (IVA) per person employed IVA of manufacturing management units which operated during the year ended 30 June divided by employment at the end of June in the same year.

Intermediate inputs Intermediate inputs consist of materials and certain services which are used up in

GLOSSARY *continued*

the production process. Definitions of relevant component items are also included in this Glossary. It is calculated as:

	Intermediate input expenses (for details, see the entry for operating expenses)
<i>plus</i>	Opening inventories
<i>less</i>	Closing inventories

Management unit	The management unit is the highest-level accounting 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 (i.e. company, partnership, trust, sole proprietorship, 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. A management unit consists of one or more establishments.
Management units that do not export	Businesses that reported no exports (either by their business or for them by an agent) of goods that they produced.
Management units with exports of more than 50% of sales	Businesses that reported exports (either by their business or for them by an agent) of more than 50% of sales of goods that they produced.
Management units with exports up to and including 50% of sales	Businesses that reported exports (either by their business or for them by an agent) of up to and including 50% of sales of goods that they produced.
Manufacturing establishment	An establishment predominantly engaged in manufacturing activities. The data collected for such establishments cover all activities of the establishment (including non-manufacturing activities).
Manufacturing management unit	A management unit predominantly engaged in manufacturing activities. The data collected for such management units cover all activities of the management unit (including non-manufacturing activities).
Net capital expenditure	The value of total capital expenditure less proceeds received from the disposal of assets.
Opening inventories	The value of all inventories of finished goods, work-in-progress, raw materials, fuels, containers and packaging at the beginning of the reporting period.
Operating expenses	<p>For the purposes of calculating economic and accounting variables for manufacturing industries, operating expenses incurred by businesses are divided into several categories. However, some expenses are excluded entirely from all such calculations. These expenses are extraordinary expenses, capitalised expenses, income tax and other direct taxes, goods and services tax (GST) and excise payable to governments, capital repayments or losses on asset sales, dividends, donations or foreign exchange losses.</p> <p>Remaining expenses are categorised as follows:</p> <p><i>Intermediate input expenses</i></p> <p>Intermediate input expenses cover the major expenses incurred by manufacturers in producing and distributing goods and services (except labour costs), namely:</p> <ul style="list-style-type: none"> ■ purchases of materials, components, containers and packaging materials, electricity, fuels and water, and purchases of goods for resale ■ motor vehicle running expenses, freight and cartage expenses, repair and maintenance expenses ■ rent, leasing and hiring expenses (except for finance lease payments) ■ commission payments to other businesses and self employed persons for work done or sales made on a commission basis without a retainer.

GLOSSARY *continued*

Operating expenses <i>continued</i>	<p>Also included in the calculation of intermediate inputs are advertising expenses, audit and other accounting expenses, bank fees and charges (except interest), cleaning expenses, environmental protection expenses, intellectual property royalty expenses, legal fees, management fees, paper, printing and stationery expenses, postal and telecommunication expenses, staff training expenses, and travelling, accommodation and entertainment expenses.</p> <p>Excluded from this category are selected labour costs and other operating expenses as defined below:</p> <p><i>Selected labour costs</i></p> <p>Selected labour costs are:</p> <ul style="list-style-type: none">■ Wages and salaries including provisions for employee entitlements■ Employer contributions into superannuation including salary sacrifice■ Workers' compensation premiums/costs■ Payroll tax and Fringe benefits tax. <p><i>Other operating expenses</i></p> <p>This group of expenses is not included in the calculation of the above economic variables but is included in the calculation of the accounting variable OPBT. Included in this group of expenses are bad and doubtful debts, computer software expenses not capitalised by businesses, depreciation and amortisation, insurance premiums (except workers' compensation and compulsory third party motor vehicle insurance premiums), interest expenses, land rates and taxes, mineral/petroleum exploration expenses not capitalised by businesses, and natural resource royalties expenses.</p>
Other intermediate input expenses	Intermediate input expenses less purchases.
Own account capital work	<p>Work done by the employees or proprietors of a management unit for use by the business or for rental or lease to other businesses that is capitalised. The main types of work included are the manufacturing, constructing, installing or repairing of assets and the in-house development of computer software. This work is valued at the capitalised costs of the materials and the wages and salaries involved.</p> <p>Conceptually, under the current international standards, this item should also include own account mineral exploration and own account production of literary, entertainment or artistic originals. However, these activities are relatively unimportant for manufacturers and have not been measured for manufacturing industries.</p>
Purchases	Purchases of materials, components, containers and packaging materials, electricity, fuels and water, and purchases of goods for resale. The purchase of parts and fuel for motor vehicles run by businesses is excluded.
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 2000–01 collection, a business may have reported data for the year ended 31 December 2000.
Sales and service income	Sales of goods whether or not produced by the business (including goods produced for the business on a commission basis) and income from service activities. Both are valued net of discounts given and exclusive of GST. Sales of goods includes progress payments relating to long term contracts if they are billed in the period and delivery charges not separately invoiced to customers, but excludes excise and duties receivable on behalf of the government. Exports

GLOSSARY *continued*

Sales and service income <i>continued</i>	<p>are valued free on board (f.o.b.) (i.e. export freight charges are excluded). Service income includes income from work done or sales made on a commission basis, income from repair, maintenance or servicing, advertising income, installation and delivery charges separately invoiced to customers, and management fees/charges received from related and unrelated businesses. Management units with significant activities in more than one state/territory were asked to report sales and service income for each state/territory in which the business operated.</p> <p>Under the current international standards, income from intellectual property royalties and rent, leasing and hiring income (except from finance leases) are also classified as service income. Rent, leasing and hiring income is income derived from the ownership of land, buildings, vehicles, machinery or equipment, excluding income from finance leases.</p> <p>For further explanation on the treatment of commission manufacturing activities, see the entry for commission manufacturing.</p>
Sales and service income per person employed	<p>Sales and service income of manufacturing management units which operated during the year ended 30 June divided by employment at the end of June in the same year.</p>
Sales of goods produced (table 6)	<p>Sales of goods produced by this management unit.</p>
Total capital expenditure	<p>The total capital expenditure on the acquisition of plant, machinery and equipment, dwellings, other buildings and structures, and of other assets (including land and intangible assets). Also included is capitalised work done for own use.</p>
Total disposal of assets	<p>Proceeds received from the disposal of plant, machinery, equipment, land, dwellings, other buildings and structures, and intangible assets.</p>
Turnover	<p>Sales and service income, funding by federal, state or local governments for operational costs, and capitalised work done by the business' own employees or proprietors for use by the business unit or for rental or lease to other businesses.</p> <p>Excluded from turnover are interest income, income from natural resource royalties, funding by federal, state or local governments for specific capital items, dividends, and receipts from the sale of fixed tangible assets.</p> <p>Conceptually, turnover also includes transfers out of goods by establishments. From the 2000–01 collection, data are no longer collected from establishments. Hence, the previously published turnover data item has been replaced by the sales and service income data item.</p> <p>Note (a): The tables in Appendix 3 show selected data items, including turnover, for manufacturing establishments and management units for 1999–2000. Appendix 3 is designed to provide a bridge between the previous establishment based series and the new manufacturing management unit based series.</p> <p>Note (b): Turnover data for manufacturing establishments includes transfers to other establishments of the same business. They are valued, for statistical purposes, at commercial value (i.e. the value which would have applied had the establishments concerned been under separate ownership).</p> <p>Note (c): The turnover data for manufacturing management units shown in the tables in Appendix 3, by definition, exclude transfers out.</p>
Wages and salaries	<p>The gross wages and salaries (including capitalised wages and salaries) of all employees of the business (i.e. management unit). The item includes severance, termination and redundancy payments, salaries and fees of directors and executives, retainers and commissions of persons who received a retainer,</p>

GLOSSARY *continued*

Wages and salaries <i>continued</i>	bonuses, and annual and other types of leave. Provision expenses for employee entitlements (e.g. provisions for annual leave and leave bonus, long service leave, sick leave, and severance, termination and redundancy payments) are also included. Payments related to salary sacrifice and payments to self-employed persons such as consultants, contractors and persons paid solely by commission without a retainer are excluded. The drawings of working proprietors and partners are also excluded. Management units with significant activities in more than one state/territory were asked to report wages and salaries for each state/territory in which the business operated.
Wages and salaries to sales and service income ratio	The wages and salaries paid by manufacturing management units which operated during the year ended 30 June as a proportion of the sales and service income of manufacturing management units which operated during the same year.
Workers' compensation premiums/costs	As reported by providers.

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