



2003-04

8221.0

# MANUFACTURING INDUSTRY

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) WED 5 JUL 2006

## CONTENTS

	<i>page</i>
Notes .....	2
List of tables .....	3
Abbreviations .....	4

### CHAPTERS

1 Summary .....	5
2 National data .....	9
3 States, territories and Australia .....	29
4 Exports .....	37

### ADDITIONAL INFORMATION

Explanatory Notes .....	41
Appendix 1: Data items .....	47
Appendix 2: Survey changes .....	49
Technical Note 1: Methodology .....	50
Technical Note 2: Data reliability .....	53
Technical Note 3: Relative standard errors .....	55
Glossary .....	56

## INQUIRIES

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

## NOTES

- ABOUT THIS PUBLICATION** This publication presents estimates for the manufacturing industry for 2003–04 from the Economic Activity Survey, together with data on a comparable basis for 2001–02 and 2002–03.
- CHANGES TO THIS PUBLICATION** This publication includes the first release of employment estimates (and related ratios) using the new statistical infrastructure described in the previous issue of this publication. These were not included in the previous issue, due to methodological problems in deriving employment data from the taxation system data used. (See Appendix 2 for details.) A time series of employment estimates using the new statistical infrastructure is presented in table 1.1.
- Estimates of most assets and liabilities items (and related ratios) are not available from the 2003–04 collection, and hence are not included in this issue.
- REVISIONS** Data for 2001–02 and 2002–03 have been revised since the previous issue of this publication. All comparisons with earlier years are based on revised data. Revisions to key data items are presented in table 1.1. Revised data for other items are available on-line in updated versions of the original datasets. Please see below.
- INFORMATION AVAILABLE ON-LINE** The text components of this publication are available free on-line. A PDF publication and extended data spreadsheets are also available free on-line. To access this information, go to the ABS website home page <<http://abs.gov.au>>. Open the *Industry* link shown under *Themes* (located in the left-side navigator), then open the *Manufacturing Statistics* link shown under *Industry*.

Dennis Trewin  
Australian Statistician

## LIST OF TABLES .....

page

### SUMMARY

- 1.1** Summary, 2001–02 to 2003–04 ..... 6
- 1.2** Production volumes, Gross value added, 2002–03 and 2003–04 ..... 8

### NATIONAL DATA

- 2.1** Industry class ..... 17
- 2.2** Employment size ..... 23
- 2.3** Industry value added ..... 27
- 2.4** Acquisition and disposal of assets ..... 28
- 2.5** Selected non-wage labour costs ..... 28

### STATES, TERRITORIES AND AUSTRALIA

- 3.1** States, territories and Australia ..... 33
- 3.2** Industry contribution to total factor income ..... 36

### EXPORTS

- 4.1** Exported and total production, Employment size ..... 39
- 4.2** Contribution of exporting and non-exporting businesses ..... 40

## ABBREVIATIONS .....

<b>\$'000</b>	thousand dollars
<b>\$b</b>	billion (thousand million) dollars
<b>\$m</b>	million dollars
<b>ABN</b>	Australian Business Number
<b>ABR</b>	Australian Business Register
<b>ABS</b>	Australian Bureau of Statistics
<b>ABSBR</b>	Australian Bureau of Statistics Business Register
<b>ACT</b>	Australian Capital Territory
<b>ANZSIC</b>	Australian and New Zealand Standard Industrial Classification
<b>ASIC</b>	Australian Standard Industrial Classification
<b>ATO</b>	Australian Taxation Office
<b>Aust.</b>	Australia
<b>BAS</b>	Business Activity Statement
<b>BIT</b>	business income tax
<b>cat. no.</b>	Catalogue number
<b>EAS</b>	Economic Activity Survey
<b>f.o.b.</b>	free on board
<b>GST</b>	goods and services tax
<b>IVA</b>	industry value added
<b>mfg</b>	manufacturing
<b>MU</b>	management unit
<b>n.e.c.</b>	not elsewhere classified
<b>no.</b>	number
<b>NSW</b>	New South Wales
<b>NT</b>	Northern Territory
<b>OPBT</b>	operating profit before tax
<b>PAYGW</b>	pay-as-you-go withholding
<b>Qld</b>	Queensland
<b>RSE</b>	relative standard error
<b>SA</b>	South Australia
<b>SISCA</b>	Standard Institutional Sector Classification of Australia
<b>Tas.</b>	Tasmania
<b>TAU</b>	type of activity unit
<b>TNTS</b>	The New Tax System
<b>Vic.</b>	Victoria
<b>WA</b>	Western Australia

# CHAPTER 1

## SUMMARY

### INTRODUCTION

This publication presents 2003–04 estimates for the manufacturing industry based on new statistical infrastructure introduced for 2001–02.

### KEY DATA

Table 1.1 presents a time series for selected items, from 2001–02 to 2003–04. All value data in this table are shown at current prices.

For more information about:

- employment estimates, see Appendix 2, page 49
- survey methodology, see Technical Note 1, page 50.

The Glossary provides definitions for terms used.

### GROSS VALUE ADDED

Table 1.2 illustrates the growth of Australian industries over time using chain volume measures of their gross value added. Chain volume measures provide estimates free of the direct effects of price change.

Of the seventeen industries shown in table 1.2, MANUFACTURING ranked fifteenth in its average annual growth rate over the past 10 years and lowest over the past 25 years, with increases of 2.0% and 1.7% respectively. By comparison, the highest growth rates were recorded by COMMUNICATION SERVICES, with annualised rates of 6.1% and 6.7% for the 10 year and 25 year periods.

### FURTHER COMMENTARY

Please see:

- *National data*: Chapter 2, page 9
- *States, territories and Australia*: Chapter 3, page 29
- *Exports*: Chapter 4, page 37.

**1.1**

## SUMMARY

	<i>Employment at end of June(a)</i>	<i>Wages and salaries(b)</i>	<i>Sales and service income(c)</i>	<i>Industry value added</i>	<i>Wages and salaries per person employed</i>	<i>Wages and salaries to sales and service income</i>	<i>Sales and service income per person employed</i>	<i>Industry value added per person employed</i>
	'000	\$m	\$m	\$m	\$'000	ratio	\$'000	\$'000
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
2001-02	197.2	7 950	66 048	16 729	40.3	0.12	335.0	84.8
2002-03	195.2	8 336	67 020	17 177	42.7	0.12	343.4	88.0
2003-04	193.2	8 502	68 470	17 609	44.0	0.12	354.5	91.2
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
2001-02	72.4	1 869	11 039	2 995	25.8	0.17	152.4	41.4
2002-03	69.1	1 863	10 722	3 068	27.0	0.17	155.1	44.4
2003-04	66.6	1 820	10 291	3 189	27.3	0.18	154.5	47.9
WOOD AND PAPER PRODUCT MANUFACTURING								
2001-02	72.2	2 528	16 563	5 559	35.0	0.15	229.4	77.0
2002-03	72.3	2 764	17 926	6 279	38.3	0.15	248.1	86.9
2003-04	74.1	2 901	18 627	6 523	39.2	0.16	251.5	88.1
PRINTING, PUBLISHING AND RECORDED MEDIA								
2001-02	114.1	4 642	20 237	8 430	40.7	0.23	177.4	73.9
2002-03	111.9	4 504	20 355	8 923	40.2	0.22	181.9	79.7
2003-04	109.5	4 737	20 662	9 316	43.3	0.23	188.7	85.1
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
2001-02	102.8	5 079	49 023	10 066	49.4	0.10	476.9	97.9
2002-03	104.2	5 185	50 701	11 119	49.7	0.10	486.4	106.7
2003-04	107.9	5 450	52 833	11 258	50.5	0.10	489.4	104.3
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
2001-02	44.0	1 813	11 309	3 864	41.2	0.16	256.9	87.8
2002-03	47.7	2 006	12 491	4 478	42.1	0.16	262.0	93.9
2003-04	46.2	2 095	13 646	4 811	45.3	0.15	295.2	104.1
METAL PRODUCT MANUFACTURING								
2001-02	173.3	7 017	52 146	15 072	40.5	0.13	300.9	87.0
2002-03	178.7	7 708	57 413	15 809	43.1	0.13	321.3	88.5
2003-04	170.3	7 668	58 743	15 902	45.0	0.13	345.0	93.4
MACHINERY AND EQUIPMENT MANUFACTURING								
2001-02	231.3	9 387	54 239	14 781	40.6	0.17	234.5	63.9
2002-03	239.7	10 275	56 771	16 449	42.9	0.18	236.8	68.6
2003-04	244.2	10 727	59 843	17 790	43.9	0.18	245.1	72.9

(a) Includes working proprietors.

(c) Includes rent, leasing and hiring income.

(b) Excludes the drawings of working proprietors.

**1.1**SUMMARY *continued*

	<i>Employment at end of June(a)</i>	<i>Wages and salaries(b)</i>	<i>Sales and service income(c)</i>	<i>Industry value added</i>	<i>Wages and salaries per person employed</i>	<i>Wages and salaries to sales and service income</i>	<i>Sales and service income per person employed</i>	<i>Industry value added per person employed</i>
	'000	\$m	\$m	\$m	\$'000	ratio	\$'000	\$'000
OTHER MANUFACTURING								
2001-02	90.0	2 231	11 603	3 620	24.8	0.19	128.9	40.2
2002-03	85.9	2 180	11 604	3 591	25.4	0.19	135.1	41.8
2003-04	83.3	2 321	12 490	4 036	27.9	0.19	150.0	48.5
TOTAL MANUFACTURING								
2001-02	1 097.3	42 516	292 208	81 117	38.7	0.15	266.3	73.9
2002-03	1 104.7	44 820	305 002	86 893	40.6	0.15	276.1	78.7
2003-04	1 095.3	46 222	315 605	90 434	42.2	0.15	288.2	82.6

(a) Includes working proprietors.

(c) Includes rent, leasing and hiring income.

(b) Excludes the drawings of working proprietors.

## 1.2 PRODUCTION VOLUMES (a), Gross value added .....

Industry	CHAIN VOLUME MEASURES		Change from last year	AVERAGE ANNUAL CHANGE OVER LAST	
	2002-03	2003-04		10 years	25 years
	\$m	\$m		%	%
Agriculture, forestry and fishing	20 564	27 010	31.3	3.2	2.1
Mining	35 608	34 366	-3.5	2.7	3.5
<b>Manufacturing</b>	<b>96 277</b>	<b>97 103</b>	<b>0.9</b>	<b>2.0</b>	<b>1.7</b>
Electricity, gas and water supply	18 663	18 816	0.8	1.3	2.6
Construction	47 950	51 117	6.6	5.2	3.5
Wholesale trade	38 786	40 675	4.9	4.5	3.1
Retail trade	47 790	50 278	5.2	4.2	3.3
Accommodation, cafes and restaurants	16 625	17 560	5.6	4.2	3.5
Transport and storage	35 270	36 851	4.5	4.3	3.7
Communication services	22 092	22 756	3.0	6.1	6.7
Finance and insurance	54 984	57 496	4.6	4.1	4.2
Property and business services	94 679	97 997	3.5	5.2	5.0
Government administration and defence	31 879	32 392	1.6	2.5	2.5
Education	36 062	36 530	1.3	1.9	2.6
Health and community services	47 870	49 509	3.4	4.0	3.8
Cultural and recreational services	10 306	10 901	5.8	3.5	3.3
Personal and other services	14 626	14 834	1.4	3.7	3.1
<b>Total all industries</b>	<b>670 031</b>	<b>696 191</b>	<b>3.9</b>	<b>3.7</b>	<b>3.3</b>

(a) Reference year for chain volume measures in 2003-04.

Note: The volume estimates contained in this table are derived from quarterly Business Surveys.

Source: Australian National Accounts: National Income, Expenditure and Product, December Quarter 2005

(cat. no. 5206.0), table 45.

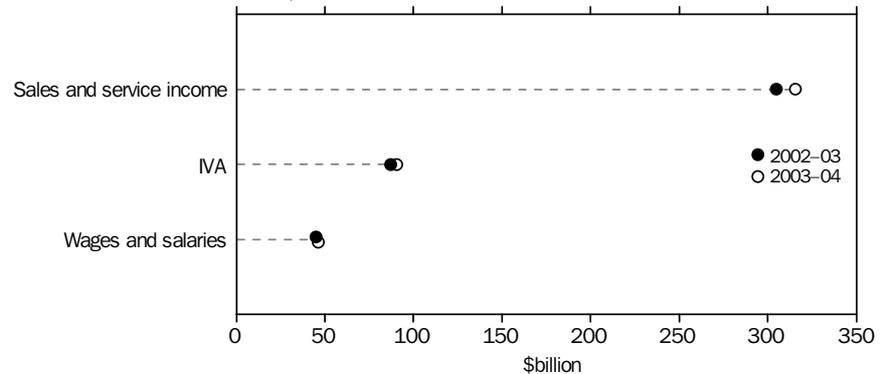
**INTRODUCTION**

Statistics in this publication relate to the manufacturing industry as defined by the Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993 edition. These data are presented at the ABN unit/TAU level (see the Glossary for definitions) and, therefore, can contain data about activities normally associated with industries other than manufacturing. See Explanatory Notes paragraphs 4–16 for further details. The commentary focuses mainly on the major data variables for the nine ANZSIC industry subdivisions that comprise the manufacturing industry.

**OVERVIEW**

Most major indicators of activity for the Australian manufacturing industry increased, in current price terms, during 2003–04. Sales and service income increased 3.5% and industry value added (IVA) rose by 4.1%. Manufacturers paid \$46.2b in wages and salaries in 2003–04, 3.1% more than in 2002–03 (despite a decline in employment). The increase in net capital expenditure was 9.0% (from \$9.9b in 2002–03 to \$10.8b in 2003–04). Export sales of goods produced decreased by 1.1% (from \$48.3b in 2002–03 to \$47.8b in 2003–04).

SELECTED VARIABLES, 2002–03 AND 2003–04



**EMPLOYMENT**

Australian manufacturing industry employed 1,095,300 persons at the end of June 2004, a decrease of 9,500 (or 0.9%) compared to the end of June 2003.

Employment fell in six of the nine manufacturing industry subdivisions between June 2003 and June 2004. The industry subdivisions which experienced the greatest percentage declines in employment were METAL PRODUCT MANUFACTURING (down 4.7%, from 178,700 to 170,300), TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING (down 3.7%, from 69,100 to 66,600), and OTHER MANUFACTURING (down 3.1%, from 85,900 to 83,300). The increases were recorded by PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (up 3.6%, from 104,200 to 107,900), WOOD AND PAPER PRODUCT MANUFACTURING (up 2.5% from 72,300 to 74,100), and MACHINERY AND EQUIPMENT MANUFACTURING (up 1.9%, from 239,700 to 244,200).

EMPLOYMENT *continued*

At the industry class level, the five largest manufacturing industries as measured by employment at the end of June 2004 were PRINTING (ANZSIC Class 2412) (44,500 persons), WOODEN FURNITURE AND UPHOLSTERED SEAT MANUFACTURING (ANZSIC 2921) (36,700 persons), FABRICATED METAL PRODUCT MANUFACTURING N.E.C. (ANZSIC 2769) (31,400 persons), MEAT PROCESSING (ANZSIC 2111) (28,800 persons) and MOTOR VEHICLE MANUFACTURING (ANZSIC 2811) (28,700 persons).

At the end of June 2004, employment in Australian manufacturing was marginally lower (by 2,000 persons) than at the end of June 2002.

WAGES AND SALARIES

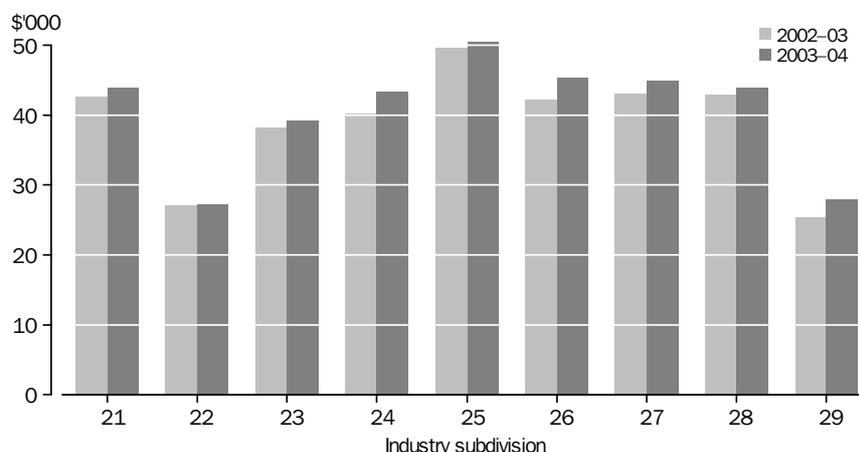
The Australian manufacturing industry paid \$46.2b in wages and salaries in 2003–04, 3.1% higher than in 2002–03.

Total wages and salaries paid rose, in current price terms, in seven of the nine manufacturing industry subdivisions between 2002–03 and 2003–04.

The manufacturing industry subdivision showing the largest percentage increase in wages and salaries in 2003–04 was OTHER MANUFACTURING (up 6.5%, or \$0.1b, to \$2.3b). In absolute terms, MACHINERY AND EQUIPMENT MANUFACTURING recorded the largest increase (up \$0.5b, or 4.4%, to \$10.7b).

The industry group, of those available for publication, which recorded the highest wages and salaries expense was MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC Group 281), with \$3.3b or 7.2% of total manufacturing.

WAGES AND SALARIES PER PERSON EMPLOYED AT END OF JUNE, 2002–03 AND 2003–04



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

## WAGES AND SALARIES

*continued*

Wages and salaries per person employed in manufacturing in 2003–04 were \$42,200, representing an increase of \$1,600 (or 4.0%) compared to 2002–03. In 2003–04 at the subdivision level, wages and salaries per person employed ranged from \$50,500 in PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING to \$27,300 in TEXTILES, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING. The greatest percentage change over the period from 2001–02 to 2003–04 was an increase of 12.5% for OTHER MANUFACTURING.

SALES & SERVICE  
INCOME

Sales and service income of manufacturing industry in Australia in 2003–04, at \$315.6b, was \$10.6b (or 3.5%) higher than in 2002–03.

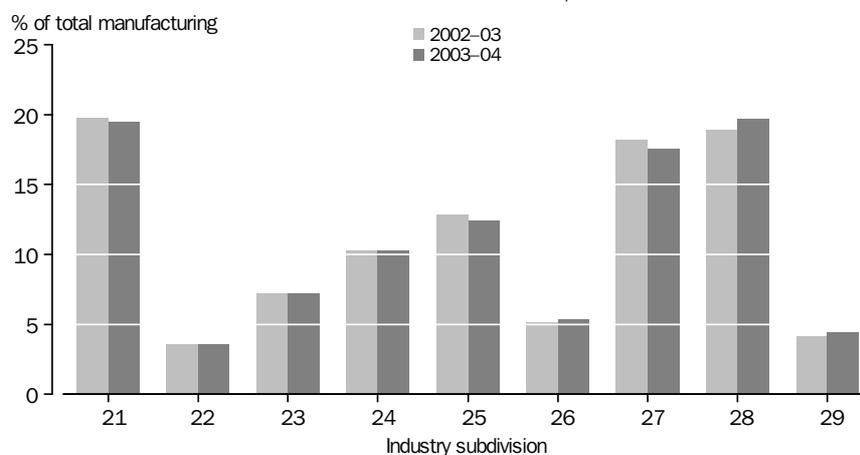
Over the period from 2001–02 to 2003–04, manufacturing's total sales and service income increased by 8.0%.

At the industry group level, of those groups available for publication, NON-METALLIC MINERAL PRODUCT MANUFACTURING N.E.C. (ANZSIC group 264) recorded the largest percentage increase in sales and service income (16.6%) between 2002–03 and 2003–04. The largest absolute increase, of \$2.1b, was recorded by MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC group 281), which also contributed the largest share (7.5%) of sales and service income.

Sales and service income per person employed in Australian manufacturing in 2003–04 was \$288,200, 4.4%, or \$12,100, higher than for 2002–03, and 8.2%, or \$21,900, higher than in 2001–02.

INDUSTRY VALUE ADDED  
(IVA)

## DISTRIBUTION OF IVA ACROSS INDUSTRIES, 2002–03 AND 2003–04



Note: Industry subdivisions

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

IVA for the manufacturing industry increased by \$3.5b (4.1%) to \$90.4b in 2003–04. This increase consists of the \$10.6b increase in sales and service income mentioned above, less a \$4.8b (2.9%) increase in purchases of goods and materials and a \$1.1b (2.0%) increase in other intermediate input expenses, and a decrease in the value of the change in inventories of \$1.1b (73.2%).

**INDUSTRY VALUE ADDED (IVA) *continued***

All nine manufacturing industry subdivisions increased IVA in current price terms between 2002–03 and 2003–04.

At the industry group level, of those groups available for publication, FURNITURE MANUFACTURING (ANZSIC group 292) recorded the largest percentage increase in IVA (17.3%) in 2003–04. MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC group 281) experienced the largest growth in IVA, \$0.7b (12.4%), followed by PUBLISHING (ANZSIC group 242) with \$0.6b (13.3%).

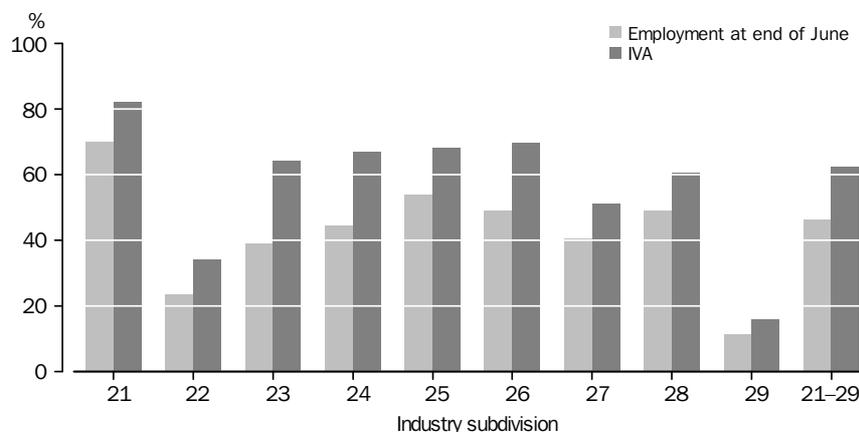
As measured by contribution to IVA, the largest manufacturing industry groups in 2003–04 (of those available for publication) were MOTOR VEHICLE AND PART MANUFACTURING (ANZSIC group 281), with \$5.9b, or 6.5% of total manufacturing, PUBLISHING (ANZSIC group 242), with \$5.4b, or 6.0%, and BASIC NON-FERROUS METAL MANUFACTURING (ANZSIC group 272), with \$4.4b, or 4.9%.

IVA per person employed in manufacturing has increased by 5.0%, from \$78,700 in 2002–03 to \$82,600 in 2003–04.

**EMPLOYMENT SIZE**

In 2003–04, businesses employing 100 or more persons accounted for 46.4% of total manufacturing employment in Australia and 61.1% of wages and salaries. Their contribution to sales and service income was 64.7% and to industry value added 62.6%.

**CONTRIBUTION TO MANUFACTURING INDUSTRIES BY BUSINESSES EMPLOYING 100 OR MORE PERSONS, 2003–04**



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

Of the employment size categories shown in Table 2.2, businesses employing 1,000 or more persons accounted for the largest share of all four variables at the total manufacturing level. For further discussion of the contribution of businesses categorised by employment size see the Industry Subdivision Analysis below.

NET CAPITAL  
EXPENDITURE

Net capital expenditure by manufacturing businesses rose by 9.0%, or \$0.9b, to \$10.8b between 2002–03 and 2003–04. Total acquisitions grew by 3.1% (\$0.4b), mainly reflecting a 16.6% (\$0.2b) increase in outlays on dwellings, other buildings and structures and a 2.0% (\$0.2b) increase in plant, machinery and equipment. Asset disposals in 2003–04 were 17% (\$0.5b), lower than in the previous year.

LABOUR COSTS

The value of the selected non-wage labour costs as a proportion of wages and salaries increased for total manufacturing from 17.3% in 2002–03 to 18.3% in 2003–04. This mainly reflected an increase (from 8.4% to 9.2%) in the proportion represented by employer contributions into superannuation. Apart from TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING, this proportion rose in all manufacturing subdivisions.

INDUSTRY SUBDIVISION  
ANALYSIS

FOOD, BEVERAGE AND TOBACCO  
MANUFACTURING

FOOD, BEVERAGE AND TOBACCO MANUFACTURING recorded increases of 2.2% in sales and service income and 2.5% in IVA. Although wages and salaries increased by 2.0%, employment fell by 1.0%.

In 2003–04, FOOD, BEVERAGE AND TOBACCO MANUFACTURING was the largest manufacturing industry as measured by its share of sales and service income (21.7%); it ranked second in IVA (19.5%) and wages and salaries (18.4%). This industry also outlayed the largest amount on purchases of goods and materials, \$38.3b, or 22.6%, of the Australian manufacturing total. The value of assets acquired by FOOD, BEVERAGE AND TOBACCO MANUFACTURING (\$2.8b, or 21.4% of total acquisitions) and net capital expenditure (\$2.4b, or 21.9%) also exceeded that of all other manufacturing industry subdivisions.

Of the nine manufacturing industry subdivisions, FOOD, BEVERAGE AND TOBACCO MANUFACTURING is the second largest employer, accounting for 17.6% of the estimate for total manufacturing. In percentage terms, the industry is dominated by businesses employing 100 or more persons. These businesses contribute 82.1% of the subdivision's IVA, 80.3% of wages and salaries, 78.3% of sales and service income and 69.9% of employment. Compared to businesses employing 100 or more persons across the other eight industry subdivisions, those in FOOD, BEVERAGE AND TOBACCO MANUFACTURING provided the greatest proportion of total manufacturing employment (26.6%), sales and service income (26.3%), IVA (25.6%) and wages and salaries (24.2%). One half of this industry's IVA is produced by businesses employing 1,000 or more persons.

TEXTILE, CLOTHING, FOOTWEAR AND  
LEATHER MANUFACTURING

Despite sales and service income declining during 2003–04 by 4.0%, IVA of TEXTILES, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING rose by 3.9%. This was mainly due to a \$0.5b decrease in the value of purchased goods and materials compared to 2002–03.

The smallest manufacturing subdivision by most key measures presented, the industry accounted for less than 4% of total manufacturing IVA, sales and service income, purchases of goods and materials, and wages and salaries. TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING was the second smallest manufacturing employer in 2003–04, with 6.1% of total persons employed in Australian manufacturing.

Over the period from 2001–02 to 2003–04, employment in this industry has decreased by 8.1%. Within TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING, businesses employing 0–4 persons accounted for 30.3% of the subdivision's estimated total employment. However, of the employment size categories presented, businesses employing from 20

TEXTILE, CLOTHING, FOOTWEAR AND  
LEATHER MANUFACTURING  
*continued*

to 49 persons (with 14.5% of the industry's employment) made the greatest contribution to the subdivision's sales and service income (18.7%), wages and salaries (18.6%) and IVA(17.2%).

Exports made up 17.6% of the industry's sales of goods produced.

WOOD AND PAPER PRODUCT  
MANUFACTURING

IVA and sales and service income of WOOD AND PAPER PRODUCT MANUFACTURING increased by 3.9% between 2002–03 and 2003–04, accompanied by growth of 3.0% in purchases of goods and materials and 4.9% in other intermediate input expenses. Wages and salaries rose by 5.0% and employment by 2.5% to 74,100 persons.

In 2003–04, WOOD AND PAPER PRODUCT MANUFACTURING accounted for 7.2% of total IVA for manufacturing, 6.8% of employment, 6.3% of wages and salaries, and 5.9% of sales and service income, and 5.2% of purchases of goods and materials.

WOOD AND PAPER PRODUCT MANUFACTURING recorded a 45.1% increase in net capital expenditure during 2003–04, the strongest percentage growth of any manufacturing subdivision. The industry accounted for 7.4% of manufacturing asset acquisitions and 8.1% of net capital expenditure.

PRINTING, PUBLISHING AND  
RECORDED MEDIA

During 2003–04 the industry recorded an 4.4% increase in IVA. This increase was mainly attributable to a 3.9% decrease in other intermediate input expenses, with purchases of goods and materials increasing by 2.5% and a modest rise of 1.5% in sales and service income. Wages and salaries increased by 5.2%.

PRINTING, PUBLISHING AND RECORDED MEDIA's share of manufacturing purchases of goods and materials in 2003–04 was, at 3.6%, substantially less than its contribution to manufacturing's total IVA (10.3%), wages and salaries (10.2%), and sales and service income (6.5%). Of total employment in manufacturing at the end of June 2004, 10.0% was accounted for by this subdivision. PRINTING, PUBLISHING AND RECORDED MEDIA exported 4.5% of the value of its sales of goods produced, and non-exporting businesses represented over 75% of its employment, wages and salaries, sales and service income and IVA.

PETROLEUM, COAL, CHEMICAL AND  
ASSOCIATED PRODUCT  
MANUFACTURING

IVA increased marginally (1.2%) in 2003–04, following a rise of 10.5% the previous year. PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING sales and service income and purchases of goods and materials both increased by 4.2% in 2003–04, and wages and salaries by 5.1%. The industry accounted for 12.4% of IVA for manufacturing, 16.7% of sales and service income, 19.7% of purchases of goods and materials and 11.8% of wages and salaries. Total assets acquired by the subdivision represented 17.3% of total manufacturing and net capital expenditure 18.3%. The increase of \$0.6b (34.6%) in total capital acquisitions was the largest increase of any manufacturing industry.

Employment in the PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING industry constituted 9.9% of total manufacturing employment at the end of June 2004. Businesses employing 100 or more people accounted for 53.8% of employment in PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING. Such businesses produced 77.5% of the industry's sales and service income and 68.3% of its IVA, and paid 66.4% of its wages and salaries.

NON-METALLIC MINERAL PRODUCT MANUFACTURING	<p>This industry increased its wages and salaries paid by 4.4% from 2002–03 to 2003–04. IVA increased by 7.4%, reflecting a 9.2% increase in sales and service income and a 7.3% increase in purchases of goods and materials. In 2003–04, the subdivision's share of total acquisition of assets in manufacturing was 8.0% and 7.9% of net capital expenditure.</p> <p>As well as being the smallest manufacturing subdivision in terms of employment (contributing 4.2%), NON-METALLIC MINERAL PRODUCT MANUFACTURING is the subdivision in which businesses employing fewer than 100 persons made the smallest contributions in 2003–04 to total manufacturing sales and service income, IVA and wages and salaries. In contrast, NON-METALLIC MINERAL PRODUCT MANUFACTURING recorded the highest IVA per person employed, at \$104,000.</p>
METAL PRODUCT MANUFACTURING	<p>In 2003–04, IVA of METAL PRODUCT MANUFACTURING increased by 0.6%. Sales and service income increased by 2.3%, and purchases of goods and materials by 2.8%. Wages and salaries fell marginally, by 0.5%. The industry was a significant contributor to manufacturing total asset acquisitions (20.2%) and net capital expenditure (18.8%).</p> <p>METAL PRODUCT MANUFACTURING is the most heavily export-oriented manufacturing industry. In 2003–04, 36.5% of sales of goods produced were exported. Businesses exporting 50% or more of sales contributed 30.4% of the METAL PRODUCT MANUFACTURING's sales and service income and 29.3% of IVA, much higher than such businesses in any other manufacturing subdivision.</p> <p>Businesses employing fewer than 100 persons provided 59.5% of this industry's employment at the end of June 2004. The contribution of businesses in this employment size category was greater in METAL PRODUCT MANUFACTURING than to manufacturing overall. The percentage difference was especially marked in relation to IVA, to which they contributed 48.6% for this industry but only 22.9% at the total manufacturing level.</p>
MACHINERY AND EQUIPMENT MANUFACTURING	<p>The largest industry in terms of employment (244,200 or 22.3%) and wages and salaries (\$10.7b or 23.2%), MACHINERY AND EQUIPMENT MANUFACTURING was also the largest contributor to manufacturing IVA (\$17.8b or 19.7%). The subdivision's contribution to total capital acquisitions and net capital expenditure were both proportionately lower, at 13.1%. In 2003–04, IVA increased by 8.1%, sales and service income 5.4% and purchases of goods and materials by 5.5%. Wages and salaries grew by 4.4% (following a 9.5% increase in 2002–03), and employment increased at a more moderate rate of 1.9%.</p> <p>Uniquely among the manufacturing industries, employment within MACHINERY AND EQUIPMENT MANUFACTURING was almost equally shared between businesses employing fewer than 100 persons (50.7%) and those employing 100 or more (49.3%). However, businesses employing 100 or more persons paid 60.1% of the industry's wages and salaries, and made similar contributions to sales and service income (63.2%) and IVA (60.6%).</p>
OTHER MANUFACTURING	<p>Sales and service income of this industry increased by 7.6% and purchases of goods and materials by 4.5%. In 2003–04, OTHER MANUFACTURING accounted for 7.6% of total manufacturing employment but 5.0% or less of wages and salaries, IVA, sales and service income and purchases of goods and materials.</p>

OTHER MANUFACTURING  
*continued*

Of the nine manufacturing industry subdivisions, OTHER MANUFACTURING is heavily dominated by businesses employing fewer than 100 persons. In this industry, these businesses account for 88.3% of employment, 82.5% of wages and salaries, 85.3% of sales and service income, and 84.2% of IVA. In all the employment size categories representing businesses employing fewer than 20 persons, OTHER MANUFACTURING made the greatest percentage contribution of any manufacturing industry.

OTHER MANUFACTURING exported 3.3% of its sales of goods produced, the second lowest of any other manufacturing subdivision. Businesses which did not export accounted for 81.6% of employment in the industry, with similar levels of contribution to wages and salaries, sales and service income and IVA.

## 2.1 INDUSTRY CLASS

INDUSTRY CLASS	Employment at end of June(a)	Wages and salaries(b)	Sales and service income(c)	Industry value added	Sales and service income per person employed	Industry value added per person employed	
ANZSIC code    Description	no.	\$m	\$m	\$m	\$'000	\$'000	
<b>FOOD, BEVERAGE AND TOBACCO MFG</b>							
<b>211</b>	<b>Meat and meat product mfg</b>						
2111	Meat processing	28 817	1 034	10 034	1 658	348.2	57.5
2112	Poultry processing	15 632	655	3 848	1 114	246.2	71.3
2113	Bacon, ham and smallgoods mfg	8 044	317	2 126	496	264.3	61.7
	<i>Total</i>	52 492	2 006	16 008	3 269	305.0	62.3
<b>212</b>	<b>Dairy product mfg</b>						
2121	Milk and cream processing	6 480	312	2 919	625	450.5	96.4
2122	Ice cream mfg	1 744	67	552	127	316.8	73.0
2129	Dairy product mfg n.e.c.	11 010	522	5 519	795	501.3	72.2
	<i>Total</i>	19 235	901	8 991	1 547	467.4	80.4
<b>213</b>	<b>Fruit and vegetable processing</b>						
213		12 863	610	4 606	1 163	358.1	90.4
<b>214</b>	<b>Oil and fat mfg</b>						
214		2 983	169	1 683	406	564.1	136.2
<b>215</b>	<b>Flour mill and cereal food mfg</b>						
2151	Flour mill product mfg	2 034	120	1 560	290	767.2	142.4
2152	Cereal food and baking mix mfg	6 126	280	2 024	610	330.3	99.5
	<i>Total</i>	8 160	400	3 584	899	439.2	110.2
<b>216</b>	<b>Bakery product mfg</b>						
2161	Bread mfg	11 369	461	1 810	720	159.2	63.3
2162	Cake and pastry mfg	9 186	268	1 113	404	121.2	43.9
2163	Biscuit mfg	4 788	212	870	387	181.8	80.8
	<i>Total</i>	25 343	941	3 794	1 510	149.7	59.6
<b>217</b>	<b>Other food mfg</b>						
2171	Sugar mfg	5 014	232	2 005	302	399.9	60.3
2172	Confectionery mfg	9 535	559	3 757	1 311	394.1	137.4
2173	Seafood processing	4 316	132	1 413	235	327.4	54.4
2174	Prepared animal and bird feed mfg	4 210	222	2 676	444	635.6	105.5
2179	Food mfg n.e.c.	19 814	753	5 307	1 221	267.8	61.6
	<i>Total</i>	42 888	1 898	15 159	3 512	353.5	81.9
<b>218</b>	<b>Beverage and malt mfg</b>						
2181	Soft drink, cordial and syrup mfg	7 011	350	3 310	1 052	472.1	150.0
2182	Beer and malt mfg	4 148	304	3 623	1 431	873.3	345.0
2183	Wine mfg	15 393	704	5 541	1 691	360.0	109.9
2184	Spirit mfg	np	np	np	np	np	np
	<i>Total</i>	np	np	np	np	np	np
<b>219</b>	<b>Tobacco product mfg</b>						
219		np	np	np	np	np	np
<b>21</b>	<b>Total food, beverage and tobacco mfg</b>	<b>193 172</b>	<b>8 502</b>	<b>68 470</b>	<b>17 609</b>	<b>354.5</b>	<b>91.2</b>
<b>TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG</b>							
<b>221</b>	<b>Textile fibre, yarn and woven fabric mfg</b>						
2211	Wool scouring	540	41	258	35	478.5	64.7
2212	Synthetic fibre textile mfg	2 178	78	403	150	185.3	69.1
2213	Cotton textile mfg	2 060	74	336	124	163.0	60.3
2214	Wool textile mfg	891	33	185	56	207.1	62.4
2215	Textile finishing	1 362	43	222	79	163.1	58.2
	<i>Total</i>	7 032	268	1 404	444	199.7	63.2

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

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring income.

**2.1** INDUSTRY CLASS *continued*

INDUSTRY CLASS	Employment at end of June(a)	Wages and salaries(b)	Sales and service income(c)	Industry value added	Sales and service income per person employed	Industry value added per person employed	
ANZSIC code Description	no.	\$m	\$m	\$m	\$'000	\$'000	
<b>TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MFG <i>cont.</i></b>							
<b>222</b>	<b>Textile product mfg</b>						
2221	Made-up textile product mfg	9 494	256	1 227	425	129.2	44.8
2222	Textile floor covering mfg	3 776	180	1 107	321	293.1	85.0
2223	Rope, cordage and twine mfg	581	18	114	28	195.9	48.9
2229	Textile product mfg n.e.c.	3 756	109	548	188	145.8	50.2
	<i>Total</i>	<i>17 608</i>	<i>563</i>	<i>2 995</i>	<i>963</i>	<i>170.1</i>	<i>54.7</i>
<b>223</b>	<b>Knitting mills</b>						
2231	Hosiery mfg	997	39	131	65	130.9	65.3
2232	Cardigan and pullover mfg	660	17	80	30	121.4	45.0
2239	Knitting mill product mfg n.e.c.	1 061	28	166	48	156.0	45.7
	<i>Total</i>	<i>2 717</i>	<i>83</i>	<i>376</i>	<i>143</i>	<i>138.5</i>	<i>52.7</i>
<b>224</b>	<b>Clothing mfg</b>						
2241	Men's and boys' wear mfg	3 739	115	579	190	154.8	50.9
2242	Women's and girls' wear mfg	6 827	135	917	266	134.3	39.0
2243	Sleepwear, underwear and infant clothing mfg	1 372	46	359	95	261.6	68.9
2249	Clothing mfg n.e.c.	20 255	384	2 252	705	111.2	34.8
	<i>Total</i>	<i>32 193</i>	<i>680</i>	<i>4 106</i>	<i>1 256</i>	<i>127.5</i>	<i>39.0</i>
<b>225</b>	<b>Footwear mfg</b>						
		3 135	105	562	186	179.1	59.4
<b>226</b>	<b>Leather and leather product mfg</b>						
2261	Leather tanning and fur dressing	2 423	86	635	126	262.1	52.2
2262	Leather and leather substitute product mfg	1 485	35	213	70	143.2	47.3
	<i>Total</i>	<i>3 908</i>	<i>121</i>	<i>848</i>	<i>197</i>	<i>216.9</i>	<i>50.3</i>
<b>22</b>	<b>Total textile, clothing, footwear and leather mfg</b>	<b>66 594</b>	<b>1 820</b>	<b>10 291</b>	<b>3 189</b>	<b>154.5</b>	<b>47.9</b>
<b>WOOD AND PAPER PRODUCT MFG</b>							
<b>231</b>	<b>Log sawmilling and timber dressing</b>						
2311	Log sawmilling	9 535	296	1 569	736	164.6	77.2
2312	Wood chipping	1 054	42	655	222	621.3	210.8
2313	Timber resawing and dressing	6 885	308	1 988	788	288.7	114.4
	<i>Total</i>	<i>17 474</i>	<i>646</i>	<i>4 212</i>	<i>1 746</i>	<i>241.0</i>	<i>99.9</i>
<b>232</b>	<b>Other wood product mfg</b>						
2321	Plywood and veneer mfg	1 357	61	366	107	269.5	78.6
2322	Fabricated wood mfg	4 443	226	1 456	497	327.6	111.8
2323	Wooden structural component mfg	22 283	597	3 327	1 066	149.3	47.9
2329	Wood product mfg n.e.c.	9 493	202	1 143	386	120.4	40.7
	<i>Total</i>	<i>37 576</i>	<i>1 086</i>	<i>6 291</i>	<i>2 056</i>	<i>167.4</i>	<i>54.7</i>
<b>233</b>	<b>Paper and paper product mfg</b>						
2331	Pulp, paper and paperboard mfg	3 977	238	1 860	598	467.7	150.5
2332	Solid paperboard container mfg	2 197	138	518	227	235.9	103.2
2333	Corrugated paperboard container mfg	6 105	404	3 275	1 021	536.4	167.3
2334	Paper bag and sack mfg	1 097	62	357	139	325.1	126.9
2339	Paper product mfg n.e.c.	5 649	327	2 114	735	374.3	130.2
	<i>Total</i>	<i>19 025</i>	<i>1 170</i>	<i>8 124</i>	<i>2 721</i>	<i>427.0</i>	<i>143.0</i>
<b>23</b>	<b>Total wood and paper product mfg</b>	<b>74 075</b>	<b>2 901</b>	<b>18 627</b>	<b>6 523</b>	<b>251.5</b>	<b>88.1</b>

(a) Includes working proprietors.

(c) Includes rent, leasing and hiring income.

(b) Excludes the drawings of working proprietors.

## 2.1 INDUSTRY CLASS *continued*

INDUSTRY CLASS	Employment at end of June(a)	Wages and salaries(b)	Sales and service income(c)	Industry value added	Sales and service income per person employed	Industry value added per person employed	
ANZSIC code    Description	no.	\$m	\$m	\$m	\$'000	\$'000	
<b>PRINTING, PUBLISHING AND RECORDED MEDIA</b>							
<b>241</b>	<b>Printing and services to printing</b>						
2411	Paper stationery mfg	5 040	226	1 213	379	240.6	75.2
2412	Printing	44 478	1 784	7 353	2 895	165.3	65.1
2413	Services to printing	7 401	214	775	322	104.8	43.5
	<i>Total</i>	56 919	2 224	9 341	3 596	164.1	63.2
<b>242</b>	<b>Publishing</b>						
2421	Newspaper printing or publishing	27 964	1 388	5 789	3 178	207.0	113.7
2422	Other periodical publishing	8 425	426	1 752	693	208.0	82.3
2423	Book and other publishing	11 863	504	2 969	1 530	250.2	128.9
	<i>Total</i>	48 252	2 319	10 510	5 401	217.8	111.9
<b>243</b>	<b>Recorded media manufacturing and publishing</b>						
<b>24</b>	<b>Total printing, publishing and recorded media</b>	<b>109 496</b>	<b>4 737</b>	<b>20 662</b>	<b>9 316</b>	<b>188.7</b>	<b>85.1</b>
<b>PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG</b>							
<b>251</b>	<b>Petroleum refining</b>						
<b>252</b>	<b>Petroleum and coal product mfg n.e.c.</b>						
<b>253</b>	<b>Basic chemical mfg</b>						
2531	Fertiliser mfg	np	np	np	np	np	np
2532	Industrial gas mfg	np	np	np	np	np	np
2533	Synthetic resin mfg	6 430	351	3 226	726	501.7	112.9
2534	Organic industrial chemical mfg n.e.c.	2 120	122	994	213	468.9	100.6
2535	Inorganic industrial chemical mfg n.e.c.	4 664	277	2 765	776	592.8	166.4
	<i>Total</i>	18 035	1 060	10 219	2 712	566.6	150.4
<b>254</b>	<b>Other chemical product mfg</b>						
2541	Explosive mfg	np	np	np	np	np	np
2542	Paint mfg	6 700	340	1 960	555	292.5	82.9
2543	Medicinal and pharmaceutical product mfg	14 987	812	5 903	1 526	393.9	101.8
2544	Pesticide mfg	1 167	74	722	172	618.6	147.0
2545	Soap and other detergent mfg	3 869	212	1 691	494	437.1	127.7
2546	Cosmetic and toiletry preparation mfg	3 291	96	582	179	177.0	54.5
2547	Ink mfg	np	np	np	np	np	np
2549	Chemical product mfg n.e.c.	4 304	196	1 397	414	324.6	96.2
	<i>Total</i>	36 837	1 892	13 447	3 770	365.0	102.3
<b>255</b>	<b>Rubber product mfg</b>						
2551	Rubber tyre mfg	3 446	170	953	270	276.7	78.2
2559	Rubber product mfg n.e.c.	5 139	219	1 066	375	207.5	73.0
	<i>Total</i>	8 585	388	2 020	645	235.3	75.1

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

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring income.

**2.1** INDUSTRY CLASS *continued*

INDUSTRY CLASS	Employment at end of June(a)	Wages and salaries(b)	Sales and service income(c)	Industry value added	Sales and service income per person employed	Industry value added per person employed	
ANZSIC code    Description	no.	\$m	\$m	\$m	\$'000	\$'000	
<b>PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MFG <i>cont.</i></b>							
<b>256</b>	<b>Plastic product mfg</b>						
2561	4 050	182	935	342	230.8	84.4	
2562	4 645	186	1 244	362	267.8	78.0	
2563	5 939	300	1 815	590	305.7	99.3	
2564	6 996	228	1 037	366	148.2	52.3	
2565	2 274	91	476	176	209.2	77.5	
2566	13 543	519	2 663	941	196.6	69.5	
	<i>Total</i>	<i>37 447</i>	<i>1 507</i>	<i>8 169</i>	<i>2 777</i>	<i>218.2</i>	<i>74.2</i>
<b>25</b>	<b>Total petroleum, coal, chemical and associated product mfg</b>						
	<b>107 948</b>	<b>5 450</b>	<b>52 833</b>	<b>11 258</b>	<b>489.4</b>	<b>104.3</b>	
<b>NON-METALLIC MINERAL PRODUCT MFG</b>							
<b>261</b>	<b>Glass and glass product mfg</b>						
	7 838	320	1 889	800	241.0	102.1	
<b>262</b>	<b>Ceramic mfg</b>						
2621	3 043	167	964	442	316.8	145.2	
2622	1 222	71	258	101	211.2	82.9	
2623	^ 787	26	112	44	142.6	55.4	
2629	2 656	85	451	188	169.6	70.8	
	<i>Total</i>	<i>7 707</i>	<i>349</i>	<i>1 785</i>	<i>775</i>	<i>231.6</i>	<i>100.5</i>
<b>263</b>	<b>Cement, lime, plaster and concrete product mfg</b>						
2631	3 099	192	1 699	675	548.3	217.8	
2632	4 361	222	1 598	478	366.4	109.6	
2633	7 357	390	3 416	898	464.3	122.1	
2634	1 045	50	230	91	220.2	87.2	
2635	7 192	270	1 400	532	194.7	73.9	
	<i>Total</i>	<i>23 055</i>	<i>1 124</i>	<i>8 343</i>	<i>2 674</i>	<i>361.9</i>	<i>116.0</i>
<b>264</b>	<b>Non-metallic mineral product mfg n.e.c.</b>						
	7 623	301	1 628	562	213.6	73.7	
<b>26</b>	<b>Total non-metallic mineral product mfg</b>						
	<b>46 223</b>	<b>2 095</b>	<b>13 646</b>	<b>4 811</b>	<b>295.2</b>	<b>104.1</b>	
<b>METAL PRODUCT MFG</b>							
<b>271</b>	<b>Iron and steel mfg</b>						
2711	23 175	1 480	11 541	2 932	498.0	126.5	
2712	9 413	498	2 046	912	217.3	96.9	
2713	2 901	146	1 072	315	369.6	108.4	
	<i>Total</i>	<i>35 488</i>	<i>2 124</i>	<i>14 659</i>	<i>4 159</i>	<i>413.1</i>	<i>117.2</i>
<b>272</b>	<b>Basic non-ferrous metal mfg</b>						
2721	7 242	594	5 566	2 369	768.6	327.1	
2722	4 789	380	5 928	1 385	1 237.9	289.1	
2723	2 194	152	2 327	32	1 060.5	14.4	
2729	2 294	150	8 224	629	3 585.2	274.3	
	<i>Total</i>	<i>16 519</i>	<i>1 276</i>	<i>22 045</i>	<i>4 415</i>	<i>1 334.6</i>	<i>267.2</i>
<b>273</b>	<b>Non-ferrous basic metal product mfg</b>						
2731	3 277	212	1 399	329	426.9	100.4	
2732							
	1 758	94	863	137	491.0	77.7	
2733	1 371	56	212	86	154.8	62.6	
	<i>Total</i>	<i>6 407</i>	<i>363</i>	<i>2 474</i>	<i>551</i>	<i>386.2</i>	<i>86.1</i>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring income.

## 2.1 INDUSTRY CLASS *continued*

INDUSTRY CLASS	Employment at end of June(a)	Wages and salaries(b)	Sales and service income(c)	Industry value added	Sales and service income per person employed	Industry value added per person employed	
ANZSIC code    Description	no.	\$m	\$m	\$m	\$'000	\$'000	
<b>METAL PRODUCT MFG <i>cont.</i></b>							
<b>274</b>	<b>Structural metal product mfg</b>						
2741	Structural steel fabricating	17 384	670	3 769	1 085	216.8	62.4
2742	Architectural aluminium product mfg	16 418	568	2 834	951	172.6	57.9
2749	Structural metal product mfg n.e.c.	7 646	251	1 324	443	173.2	57.9
	<i>Total</i>	<i>41 447</i>	<i>1 489</i>	<i>7 927</i>	<i>2 479</i>	<i>191.3</i>	<i>59.8</i>
<b>275</b>	<b>Sheet metal product mfg</b>						
2751	Metal container mfg	3 771	207	1 394	407	369.7	108.0
2759	Sheet metal product mfg n.e.c.	15 230	531	2 609	956	171.3	62.8
	<i>Total</i>	<i>19 001</i>	<i>738</i>	<i>4 003</i>	<i>1 364</i>	<i>210.7</i>	<i>71.8</i>
<b>276</b>	<b>Fabricated metal product mfg</b>						
2761	Hand tool and general hardware mfg	2 639	71	327	130	123.9	49.2
2762	Spring and wire product mfg	4 745	212	1 044	335	220.0	70.7
2763	Nut, bolt, screw and rivet mfg	1 953	84	445	148	228.1	75.8
2764	Metal coating and finishing	9 798	282	933	459	95.2	46.8
2765	Non-ferrous pipe fitting mfg	869	38	212	73	244.3	83.7
2769	Fabricated metal product mfg n.e.c.	31 416	992	4 673	1 790	148.7	57.0
	<i>Total</i>	<i>51 420</i>	<i>1 679</i>	<i>7 634</i>	<i>2 935</i>	<i>148.5</i>	<i>57.1</i>
<b>27</b>	<b>Total metal product mfg</b>	<b>170 283</b>	<b>7 668</b>	<b>58 743</b>	<b>15 902</b>	<b>345.0</b>	<b>93.4</b>
<b>MACHINERY AND EQUIPMENT MFG</b>							
<b>281</b>	<b>Motor vehicle and part mfg</b>						
2811	Motor vehicle mfg	28 717	1 520	14 081	2 818	490.3	98.1
2812	Motor vehicle body mfg	^ 12 169	^ 387	2 106	^ 624	173.0	51.3
2813	Automotive electrical and instrument mfg	4 981	216	1 631	330	327.4	66.2
2819	Automotive component mfg n.e.c.	25 246	1 194	5 814	2 117	230.3	83.9
	<i>Total</i>	<i>71 113</i>	<i>3 317</i>	<i>23 631</i>	<i>5 889</i>	<i>332.3</i>	<i>82.8</i>
<b>282</b>	<b>Other transport equipment mfg</b>						
2821	Shipbuilding	6 632	335	1 697	608	255.9	91.8
2822	Boatbuilding	7 294	185	1 092	307	149.8	42.1
2823	Railway equipment mfg	5 751	275	1 258	386	218.8	67.1
2824	Aircraft mfg	13 325	598	3 128	1 010	234.8	75.8
2829	Transport equipment mfg n.e.c.	876	22	185	37	211.7	42.0
	<i>Total</i>	<i>33 879</i>	<i>1 415</i>	<i>7 362</i>	<i>2 349</i>	<i>217.3</i>	<i>69.3</i>
<b>283</b>	<b>Photographic and scientific equipment mfg</b>						
2831	Photographic and optical good mfg	2 999	148	1 179	240	393.2	80.0
2832	Medical and surgical equipment mfg	9 192	343	1 471	649	160.0	70.6
2839	Professional and scientific equipment mfg n.e.c.	6 091	284	1 287	458	211.4	75.1
	<i>Total</i>	<i>18 283</i>	<i>775</i>	<i>3 937</i>	<i>1 347</i>	<i>215.4</i>	<i>73.7</i>
<b>284</b>	<b>Electronic equipment mfg</b>						
2841	Computer and business machine mfg	4 383	180	1 151	263	262.5	60.0
2842	Telecommunication, broadcasting and transceiving equipment mfg	7 445	472	1 641	707	220.4	95.0
2849	Electronic equipment mfg n.e.c.	9 873	459	1 875	640	189.9	64.8
	<i>Total</i>	<i>21 701</i>	<i>1 111</i>	<i>4 667</i>	<i>1 610</i>	<i>215.0</i>	<i>74.2</i>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring income.

## 2.1 INDUSTRY CLASS *continued*

INDUSTRY CLASS	Employment at end of June (a)	Wages and salaries (b)	Sales and service income (c)	Industry value added	Sales and service income per person employed	Industry value added per person employed	
ANZSIC code    Description	no.	\$m	\$m	\$m	\$'000	\$'000	
<b>MACHINERY AND EQUIPMENT MFG <i>cont.</i></b>							
<b>285</b>	<b>Electrical equipment and appliance mfg</b>						
2851	Household appliance mfg	12 610	540	3 078	970	244.1	77.0
2852	Electric cable and wire mfg	2 523	141	902	255	357.5	101.2
2853	Battery mfg	1 151	48	280	88	242.9	76.8
2854	Electric light and sign mfg	5 574	204	845	278	151.6	49.9
2859	Electrical equipment mfg n.e.c.	15 850	619	2 986	878	188.4	55.4
	<i>Total</i>	37 708	1 553	8 091	2 471	214.6	65.5
<b>286</b>	<b>Industrial machinery and equipment mfg</b>						
2861	Agricultural machinery mfg	6 159	206	1 257	350	204.1	56.9
2862	Mining and construction machinery mfg	^ 12 679	^ 520	2 260	835	178.2	65.9
2863	Food processing machinery mfg	2 799	107	561	180	200.5	64.3
2864	Machine tool and part mfg	6 027	218	840	362	139.3	60.1
2865	Lifting and material handling equipment mfg	8 591	465	1 911	694	222.4	80.8
2866	Pump and compressor mfg	3 534	168	824	290	233.1	82.1
2867	Commercial space heating and cooling equipment mfg	2 106	94	499	145	236.9	68.6
2869	Industrial machinery and equipment mfg n.e.c.	19 617	779	4 004	1 269	204.1	64.7
	<i>Total</i>	61 513	2 556	12 155	4 125	197.6	67.1
<b>28</b>	<b>Total machinery and equipment mfg</b>	<b>244 196</b>	<b>10 727</b>	<b>59 843</b>	<b>17 790</b>	<b>245.1</b>	<b>72.9</b>
<b>OTHER MANUFACTURING</b>							
<b>291</b>	<b>Prefabricated building mfg</b>						
2911	Prefabricated metal building mfg	2 722	98	739	193	271.4	71.0
2919	Prefabricated building mfg n.e.c.	1 704	46	341	95	200.0	56.0
	<i>Total</i>	4 426	144	1 080	289	243.9	65.2
<b>292</b>	<b>Furniture mfg</b>						
2921	Wooden furniture and upholstered seat mfg	36 682	945	4 331	1 550	118.1	42.2
2922	Sheet metal furniture mfg	3 277	121	527	194	160.8	59.3
2923	Mattress mfg (except rubber)	3 123	109	569	192	182.1	61.6
2929	Furniture mfg n.e.c.	11 913	375	2 234	646	187.5	54.3
	<i>Total</i>	54 995	1 550	7 660	2 583	139.3	47.0
<b>294</b>	<b>Miscellaneous mfg</b>						
2941	Jewellery and silverware mfg	4 597	94	621	189	135.1	41.1
2942	Toy and sporting good mfg	3 492	82	530	151	151.7	43.1
2949	Manufacturing n.e.c.	15 768	451	2 600	825	164.9	52.3
	<i>Total</i>	23 856	627	3 751	1 165	157.2	48.8
<b>29</b>	<b>Total other manufacturing</b>	<b>83 277</b>	<b>2 321</b>	<b>12 490</b>	<b>4 036</b>	<b>150.0</b>	<b>48.5</b>
<b>21-29</b>	<b>TOTAL MANUFACTURING</b>	<b>1 095 263</b>	<b>46 222</b>	<b>315 605</b>	<b>90 434</b>	<b>288.2</b>	<b>82.6</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring income.

## 2.2 EMPLOYMENT SIZE (a)

Employment size group	Employment at end of June(b)		Wages and salaries(c)		Sales and service income(d)		Industry value added	
	'000	%	\$m	%	\$m	%	\$m	%
FOOD, BEVERAGE AND TOBACCO MANUFACTURING								
0–4 persons	7.8	4.0	80	0.9	2 331	3.4	303	1.7
5–9 persons	7.9	4.1	213	2.5	1 556	2.3	375	2.1
10–19 persons	9.8	5.1	287	3.4	1 968	2.9	480	2.7
20–49 persons	18.1	9.3	563	6.6	4 345	6.4	989	5.6
50–99 persons	14.5	7.5	531	6.3	4 584	6.7	1 003	5.7
Total less than 100 persons	58.1	30.1	1 674	19.7	14 784	21.7	3 150	17.9
100–199 persons	12.9	6.7	547	6.4	4 203	6.2	1 039	5.9
200–499 persons	28.4	14.7	1 229	14.5	11 147	16.3	2 655	15.1
500–999 persons	18.7	9.7	941	11.1	7 972	11.7	1 831	10.4
1000 or more persons	75.1	38.9	4 095	48.3	30 076	44.1	8 908	50.7
Total 100 or more persons	135.1	69.9	6 813	80.3	53 399	78.3	14 433	82.1
Total	193.2	100.0	8 487	100.0	68 182	100.0	17 583	100.0
TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING								
0–4 persons	20.2	30.3	148	8.2	1 589	15.6	400	12.6
5–9 persons	7.6	11.5	207	11.5	912	9.0	327	10.3
10–19 persons	6.8	10.2	208	11.5	1 121	11.0	388	12.2
20–49 persons	9.7	14.5	336	18.6	1 906	18.7	548	17.2
50–99 persons	6.5	9.8	256	14.2	1 371	13.5	426	13.4
Total less than 100 persons	50.9	76.4	1 154	63.9	6 899	67.7	2 089	65.6
100–199 persons	4.7	7.1	212	11.7	1 150	11.3	359	11.3
200–499 persons	5.6	8.5	198	11.0	860	8.4	313	9.8
500–999 persons	5.3	8.0	240	13.3	1 275	12.5	423	13.3
1000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	15.7	23.6	651	36.1	3 285	32.3	1 095	34.4
Total	66.6	100.0	1 804	100.0	10 184	100.0	3 185	100.0
WOOD AND PAPER PRODUCT MANUFACTURING								
0–4 persons	12.2	16.5	112	3.9	1 145	6.2	332	5.1
5–9 persons	9.0	12.1	251	8.7	1 189	6.4	409	6.3
10–19 persons	7.4	10.0	239	8.3	1 383	7.5	488	7.5
20–49 persons	10.4	14.1	349	12.1	1 956	10.6	684	10.5
50–99 persons	6.0	8.1	219	7.6	1 153	6.2	407	6.3
Total less than 100 persons	45.0	60.8	1 170	40.6	6 826	36.9	2 320	35.7
100–199 persons	4.9	6.7	243	8.4	1 400	7.6	506	7.8
200–499 persons	7.5	10.1	392	13.6	2 785	15.1	973	15.0
500–999 persons	3.8	5.1	192	6.7	1 677	9.1	683	10.5
1000 or more persons	12.9	17.4	885	30.7	5 797	31.4	2 013	31.0
Total 100 or more persons	29.1	39.2	1 712	59.4	11 661	63.1	4 175	64.3
Total	74.1	100.0	2 882	100.0	18 487	100.0	6 494	100.0

— nil or rounded to zero (including null cells)

(a) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing ABN units / TAUs which operated during 2003–04 but were not operating at 30 June 2004. See paragraph 23 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Includes rent, leasing and hiring income.

## 2.2 EMPLOYMENT SIZE (a) *continued*

Employment size group	Employment at end of June (b)		Wages and salaries (c)		Sales and service income (d)		Industry value added	
	'000	%	\$m	%	\$m	%	\$m	%
PRINTING, PUBLISHING AND RECORDED MEDIA								
0–4 persons	18.9	17.2	286	6.1	1 571	7.6	421	4.5
5–9 persons	7.6	6.9	271	5.7	946	4.6	387	4.2
10–19 persons	12.4	11.3	476	10.1	1 756	8.6	709	7.6
20–49 persons	13.2	12.1	535	11.3	1 950	9.5	845	9.1
50–99 persons	8.8	8.0	432	9.2	1 771	8.6	711	7.7
<i>Total less than 100 persons</i>	<i>60.8</i>	<i>55.6</i>	<i>2 001</i>	<i>42.4</i>	<i>7 994</i>	<i>38.9</i>	<i>3 073</i>	<i>33.1</i>
100–199 persons	7.8	7.1	379	8.0	1 754	8.5	697	7.5
200–499 persons	10.6	9.7	561	11.9	2 619	12.7	1 035	11.1
500–999 persons	7.1	6.5	316	6.7	1 419	6.9	716	7.7
1000 or more persons	23.1	21.1	1 463	31.0	6 756	32.9	3 767	40.6
<i>Total 100 or more persons</i>	<i>48.7</i>	<i>44.4</i>	<i>2 719</i>	<i>57.6</i>	<i>12 549</i>	<i>61.1</i>	<i>6 215</i>	<i>66.9</i>
<i>Total</i>	<i>109.5</i>	<i>100.0</i>	<i>4 720</i>	<i>100.0</i>	<i>20 543</i>	<i>100.0</i>	<i>9 288</i>	<i>100.0</i>
PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING								
0–4 persons	7.4	6.8	107	2.0	1 350	2.6	310	2.8
5–9 persons	7.2	6.7	252	4.6	1 258	2.4	430	3.8
10–19 persons	8.8	8.1	341	6.3	1 703	3.2	506	4.5
20–49 persons	14.9	13.8	570	10.5	3 685	7.0	1 164	10.4
50–99 persons	11.6	10.8	556	10.2	3 807	7.3	1 145	10.2
<i>Total less than 100 persons</i>	<i>49.8</i>	<i>46.2</i>	<i>1 825</i>	<i>33.6</i>	<i>11 802</i>	<i>22.5</i>	<i>3 555</i>	<i>31.7</i>
100–199 persons	10.0	9.2	535	9.8	4 183	8.0	1 101	9.8
200–499 persons	14.9	13.8	961	17.7	10 323	19.7	2 046	18.2
500–999 persons	16.2	15.0	982	18.1	13 155	25.1	2 231	19.9
1000 or more persons	17.0	15.8	1 131	20.8	13 009	24.8	2 284	20.4
<i>Total 100 or more persons</i>	<i>58.1</i>	<i>53.8</i>	<i>3 609</i>	<i>66.4</i>	<i>40 670</i>	<i>77.5</i>	<i>7 662</i>	<i>68.3</i>
<i>Total</i>	<i>107.9</i>	<i>100.0</i>	<i>5 433</i>	<i>100.0</i>	<i>52 472</i>	<i>100.0</i>	<i>11 217</i>	<i>100.0</i>
NON-METALLIC MINERAL PRODUCT MANUFACTURING								
0–4 persons	6.7	14.5	73	3.5	721	5.3	221	4.6
5–9 persons	3.9	8.4	111	5.3	490	3.6	192	4.0
10–19 persons	3.0	6.4	106	5.0	501	3.7	179	3.7
20–49 persons	6.9	14.9	296	14.1	1 704	12.5	549	11.4
50–99 persons	3.0	6.6	153	7.3	1 013	7.4	313	6.5
<i>Total less than 100 persons</i>	<i>23.5</i>	<i>50.8</i>	<i>738</i>	<i>35.3</i>	<i>4 428</i>	<i>32.5</i>	<i>1 454</i>	<i>30.3</i>
100–199 persons	4.0	8.7	224	10.7	1 648	12.1	499	10.4
200–499 persons	4.4	9.5	250	12.0	1 483	10.9	637	13.3
500–999 persons	4.4	9.5	273	13.0	1 681	12.3	634	13.2
1000 or more persons	10.0	21.5	608	29.1	4 379	32.2	1 582	32.9
<i>Total 100 or more persons</i>	<i>22.8</i>	<i>49.2</i>	<i>1 355</i>	<i>64.7</i>	<i>9 191</i>	<i>67.5</i>	<i>3 352</i>	<i>69.7</i>
<i>Total</i>	<i>46.2</i>	<i>100.0</i>	<i>2 093</i>	<i>100.0</i>	<i>13 619</i>	<i>100.0</i>	<i>4 806</i>	<i>100.0</i>

(a) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing ABN units / TAUs which operated during 2003–04 but were not operating at 30 June 2004. See paragraph 23 of the Explanatory Notes.

(b) Includes working proprietors.  
(c) Excludes the drawings of working proprietors.  
(d) Includes rent, leasing and hiring income.

**2.2****EMPLOYMENT SIZE (a)** *continued*

<i>Employment size group</i>	<i>Employment at end of June (b)</i>		<i>Wages and salaries (c)</i>		<i>Sales and service income (d)</i>		<i>Industry value added</i>	
	'000	%	\$m	%	\$m	%	\$m	%
<b>METAL PRODUCT MANUFACTURING</b>								
0–4 persons	26.3	15.5	294	3.9	10 477	17.9	2 158	13.6
5–9 persons	17.1	10.1	566	7.4	3 914	6.7	1 850	11.7
10–19 persons	19.7	11.6	734	9.6	3 518	6.0	1 246	7.9
20–49 persons	24.1	14.1	972	12.7	4 643	7.9	1 391	8.8
50–99 persons	14.1	8.3	644	8.4	3 254	5.6	1 070	6.7
<i>Total less than 100 persons</i>	<i>101.4</i>	<i>59.5</i>	<i>3 211</i>	<i>42.0</i>	<i>25 807</i>	<i>44.1</i>	<i>7 715</i>	<i>48.6</i>
100–199 persons	11.1	6.5	555	7.3	3 356	5.7	967	6.1
200–499 persons	14.0	8.2	794	10.4	7 780	13.3	1 780	11.2
500–999 persons	16.8	9.9	1 010	13.2	6 805	11.6	1 393	8.8
1000 or more persons	27.0	15.8	2 074	27.1	14 826	25.3	4 013	25.3
<i>Total 100 or more persons</i>	<i>68.9</i>	<i>40.5</i>	<i>4 433</i>	<i>58.0</i>	<i>32 767</i>	<i>55.9</i>	<i>8 153</i>	<i>51.4</i>
<i>Total</i>	<i>170.3</i>	<i>100.0</i>	<i>7 643</i>	<i>100.0</i>	<i>58 574</i>	<i>100.0</i>	<i>15 868</i>	<i>100.0</i>
<b>MACHINERY AND EQUIPMENT MANUFACTURING</b>								
0–4 persons	31.0	12.7	453	4.2	3 366	5.7	991	5.6
5–9 persons	18.5	7.6	675	6.3	3 015	5.1	1 041	5.9
10–19 persons	24.9	10.2	987	9.2	4 215	7.1	1 562	8.8
20–49 persons	29.6	12.1	1 242	11.6	6 207	10.5	1 914	10.8
50–99 persons	19.7	8.1	907	8.5	5 044	8.5	1 490	8.4
<i>Total less than 100 persons</i>	<i>123.7</i>	<i>50.7</i>	<i>4 264</i>	<i>39.9</i>	<i>21 847</i>	<i>36.8</i>	<i>6 998</i>	<i>39.4</i>
100–199 persons	17.8	7.3	807	7.5	3 996	6.7	1 326	7.5
200–499 persons	28.3	11.6	1 418	13.3	7 482	12.6	2 320	13.1
500–999 persons	25.4	10.4	1 354	12.7	7 603	12.8	2 537	14.3
1000 or more persons	49.1	20.1	2 855	26.7	18 429	31.0	4 580	25.8
<i>Total 100 or more persons</i>	<i>120.5</i>	<i>49.3</i>	<i>6 434</i>	<i>60.1</i>	<i>37 510</i>	<i>63.2</i>	<i>10 764</i>	<i>60.6</i>
<i>Total</i>	<i>244.2</i>	<i>100.0</i>	<i>10 699</i>	<i>100.0</i>	<i>59 357</i>	<i>100.0</i>	<i>17 762</i>	<i>100.0</i>
<b>OTHER MANUFACTURING</b>								
0–4 persons	26.1	31.3	223	9.7	2 311	18.8	663	16.6
5–9 persons	14.0	16.8	431	18.8	2 229	18.1	684	17.1
10–19 persons	14.3	17.2	513	22.4	2 359	19.2	867	21.7
20–49 persons	12.3	14.7	445	19.4	2 103	17.1	683	17.1
50–99 persons	6.8	8.2	281	12.3	1 482	12.1	473	11.8
<i>Total less than 100 persons</i>	<i>73.5</i>	<i>88.3</i>	<i>1 893</i>	<i>82.5</i>	<i>10 485</i>	<i>85.3</i>	<i>3 370</i>	<i>84.2</i>
100–199 persons	4.0	4.8	161	7.0	770	6.3	262	6.5
200–499 persons	5.7	6.9	240	10.5	1 035	8.4	373	9.3
500–999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>9.7</i>	<i>11.7</i>	<i>400</i>	<i>17.5</i>	<i>1 805</i>	<i>14.7</i>	<i>634</i>	<i>15.8</i>
<i>Total</i>	<i>83.3</i>	<i>100.0</i>	<i>2 293</i>	<i>100.0</i>	<i>12 290</i>	<i>100.0</i>	<i>4 004</i>	<i>100.0</i>

— nil or rounded to zero (including null cells)

(a) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing ABN units / TAUs which operated during 2003–04 but were not operating at 30 June 2004. See paragraph 23 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Includes rent, leasing and hiring income.

## 2.2 EMPLOYMENT SIZE (a) *continued*

Employment size group	Employment at end of June(b)		Wages and salaries(c)		Sales and service income(d)		Industry value added	
	'000	%	\$m	%	\$m	%	\$m	%
<b>TOTAL MANUFACTURING</b>								
0–4 persons	156.6	14.3	1 776	3.9	24 861	7.9	5 799	6.4
5–9 persons	92.9	8.5	2 976	6.5	15 508	4.9	5 695	6.3
10–19 persons	107.0	9.8	3 890	8.4	18 525	5.9	6 424	7.1
20–49 persons	139.1	12.7	5 308	11.5	28 498	9.1	8 768	9.7
50–99 persons	91.1	8.3	3 978	8.6	23 479	7.5	7 038	7.8
<i>Total less than 100 persons</i>	<i>586.8</i>	<i>53.6</i>	<i>17 929</i>	<i>38.9</i>	<i>110 872</i>	<i>35.3</i>	<i>33 724</i>	<i>37.4</i>
100–199 persons	77.2	7.1	3 662	8.0	22 460	7.2	6 756	7.5
200–499 persons	119.4	10.9	6 042	13.1	45 514	14.5	12 132	13.4
500–999 persons	97.7	8.9	5 310	11.5	41 589	13.3	10 448	11.6
1000 or more persons	214.1	19.6	13 111	28.5	93 272	29.7	27 146	30.1
<i>Total 100 or more persons</i>	<i>508.5</i>	<i>46.4</i>	<i>28 125</i>	<i>61.1</i>	<i>202 835</i>	<i>64.7</i>	<i>56 482</i>	<i>62.6</i>
<b>Total</b>	<b>1 095.3</b>	<b>100.0</b>	<b>46 054</b>	<b>100.0</b>	<b>313 707</b>	<b>100.0</b>	<b>90 206</b>	<b>100.0</b>

(a) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing ABN units / TAUs which operated during 2003–04 but were not operating at 30 June 2004. See paragraph 23 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Includes rent, leasing and hiring income.

## 2.3 INDUSTRY VALUE ADDED(a)

INDUSTRY SUBDIVISION		PLUS				LESS		Industry value added
		Sales and service income(b)	Funding from government for operational costs	Capital work done for own use	Change in inventories	Purchases of goods and materials(c)	Other intermediate input expenses	
ANZSIC code	Description	\$m	\$m	\$m	\$m	\$m	\$m	\$m
21	Food, beverage and tobacco mfg	68 470	37	96	^ 235	38 290	12 939	17 609
22	Textile, clothing, footwear and leather mfg	10 291	45	9	-62	4 970	2 125	3 189
23	Wood and paper product mfg	18 627	18	20	^ 78	8 801	3 418	6 523
24	Printing, publishing and recorded media	20 662	15	53	-17	6 155	5 242	9 316
25	Petroleum, coal, chemical and associated product mfg	52 833	62	129	-45	33 338	8 382	11 258
26	Non-metallic mineral product mfg	13 646	3	26	^ 83	5 339	3 607	4 811
27	Metal product mfg	58 743	16	124	-46	32 424	10 510	15 902
28	Machinery and equipment mfg	59 843	421	194	^ 185	33 919	8 935	17 790
29	Other manufacturing	12 490	16	16	**9	6 166	2 328	4 036
21-29	<b>Total manufacturing</b>	<b>315 605</b>	<b>632</b>	<b>667</b>	<b>^ 421</b>	<b>169 403</b>	<b>57 487</b>	<b>90 434</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

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

(a) For the definition of industry value added, see the Glossary term.

(b) Includes rent, leasing and hiring income.

(c) Includes capitalised purchases, which is not an intermediate input expense, but is a deduction in the calculation of IVA. For further details, see the Glossary term.

## 2.4 ACQUISITION AND DISPOSAL OF ASSETS

### CAPITAL EXPENDITURE(a)

INDUSTRY SUBDIVISION		Plant, machinery and equipment	Dwellings, other buildings and structures	Other (including land and intangible assets)	Total acquisitions	Disposal of assets	Net capital expenditure
ANZSIC code	Description	\$m	\$m	\$m	\$m	\$m	\$m
21	Food, beverage and tobacco mfg	2 029	366	430	2 825	457	2 367
22	Textile, clothing, footwear and leather mfg	233	^ 52	63	348	100	249
23	Wood and paper product mfg	806	127	49	982	112	870
24	Printing, publishing and recorded media	589	53	335	978	165	813
25	Petroleum, coal, chemical and associated product mfg	1 971	116	198	2 285	314	1 971
26	Non-metallic mineral product mfg	904	^ 52	104	1 061	208	853
27	Metal product mfg	2 218	265	187	2 670	643	2 026
28	Machinery and equipment mfg	1 175	287	269	1 730	314	1 417
29	Other manufacturing	^ 232	*51	57	^ 340	107	^ 233
21-29	<b>Total manufacturing</b>	<b>10 157</b>	<b>1 369</b>	<b>1 691</b>	<b>13 218</b>	<b>2 419</b>	<b>10 799</b>

^ estimate has a relative standard error of 10% to less than 25% and should be used with caution

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

(a) Items listed include value of capital work done for own use.

## 2.5 SELECTED NON-WAGE LABOUR COSTS (a)

### AS A PROPORTION 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	8.5	4.3	1.6	5.0	19.4
22	Textile, clothing, footwear and leather mfg	9.4	3.9	0.9	3.5	17.7
23	Wood and paper product mfg	8.7	4.3	0.8	4.2	18.0
24	Printing, publishing and recorded media	8.2	1.5	1.3	4.6	15.7
25	Petroleum, coal, chemical and associated product mfg	10.5	3.1	1.9	4.9	20.3
26	Non-metallic mineral product mfg	8.5	4.5	1.3	4.9	19.3
27	Metal product mfg	9.2	4.1	1.0	4.2	18.5
28	Machinery and equipment mfg	9.4	2.9	1.0	4.3	17.6
29	Other manufacturing	10.0	3.9	0.7	2.7	17.3
21-29	<b>Total manufacturing</b>	<b>9.2</b>	<b>3.5</b>	<b>1.2</b>	<b>4.4</b>	<b>18.3</b>

(a) This table shows the proportion of each selected non-wage labour cost to wages and salaries.

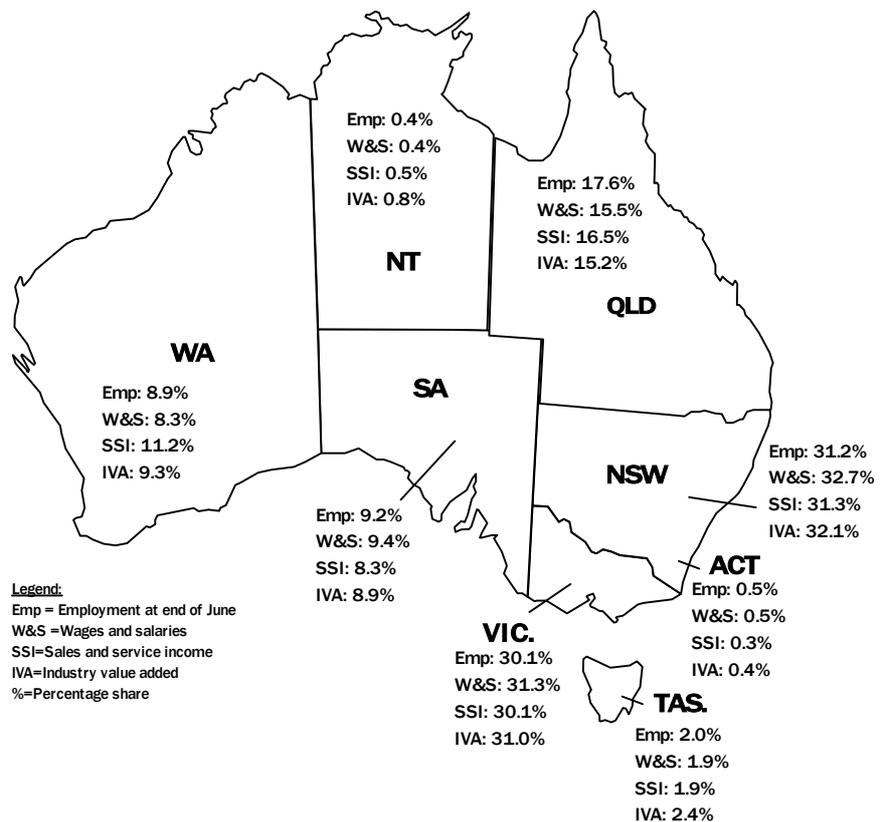
(b) Excludes the drawings of working proprietors.

INTRODUCTION

This chapter presents estimates of key variables at the state and territory level. For information about how these estimates are derived, please see paragraphs 20–22 of the Explanatory Notes. The commentary outlines features of the distribution of these key variables across states and territories, together with a summary of the state and territory dimension of each of the nine manufacturing industry subdivisions.

OVERVIEW

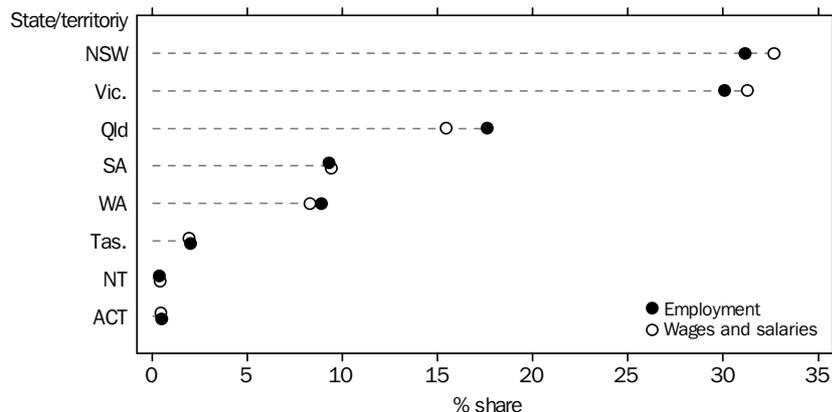
**CONTRIBUTION OF STATES / TERRITORIES TO TOTAL MANUFACTURING, 2003–04**



The above graphic illustrates each state or territory's share of economic aggregates relating to Australian manufacturing in 2003–04. The distribution is very similar across all four variables presented.

OVERVIEW *continued*

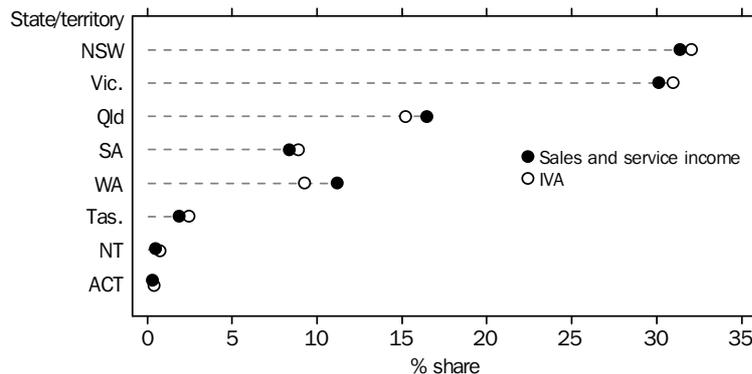
DISTRIBUTION OF EMPLOYMENT AND WAGES AND SALARIES



Compared to the previous year, manufacturing employment has increased in five of the eight states and territories. Similarly, all states and territories apart from Victoria recorded an increase in wages and salaries paid.

Compared to 2002–03, sales and service income and IVA of the manufacturing industry increased in all eight states and territories.

DISTRIBUTION OF SALES AND SERVICE INCOME AND IVA



INDUSTRY COMPOSITION

Of those industries available for publication, the industry which most heavily dominates manufacturing IVA in any state or territory is PRINTING, PUBLISHING AND RECORDED MEDIA in the Australian Capital Territory (which accounts for 35% of Australian Capital Territory manufacturing IVA, compared to 10% nationally). This is followed by MACHINERY AND EQUIPMENT MANUFACTURING in South Australia (32%; nationally 20%), METAL PRODUCT MANUFACTURING in Western Australia (31%; nationally 18%), and WOOD AND PAPER PRODUCT MANUFACTURING in Tasmania (26%; 7% nationally).

METAL PRODUCT MANUFACTURING was the major manufacturing industry, as measured by share of industry value added, in two states (Queensland and Western Australia), and MACHINERY AND EQUIPMENT MANUFACTURING in two others (Victoria and South Australia). FOOD, BEVERAGE AND TOBACCO MANUFACTURING dominated in New South Wales, as did WOOD AND PAPER PRODUCT MANUFACTURING in Tasmania. Not all subdivisions are available for publication for the two territories.

## INDUSTRY SUBDIVISION ANALYSIS

### FOOD, BEVERAGE AND TOBACCO MANUFACTURING

FOOD, BEVERAGE AND TOBACCO MANUFACTURING is the largest manufacturing industry in New South Wales as measured by contribution to that state's manufacturing sales and service income (23%) and IVA (22%). It is also the largest contributor to manufacturing in Queensland and Tasmania as measured by employment (22% for Queensland and 23% for Tasmania), sales and service income (26% in Queensland and 25% in Tasmania) and wages and salaries (22% in Queensland and 24% in Tasmania).

New South Wales businesses contributed 33% of the sales and service income of the FOOD, BEVERAGE AND TOBACCO MANUFACTURING industry, Victoria 30% and Queensland 20%. Corresponding proportions of employment were 30%, 27% and 22%.

### TEXTILE, CLOTHING, FOOTWEAR AND LEATHER MANUFACTURING

This industry is heavily concentrated in Victoria, where some 44% of the industry's sales and service income is produced. New South Wales's share is 32% and Queensland's 10%. Their contributions to IVA and employment show a similar pattern.

### WOOD AND PAPER PRODUCT MANUFACTURING

Victoria's share of this industry's sales and service income, at 32%, just exceeded that of New South Wales (31%) in 2003-04. These are more than double Queensland's contribution (15%). New South Wales, however, contributes slightly more than Victoria to employment (31% vs 28%) and IVA (30% vs 28%). In terms of its share of IVA, WOOD AND PAPER PRODUCT MANUFACTURING is the major manufacturing industry in Tasmania, contributing 26%.

### PRINTING, PUBLISHING AND RECORDED MEDIA

PRINTING, PUBLISHING AND RECORDED MEDIA is dominated by New South Wales businesses. They contribute 43% of the industry's sales and service income, compared to 30% from Victoria and 11% from Queensland. New South Wales also accounts for 38% of employment in this industry, and 41% of its wages and salaries. Of the manufacturing industries available for publication for the Australian Capital Territory PRINTING, PUBLISHING AND RECORDED MEDIA is the largest, contributing 31% of Australian Capital Territory manufacturing sales and service income, 30% of employment, 35% of IVA and 33% of wages and salaries paid.

### PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING

New South Wales businesses contributed 34% of the industry's sales and service income, Victoria 33% and Queensland 15%. Corresponding proportions of IVA are 31%, 38% and 13%. Although the distribution of sales and service income among the three largest states follows the pattern typical of several other manufacturing subdivisions (New South Wales 34%, Victoria 33% and Queensland 15%), their shares of IVA are very different. Victoria dominates IVA in PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING, accounting for 38% compared to New South Wales's 31% and 13% for Queensland. This pattern also characterises their shares of wages and salaries and employment.

### NON-METALLIC MINERAL PRODUCT MANUFACTURING

In terms of sales and service income, New South Wales contributes 32% of this industry, Victoria 25% and Queensland 18%. Their shares of employment and IVA are similar.

### METAL PRODUCT MANUFACTURING

New South Wales contributes 31% of the employment and 28% of the sales and service income of the METAL PRODUCT MANUFACTURING industry. The shares of the next three biggest states are 26% of employment and 19% of sales and service income for Victoria, 19% and 20% respectively for Queensland, and 13% and 23% for Western Australia. The relative importance of Western Australia and Queensland reflects the location of major smelting

METAL PRODUCT MANUFACTURING <i>continued</i>	and refining operations in those states, where METAL PRODUCT MANUFACTURING is the major manufacturing industry as measured by share of state IVA (31% and 23% respectively).
MACHINERY AND EQUIPMENT MANUFACTURING	<p>Concentration of the MOTOR VEHICLE AND PART MANUFACTURING and ELECTRICAL EQUIPMENT AND APPLIANCE MANUFACTURING industries in Victoria and South Australia is mainly responsible for those states' shares (respectively, 38% and 16%) of sales and service income for MACHINERY AND EQUIPMENT MANUFACTURING; New South Wales contributes 26% and Queensland 12%. Of employment in this industry at the end of June 2004, 31% is attributed to Victoria, 29% to New South Wales, 16% to Queensland and 15% to South Australia.</p> <p>By all four measures presented, MACHINERY AND EQUIPMENT MANUFACTURING is the largest manufacturing industry in South Australia and Victoria. Its domination of South Australian manufacturing is the most pronounced of any state or territory: 35% of South Australia's manufacturing employment, 32% of IVA, and 37% of both sales and service income and wages and salaries paid are attributable to MACHINERY AND EQUIPMENT MANUFACTURING. Corresponding proportions for Victoria are, respectively, 23%, 22%, 24% and 25%.</p>
OTHER MANUFACTURING	Measured by sales and service income, New South Wales contributes 34% of this industry, Victoria 30% and Queensland 20%. Their shares of employment, wages and salaries and IVA are similar.
COMPARISON ACROSS INDUSTRY	<p>Table 3.2 shows the contribution of industries to the production (as measured by total factor income) of each state and territory, as well as Australia, in 2003–04. For the purposes of this table, the activity of general government and the ownership of dwellings are each treated as industries.</p> <p>Of the nineteen industries shown in the table, PROPERTY AND BUSINESS SERVICES ranked first (at 13.0%) in its contribution to Australian production for 2003–04. MANUFACTURING was the second largest industry (at 12.8%). MANUFACTURING was the largest industry in Victoria, Queensland, South Australia and Tasmania, and in New South Wales was exceeded only by PROPERTY AND BUSINESS SERVICES. South Australia and Tasmania (at 16.7%) had the highest proportion of state or territory production attributed to Manufacturing, followed by Victoria (15.7%).</p>

### 3.1 STATES, TERRITORIES AND AUSTRALIA(a)

INDUSTRY SUBDIVISION		Employment at end of June(b)	Wages and salaries(c)	Sales and service income(d)	Industry value added	Sales and service income per person employed	Industry value added per person employed
ANZSIC code	Description	'000	\$m	\$m	\$m	\$'000	\$'000
NEW SOUTH WALES							
21	Food, beverage and tobacco mfg	58.5	2 828	22 291	6 316	380.8	107.9
22	Textile, clothing, footwear and leather mfg	19.9	543	3 278	1 000	164.6	50.2
23	Wood and paper product mfg	22.9	875	5 786	1 945	253.1	85.1
24	Printing, publishing and recorded media	41.7	1 950	8 975	3 578	215.2	85.8
25	Petroleum, coal, chemical and associated product mfg	34.3	1 684	17 767	3 478	518.3	101.5
26	Non-metallic mineral product mfg	15.2	704	4 377	1 549	287.2	101.6
27	Metal product mfg	53.6	2 613	16 386	4 685	305.8	87.4
28	Machinery and equipment mfg	69.7	3 173	15 558	5 122	223.2	73.5
29	Other manufacturing	25.6	743	4 245	1 320	165.9	51.6
21-29	<i>Total manufacturing</i>	341.4	15 113	98 663	28 994	289.0	84.9
VICTORIA							
21	Food, beverage and tobacco mfg	51.5	2 403	20 368	5 021	395.3	97.4
22	Textile, clothing, footwear and leather mfg	27.4	821	4 508	1 424	164.5	51.9
23	Wood and paper product mfg	20.9	884	5 879	1 844	280.7	88.1
24	Printing, publishing and recorded media	32.8	1 482	6 123	3 100	186.8	94.6
25	Petroleum, coal, chemical and associated product mfg	39.9	2 162	17 361	4 279	435.0	107.2
26	Non-metallic mineral product mfg	12.4	586	3 432	1 262	276.1	101.5
27	Metal product mfg	44.1	1 844	11 226	3 598	254.5	81.6
28	Machinery and equipment mfg	76.6	3 581	22 454	6 265	293.3	81.8
29	Other manufacturing	23.9	703	3 691	1 198	154.7	50.2
21-29	<i>Total manufacturing</i>	329.5	14 465	95 043	27 990	288.4	84.9
QUEENSLAND							
21	Food, beverage and tobacco mfg	42.8	1 586	13 421	2 833	313.6	66.2
22	Textile, clothing, footwear and leather mfg	9.4	200	1 069	333	114.0	35.5
23	Wood and paper product mfg	13.1	447	2 860	975	217.8	74.2
24	Printing, publishing and recorded media	15.4	552	2 284	1 107	148.6	72.0
25	Petroleum, coal, chemical and associated product mfg	14.8	677	8 040	1 418	544.6	96.0
26	Non-metallic mineral product mfg	8.1	341	2 517	820	310.9	101.3
27	Metal product mfg	32.8	1 386	11 755	3 153	357.9	96.0
28	Machinery and equipment mfg	38.7	1 477	7 454	2 313	192.8	59.8
29	Other manufacturing	17.7	481	2 515	820	142.1	46.3
21-29	<i>Total manufacturing</i>	192.7	7 146	51 914	13 773	269.3	71.5
SOUTH AUSTRALIA							
21	Food, beverage and tobacco mfg	18.6	791	5 368	1 708	287.9	91.6
22	Textile, clothing, footwear and leather mfg	3.5	101	675	156	190.4	44.1
23	Wood and paper product mfg	6.8	300	1 743	744	257.2	109.8
24	Printing, publishing and recorded media	7.6	312	1 369	598	180.7	79.0
25	Petroleum, coal, chemical and associated product mfg	8.0	399	2 187	686	273.8	85.9
26	Non-metallic mineral product mfg	3.4	146	1 247	388	362.8	112.9
27	Metal product mfg	12.2	525	3 248	950	267.2	78.2
28	Machinery and equipment mfg	35.5	1 611	9 742	2 540	274.8	71.6
29	Other manufacturing	6.2	170	765	266	123.6	43.0
21-29	<i>Total manufacturing</i>	101.8	4 354	26 344	8 036	258.9	79.0

(a) See Explanatory Notes paragraphs 20-22.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Includes rent, leasing and hiring income.

**3.1** STATES, TERRITORIES AND AUSTRALIA(a) *continued*

INDUSTRY SUBDIVISION		Employment	Wages and	Sales and	Industry	Sales and	Industry
ANZSIC		at end of	salaries(c)	service	value	income	value
code	Description	June(b)	\$m	income(d)	added	per person	added per
		'000		\$m	\$m	employed	person
						\$'000	\$'000
WESTERN AUSTRALIA							
21	Food, beverage and tobacco mfg	15.6	632	5 261	1 178	336.4	75.3
22	Textile, clothing, footwear and leather mfg	4.5	105	545	201	121.9	44.9
23	Wood and paper product mfg	5.6	186	1 019	391	182.0	69.8
24	Printing, publishing and recorded media	8.3	296	1 345	628	161.4	75.4
25	Petroleum, coal, chemical and associated product mfg	9.5	463	6 916	1 219	731.2	128.9
26	Non-metallic mineral product mfg	5.6	259	1 671	610	297.4	108.7
27	Metal product mfg	21.7	1 023	13 734	2 586	633.1	119.2
28	Machinery and equipment mfg	18.9	698	3 703	1 205	196.4	63.9
29	Other manufacturing	7.9	177	1 063	354	135.3	45.1
21-29	<i>Total manufacturing</i>	97.5	3 838	35 255	8 373	361.5	85.9
TASMANIA							
21	Food, beverage and tobacco mfg	5.1	220	1 512	477	298.5	94.1
22	Textile, clothing, footwear and leather mfg	1.5	44	182	64	118.9	41.8
23	Wood and paper product mfg	4.1	190	1 218	583	296.9	142.2
24	Printing, publishing and recorded media	1.6	60	207	141	133.3	91.1
25	Petroleum, coal, chemical and associated product mfg	1.1	52	464	152	408.9	134.3
26	Non-metallic mineral product mfg	0.8	29	169	107	221.4	140.1
27	Metal product mfg	3.9	174	1 426	421	370.5	109.2
28	Machinery and equipment mfg	3.2	107	651	217	203.7	67.9
29	Other manufacturing	1.3	24	120	46	94.8	36.0
21-29	<i>Total manufacturing</i>	22.5	900	5 948	2 208	264.9	98.3
NORTHERN TERRITORY							
21	Food, beverage and tobacco mfg	0.5	22	147	41	314.0	88.4
22	Textile, clothing, footwear and leather mfg	np	np	np	np	np	np
23	Wood and paper product mfg	0.1	3	18	5	145.9	42.6
24	Printing, publishing and recorded media	0.5	16	64	32	129.1	64.9
25	Petroleum, coal, chemical and associated product mfg	0.2	9	71	18	347.3	89.3
26	Non-metallic mineral product mfg	0.3	19	138	47	401.0	135.2
27	Metal product mfg	np	np	np	np	np	np
28	Machinery and equipment mfg	0.7	26	114	43	162.5	61.5
29	Other manufacturing	np	np	np	np	np	np
21-29	<i>Total manufacturing</i>	4.3	196	1 489	687	345.8	159.5
AUSTRALIAN CAPITAL TERRITORY							
21	Food, beverage and tobacco mfg	0.5	20	102	36	207.4	72.7
22	Textile, clothing, footwear and leather mfg	np	np	np	np	np	np
23	Wood and paper product mfg	0.5	17	105	35	193.2	65.2
24	Printing, publishing and recorded media	1.7	70	295	130	174.7	77.2
25	Petroleum, coal, chemical and associated product mfg	0.2	4	27	8	128.3	37.2
26	Non-metallic mineral product mfg	0.3	12	94	27	323.4	93.3
27	Metal product mfg	np	np	np	np	np	np
28	Machinery and equipment mfg	1.1	54	167	83	156.6	78.2
29	Other manufacturing	np	np	np	np	np	np
21-29	<i>Total manufacturing</i>	5.6	211	948	374	170.7	67.3

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

(a) See Explanatory Notes paragraphs 20-22.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Includes rent, leasing and hiring income.

### 3.1 STATES, TERRITORIES AND AUSTRALIA(a) *continued*

INDUSTRY SUBDIVISION		Employment	Wages and	Sales and	Industry	Sales and	Industry
.....		at end of	salaries(c)	service	value	service	value
ANZSIC	Description	June(b)		income(d)	added	income	added per
code		'000	\$m	\$m	\$m	per person	person
						employed	employed
						\$'000	\$'000
AUSTRALIA							
21	Food, beverage and tobacco mfg	193.2	8 502	68 470	17 609	354.5	91.2
22	Textile, clothing, footwear and leather mfg	66.6	1 820	10 291	3 189	154.5	47.9
23	Wood and paper product mfg	74.1	2 901	18 627	6 523	251.5	88.1
24	Printing, publishing and recorded media	109.5	4 737	20 662	9 316	188.7	85.1
25	Petroleum, coal, chemical and associated product mfg	107.9	5 450	52 833	11 258	489.4	104.3
26	Non-metallic mineral product mfg	46.2	2 095	13 646	4 811	295.2	104.1
27	Metal product mfg	170.3	7 668	58 743	15 902	345.0	93.4
28	Machinery and equipment mfg	244.2	10 727	59 843	17 790	245.1	72.9
29	Other manufacturing	83.3	2 321	12 490	4 036	150.0	48.5
21-29	<b>Total manufacturing</b>	<b>1 095.3</b>	<b>46 222</b>	<b>315 605</b>	<b>90 434</b>	<b>288.2</b>	<b>82.6</b>

(a) See Explanatory Notes paragraphs 20-22.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) Includes rent, leasing and hiring income.

**3.2** INDUSTRY CONTRIBUTION TO TOTAL FACTOR INCOME, 2003–04 .....

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
<i>Industry</i>	%	%	%	%	%	%	%	%	%
Agriculture, forestry and fishing	1.9	3.4	4.4	7.0	5.5	7.2	2.9	0.1	3.5
Mining	1.7	1.7	6.5	2.0	18.2	1.5	19.0	—	4.6
<b>Manufacturing</b>	<b>12.5</b>	<b>15.7</b>	<b>10.9</b>	<b>16.7</b>	<b>9.8</b>	<b>16.7</b>	<b>8.1</b>	<b>2.3</b>	<b>12.8</b>
Electricity, gas and water	2.0	2.8	2.1	2.9	3.0	5.2	1.8	2.5	2.5
Construction	6.9	6.1	7.8	5.9	6.9	4.9	8.0	6.8	6.8
Wholesale trade	5.5	5.9	5.3	4.4	4.2	3.5	2.2	1.9	5.2
Retail trade	6.2	6.3	8.0	6.4	5.8	7.8	5.0	5.4	6.5
Accommodation, cafes and restaurants	2.6	1.7	3.1	2.2	1.6	2.7	2.7	2.4	2.3
Transport and storage	4.2	3.8	4.9	4.2	4.7	4.2	3.9	2.2	4.2
Communication services	2.9	3.6	2.8	2.7	2.6	2.7	2.8	2.8	3.0
Finance and insurance	10.0	8.4	5.0	6.1	4.2	5.6	2.6	3.2	7.5
Property and business services	15.4	13.9	10.4	10.2	11.1	6.0	8.7	13.8	13.0
Government administration and defence	3.3	2.3	4.3	3.1	2.2	5.3	7.8	26.9	3.7
Education	4.3	4.9	4.5	4.9	3.3	5.0	4.0	5.9	4.4
Health and community services	6.1	6.5	6.2	7.5	6.0	8.7	5.8	5.9	6.3
Cultural and recreational services	1.5	1.5	1.1	1.3	1.0	1.1	1.8	2.6	1.4
Personal and other services	1.8	1.7	2.0	2.3	1.7	2.0	2.1	2.7	1.9
Ownership of dwellings	9.4	8.1	8.2	8.4	6.6	7.3	7.9	8.4	8.4
General government(a)	1.9	1.7	2.5	1.9	1.6	2.7	3.1	4.3	2.0

— nil or rounded to zero (including null cells)

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

Source: Australian National Accounts: State Accounts, 2003–04 (Reissue) (cat. no. 5220.0), Analysis of results (page 6).

## INTRODUCTION

This chapter illustrates the extent and importance of export activity by Australian manufacturing businesses. Table 4.1 presents estimates of the value of exports by Australian manufacturing businesses of goods that they produced. Table 4.2 categorises businesses by their involvement in exporting, and presents estimates of the contribution of each category to industry aggregates. For information about how these data have been derived, please see Explanatory Notes paragraphs 26 to 30. Even though, as explained there, the exports data presented in these tables are not directly comparable with the ABS's overseas trade series, the commentary below also uses the trade series to illustrate some characteristics of Australian manufacturing's export performance.

## INDUSTRY COMPARISON

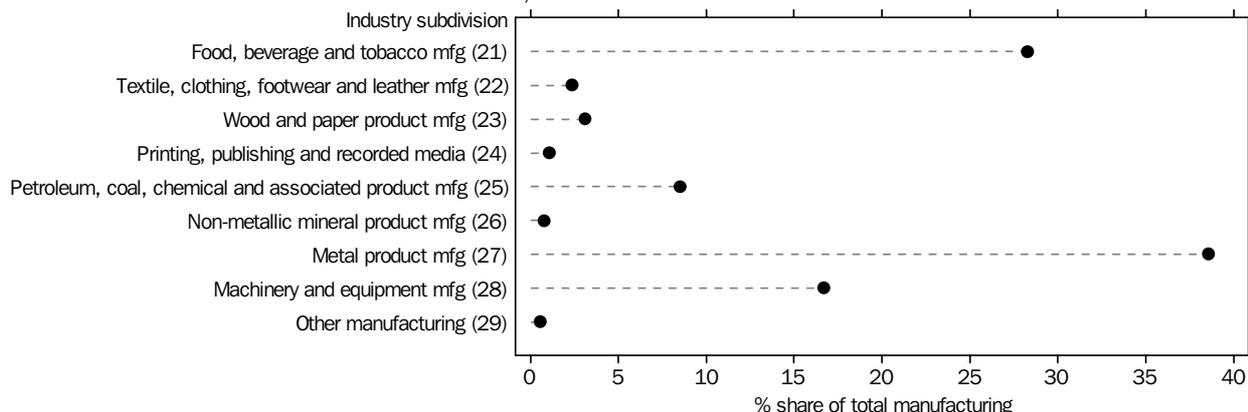
The October and November 2004 issues of *International Trade in Goods and Services, Australia* (ABS cat. no. 5368.0) report that, in terms of value of goods exports, the most significant exporting industries (of the 'owning business' of the goods exported) in 2003–04 were manufacturing (40% of the value of goods exports), mining (31%) and wholesale trade (20%). The exporting business as defined in this analysis is the owner of the good at the time of export and not necessarily the producer of the good. Approximately 60% of exports of manufactured goods were exported by the manufacturing industry, 18% by the wholesale trade industry, and 12% by the mining industry.

## VALUE OF EXPORTS

In 2003–04, the Economic Activity Survey indicated that Australian manufacturers directly exported \$47.8b worth of the goods they produced. This represented 19.1% of their value of sales of goods produced and a decrease of \$534m (or 1.1%) compared to the value for 2002–03, when the proportion was 19.8%. The following graph illustrates the percentage contribution of each manufacturing industry subdivision to total manufacturing exported sales of goods produced.

Of the nine manufacturing industry subdivisions, the value of exports of goods produced decreased between 2002–03 and 2003–04 in five and increased in the remaining four. In percentage terms, the manufacturing industry with the largest decrease in value of goods exported was OTHER MANUFACTURING, exports of which fell by 34.0% (or \$141m) to \$274m. The largest absolute decreases in the value of goods exported were recorded by PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING (down \$746m, or 15.5%) and MACHINERY AND EQUIPMENT MANUFACTURING (down \$402m, or 4.8%).

EXPORTED SALES OF GOODS PRODUCED, PERCENTAGE CONTRIBUTION BY INDUSTRY SUBDIVISION



VALUE OF EXPORTS  
*continued*

The value of goods exported by the PRINTING, PUBLISHING AND RECORDED MEDIA rose by 46.5% (or \$162m) between 2002–03 and 2003–04, the largest percentage increase in manufacturing. Over the same period, FOOD, BEVERAGE AND TOBACCO MANUFACTURING recorded the greatest increase in value of goods exported in dollar terms, \$648m (or 5.0%). The other subdivisions in which the value of goods exported increased were WOOD AND PAPER PRODUCT MANUFACTURING (up \$231m, or 18.3%) and NON-METALLIC MINERAL PRODUCT MANUFACTURING (up \$6m, or 1.6%).

EMPLOYMENT SIZE OF  
EXPORTING BUSINESSES

Excluding METAL PRODUCT MANUFACTURING (see paragraphs 23 and 24 of the Explanatory Notes), manufacturing businesses employing 100 or more persons tend to export a higher proportion (by value) of the goods that they produce, compared to businesses employing fewer than 100 persons.

The industry subdivision in which export activity is most heavily concentrated in businesses employing 100 or more persons is WOOD AND PAPER PRODUCT MANUFACTURING, where 87.7% (or \$1.3b) of total exports are produced by businesses in this size category. This is followed by MACHINERY AND EQUIPMENT MANUFACTURING, where businesses in this category account for 83.5% (or \$6.7b) of total exports. The \$101m in exports produced by businesses classified to OTHER MANUFACTURING represents the lowest proportion (36.8%) of exports produced by businesses employing 100 or more persons.

CONTRIBUTION OF  
BUSINESSES THAT  
EXPORT

Depending on the measure selected, businesses that do not export accounted for between 41% and 56% of activity at the total manufacturing level in 2003–04. For manufacturing subdivisions, their percentage contribution was greatest, across all variables, in OTHER MANUFACTURING, PRINTING, PUBLISHING AND RECORDED MEDIA and NON-METALLIC MINERAL PRODUCT MANUFACTURING.

PETROLEUM, COAL, CHEMICAL AND ASSOCIATED PRODUCT MANUFACTURING remains the industry in which businesses which export up to and including 50% of their sales of goods produced make the greatest contribution to the key aggregates presented.

Businesses which exported more than 50% of their sales of goods produced tended to contribute a higher proportion to sales and service income than to employment and wages and salaries.

**4.1****EXPORTED AND TOTAL PRODUCTION(a), Employment size**

INDUSTRY SUBDIVISION		Sales of goods produced(b)	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	7 600	1 640	21.6
22	Textile, clothing, footwear and leather mfg	2 797	444	15.9
23	Wood and paper product mfg	3 978	148	3.7
24	Printing, publishing and recorded media	3 610	85	2.4
25	Petroleum, coal, chemical and associated product mfg	6 021	787	13.1
26	Non-metallic mineral product mfg	2 364	138	5.8
27	Metal product mfg	18 551	9 678	52.2
28	Machinery and equipment mfg	8 683	856	9.9
29	Other manufacturing	5 443	126	2.3
21-29	<i>Total manufacturing</i>	59 047	13 903	23.5
50-99 PERSONS				
21	Food, beverage and tobacco mfg	3 887	699	18.0
22	Textile, clothing, footwear and leather mfg	1 094	155	14.2
23	Wood and paper product mfg	890	36	4.0
24	Printing, publishing and recorded media	1 337	113	8.5
25	Petroleum, coal, chemical and associated product mfg	2 909	520	17.9
26	Non-metallic mineral product mfg	764	21	2.8
27	Metal product mfg	2 673	180	6.7
28	Machinery and equipment mfg	3 378	458	13.6
29	Other manufacturing	1 134	47	4.1
21-29	<i>Total manufacturing</i>	18 066	2 228	12.3
100 OR MORE PERSONS				
21	Food, beverage and tobacco mfg	50 862	11 180	22.0
22	Textile, clothing, footwear and leather mfg	2 574	539	20.9
23	Wood and paper product mfg	10 816	1 312	12.1
24	Printing, publishing and recorded media	6 457	313	4.9
25	Petroleum, coal, chemical and associated product mfg	32 419	2 764	8.5
26	Non-metallic mineral product mfg	8 718	214	2.5
27	Metal product mfg	29 360	8 582	29.2
28	Machinery and equipment mfg	30 795	6 664	21.6
29	Other manufacturing	1 629	101	6.2
21-29	<i>Total manufacturing</i>	173 630	31 669	18.2
TOTAL				
21	Food, beverage and tobacco mfg	62 349	13 519	21.7
22	Textile, clothing, footwear and leather mfg	6 465	1 138	17.6
23	Wood and paper product mfg	15 684	1 496	9.5
24	Printing, publishing and recorded media	11 404	512	4.5
25	Petroleum, coal, chemical and associated product mfg	41 350	4 071	9.8
26	Non-metallic mineral product mfg	11 846	373	3.2
27	Metal product mfg	50 584	18 440	36.5
28	Machinery and equipment mfg	42 856	7 978	18.6
29	Other manufacturing	8 206	274	3.3
21-29	<b>Total manufacturing</b>	<b>250 742</b>	<b>47 801</b>	<b>19.1</b>

(a) See paragraphs 26-30 of the Explanatory Notes.

(b) Sales of goods produced by the business, including goods produced for it on a commission basis.

## 4.2 CONTRIBUTION OF EXPORTING AND NON-EXPORTING BUSINESSES (a)

INDUSTRY SUBDIVISION		Employment at end of June (b)	Wages and salaries (c)	Sales and service income	Industry value added
ANZSIC code	Description	%	%	%	%
DO NOT EXPORT					
21	Food, beverage and tobacco mfg	39.0	34.9	30.1	35.0
22	Textile, clothing, footwear and leather mfg	56.2	50.3	48.9	51.5
23	Wood and paper product mfg	59.5	50.1	43.5	42.1
24	Printing, publishing and recorded media	79.8	78.7	75.3	80.3
25	Petroleum, coal, chemical and associated product mfg	42.2	38.1	32.0	38.6
26	Non-metallic mineral product mfg	69.4	67.4	69.2	68.1
27	Metal product mfg	61.0	51.9	34.2	34.7
28	Machinery and equipment mfg	49.7	48.6	43.5	47.8
29	Other manufacturing	81.6	77.8	77.2	77.3
21-29	<b>Total manufacturing</b>	<b>55.1</b>	<b>50.7</b>	<b>41.3</b>	<b>47.1</b>
EXPORTS UP TO AND INCLUDING 50% OF SALES THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	45.6	50.6	50.7	52.3
22	Textile, clothing, footwear and leather mfg	37.3	41.5	39.5	42.4
23	Wood and paper product mfg	38.7	48.3	52.7	54.2
24	Printing, publishing and recorded media	18.4	19.7	22.7	18.1
25	Petroleum, coal, chemical and associated product mfg	55.6	59.5	64.9	57.1
26	Non-metallic mineral product mfg	28.5	31.1	29.1	30.8
27	Metal product mfg	32.1	37.9	35.4	35.9
28	Machinery and equipment mfg	41.1	41.4	45.5	42.9
29	Other manufacturing	17.1	19.9	21.2	20.9
21-29	<b>Total manufacturing</b>	<b>37.7</b>	<b>41.5</b>	<b>45.3</b>	<b>42.1</b>
EXPORTS MORE THAN 50% OF SALES THAT THEY PRODUCED					
21	Food, beverage and tobacco mfg	15.4	14.5	19.2	12.6
22	Textile, clothing, footwear and leather mfg	6.6	8.3	11.6	6.1
23	Wood and paper product mfg	1.8	1.5	3.8	3.6
24	Printing, publishing and recorded media	1.7	1.6	2.1	1.6
25	Petroleum, coal, chemical and associated product mfg	2.2	2.4	3.1	4.3
26	Non-metallic mineral product mfg	2.2	1.6	1.7	1.1
27	Metal product mfg	6.9	10.3	30.4	29.3
28	Machinery and equipment mfg	9.2	10.0	11.0	9.2
29	Other manufacturing	1.3	2.2	1.5	1.8
21-29	<b>Total manufacturing</b>	<b>7.2</b>	<b>7.8</b>	<b>13.4</b>	<b>10.8</b>

(a) See paragraph 26-30 of the Explanatory Notes.

(c) Excludes the drawings of working proprietors.

(b) Includes working proprietors.

## EXPLANATORY NOTES .....

### INTRODUCTION

**1** This publication, *Manufacturing Industry, Australia, 2003–04* (cat. no. 8221.0), presents data of the economic and financial performance of the manufacturing industry.

**2** Manufacturing, as specified in Division C of the 1993 edition of the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* (cat. no. 1292.0), 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 annually as a component of the ABS's Economic Activity Survey (EAS):

- A sample of approximately 8,800 manufacturing businesses were asked by the ABS to provide employment details and data obtained from their financial statements, mainly via mail out questionnaires. (The sample comprised all businesses classified to the manufacturing industry and which were above a certain cut-off (see Technical Note 1).)
- Key financial data, representing approximately 120,600 manufacturing businesses below the \$500,000 cut-off, which had been supplied by them to the Australian Taxation Office (ATO) on business income tax returns (BIT data), were then drawn upon to supplement the ABS's directly collected information. Section 16(4)(ga) of the *Income Tax Assessment Act 1936* provides for the ATO to pass information to the Australian Statistician for the purposes of the *Census and Statistics Act 1905*.

### STATISTICAL UNITS USED

**4** Statistical units are those entities from which statistics are collected, or about which statistics are compiled. In ABS economic statistics, the statistical unit is generally the business. All businesses in the EAS are recorded on the ABS Business Register (ABSBR).

**5** The ABS uses an economic statistics units model on the ABSBR to describe the characteristics of businesses, and the structural relationships between related businesses. Within large and diverse business groups, the units model is used also to define reporting units that can provide data to the ABS at suitable levels of detail.

**6** This units model allocates businesses to one of two sub-populations:

- Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN). The vast majority of these businesses are simple in structure and are allocated to the population which is maintained by the ATO. These are termed (by the ABS) ABN units.
- The remaining businesses are in the ABS maintained population, and are termed type of activity units, or TAUs.

**7** Together, these two sub-populations (of ABN units and TAUs) make up the ABSBR population, from which the EAS samples are taken.

**8** For details about the ABSBR and how ABN units and TAUs contribute to the industry statistics in this publication, see Technical Note 1.

### SCOPE AND COVERAGE

**9** The scope of the 2003–04 manufacturing collection comprises all businesses (including non-employed businesses) on the ABSBR at time of selection, whose industry is classified to ANZSIC Division C MANUFACTURING. For details of the structure of this division, users should consult the 1993 edition of the *Australian and New Zealand Standard Industrial Classification (ANZSIC)* (cat. no. 1292.0), which is also available

## SCOPE AND COVERAGE

*continued*

through the ABS web site <<http://www.abs.gov.au>> (using the Home page Search facility to find Division C).

**10** The ANZSIC-based industry statistics presented in this publication are compiled differently from activity statistics. Each ABN unit or TAU on the ABSBR has been classified (by the ATO and the ABS respectively) to a single industry irrespective of any diversity of activities undertaken. The industry class allocated is the one which relates to those activities that provide the main source of income. A manufacturing business is one predominantly engaged in manufacturing activities, but the data collected for it cover all activities of the business (including non-manufacturing activities). Conversely, there are some businesses predominantly engaged in non-manufacturing activities which also undertake limited manufacturing activities; these are excluded from the collection.

**11** Some manufacturing businesses engage, to a significant extent, in activities which are normally carried out by different industries. For example, a predominantly manufacturing business may also undertake significant amounts of wholesaling. Similarly, a manufacturing business may produce significant volumes of goods which are normally produced in different manufacturing industries. However, where a business makes a significant economic contribution to industries classified to different ANZSIC subdivisions, the ABS includes the business in the ABS maintained population, and 'splits' the TAU's reported data between the industries involved. Significance is determined using total income.

**12** A TAU's reported data will be split if the inclusion of data relating to the secondary activity in the statistics for the industry of the primary activity distorts (by overstating or understating) either the primary or secondary industry statistics at the ANZSIC subdivision level by:

- 3% or more, where the industries of the primary and secondary activities are in the same ANZSIC division
- 2% or more, where the industries of the primary and secondary activities are in different ANZSIC divisions.

**13** Unincorporated joint ventures (UJVs) within the manufacturing industry are arrangements which allow the sharing of expertise, resources and risk associated with specific projects. This occurs through the participation of a number of organisations (by investment) in a specific operation. Some of these organisations may not otherwise be involved in that industry.

**14** The manufacturing collection includes such businesses which are operators and/or participants in UJVs. Generally, each participant supplies data of its share of income, while the operator reports all expenses and employment.

**15** The ABS attempts to maintain a current understanding of the structure of the large, complex and diverse business groups that form the ABS maintained population on the ABSBR, through direct contact with those businesses. Resultant changes in their structures on the ABSBR can affect:

- the availability of such businesses (or units within them) for inclusion in the annual economic collections
- the delineation of the units, within those groups, for which data are to be reported.

**16** 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.

## REFERENCE PERIOD

**17** The period covered by the collection is, in general, the 12 months ended 30 June. Where businesses are unable to supply information on this basis, an accounting period for which data can be provided is used for data other than that relating to employment. Such businesses make a substantial contribution to some of the estimates presented in this publication. As a result, the estimates can reflect trading conditions that prevailed in

- .....
- REFERENCE PERIOD *continued* periods outside the twelve months ended June in the relevant year. In particular, this should be taken into account when considering those measures expressed as values per person employed.
- 18** Financial data presented incorporate all units in scope of the manufacturing collection that were at the production stage at any time during the year. They also include any temporarily inactive units, i.e. those units which were in the development stage or which were not in production, but which still existed and held assets and liabilities and/or incurred some non-operating expenses (e.g. depreciation, administration costs).
- RELIABILITY OF ESTIMATES **19** For information about this subject, see Technical Notes 2 and 3.
- STATE AND TERRITORY ESTIMATES **20** State and territory summary estimates for manufacturing subdivisions are presented in table 3.1. To enable the production of these estimates for each year, selected businesses which received the mail out questionnaire (and which were considered to operate in more than one state and/or territory) were also asked to report data for employment, wages and salaries, and sales of goods and services for each state and/or territory in which they operated, if more than one.
- 21** The relevant data for all other businesses, including those whose contribution was sourced from BIT data, were allocated to their state/territory of operations as recorded on the ABSBR.
- 22** The design of the manufacturing collection does not take into account the state/territory in which businesses are based or in which they operate. As a result, these state and territory estimates are particularly subject to variation from year to year because of rotation of businesses into and out of the sample.
- EMPLOYMENT SIZE DATA **23** Data classified by the employment size of individual manufacturing businesses are presented in table 2.2. Similarly, estimates of exports of goods produced classified by the broad employment size of individual manufacturing businesses are presented in table 4.1. The statistics in these two tables relate only to those manufacturing businesses which operated at 30 June 2004. As such, the data presented relate to a slightly different population from those presented in the other tables in this publication. These other tables include data for manufacturing businesses which operated at any time during the year ended 30 June 2004.
- 24** The treatment of unincorporated joint ventures (UJVs) under the ABS economic statistics model has an effect on data classified by employment size. This is because each of the joint venture participants reports details of its share of the sales of goods and services, but generally they 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. The number of UJVs in manufacturing industry is small, and at the aggregate level all activity is covered in the statistics.
- 25** However, this treatment does affect the employment size tables 2.2 and 4.1, as UJV participants with potentially significant sales of goods and services are included in the 0–4 persons category. These impacts are particularly evident in the METAL PRODUCT MANUFACTURING industry.
- EXPORTS BY MANUFACTURERS **26** All businesses which received an ABS mail out survey were asked whether they exported and, if so, what percentage of their sales of goods produced was exported by the business or by an agent on its behalf. Because the ATO data do not contain this information, businesses whose contribution to manufacturing estimates was sourced from BIT data do not contribute to the export tables included in this publication. The
- .....

EXPORTS BY  
MANUFACTURERS *continued*

effect of the exclusion of these businesses is likely to be minimal, in view of their small contribution to overall estimates.

**27** The data presented in table 4.1 are derived by applying the percentage of exports reported for each exporting unit and then aggregating that figure. These data also exclude any contribution by those businesses which operated during 2003–04, but were not operating at 30 June 2004.

**28** For the purposes of table 4.2, manufacturing businesses have been categorised by the extent (if any) of their involvement in exporting. For each such category, the tables present its share (relative to total Australian manufacturing) of the four key data items: employment at end of June, sales and service income, wages and salaries, and industry value added.

**29** The statistics presented in table 4.1 relating to 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 this publication's tables only relate to exports directly undertaken by the manufacturer or by its agent. The data in table 4.1 showing these exports can, therefore, 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.

**30** 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 any of these data. Examples of relevant commission arrangements 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 these tables 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.

## DATA ADJUSTED

**31** Data in this publication have been adjusted to allow for lags in processing new businesses to the ABSBR. The effect of these adjustments on the Australian total manufacturing estimate of sales and service income is an increase of 0.8%.

**32** Most states and territories and most industries were affected to a similar degree.

## ACKNOWLEDGEMENT

**33** 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

**34** The ABS produces industry estimates for a range of selected industries (including manufacturing) and these results are to be available in *Australian Industry, 2003–04* (cat. no. 8155.0), expected to be released later in July 2006. National estimates of employment, income, expenditure and associated ratios will be available at the ANZSIC division level (with a greater range of data available via the ABS web site in spreadsheet form). Some data presenting greater detail are considered experimental at this stage, while the methodology used to produce them is reviewed and improved. These consist of national estimates of income, expenses, operating profit before tax (OPBT), and wages

## RELATED PUBLICATIONS

*continued*

and salaries, at the ANZSIC class level, and state/territory estimates of these items at the ANZSIC division level.

**35** The following publications and electronic releases also contain information about the manufacturing industry:

*Australian Bureau of Statistics Business Register, Counts of Businesses – Summary*

*Tables*, cat. no. 8161.0.55.001, released on 7 October 2005 – Annual release

*Australian Industry, 2001–02 and 2002–03*, cat. no. 8155.0, released on 7 February 2005

– Annual publication

*Australian Labour Market Statistics*, cat. no. 6105.0 – Quarterly publication

*Australian National Accounts: National Income, Expenditure and Product*,

cat. no. 5206.0 – Quarterly publication

*Australian National Accounts: State Accounts, 2004–05*, cat. no. 5220.0,

released on 9 November 2005 – Annual publication

*Australian System of National Accounts: Concepts, Sources and Methods, 2000*,

cat. no. 5216.0, released on 21 December 2000 – Irregular publication

*Business Indicators, Australia*, cat. no. 5676.0 – Quarterly publication

*Environment Protection, Mining and Manufacturing Industries, Australia, 2000–2001*,

cat. no. 4603.0, released on 4 September 2002 – Irregular publication

*Information Paper: ABS Statistics and The New Tax System, 2000*, cat. no. 1358.0,

released on 26 April 2000 – Irregular publication

*Information Paper: Improvements in ABS Economic Statistics [Arising from*

*The New Tax System]*, cat. no. 1372.0, released on 6 May 2002 – Irregular publication

*International Trade in Goods and Services, Australia*, cat. no. 5368.0

– Monthly publication

*International Trade Price Indexes, Australia*, cat. no. 6457.0 – Quarterly publication

*Job Vacancies, Australia*, cat. no. 6354.0 – Quarterly publication

*Labour Costs, Australia, 2002–03*, cat. no. 6348.0.55.001, released on 11 June 2004

– Irregular electronic publication

*Labour Price Index, Australia*, cat. no. 6345.0 – Quarterly publication

*Manufacturing, Australia, 2002*, cat. no. 8225.0, released on 2 April 2003 – Final issue

*Manufacturing Indicators*, cat. no. 8229.0, released on 21 November 2005

– Quarterly electronic publication

*Manufacturing Industry, New South Wales, 2001–02*, cat. no. 8221.1.55.001,

released on 21 November 2005 – Quinquennial electronic publication

*Manufacturing Industry, Victoria, 2001–02*, cat. no. 8221.2.55.001, released on

21 November 2005 – Quinquennial electronic publication

*Manufacturing Industry, Queensland, 2001–02*, cat. no. 8221.3.55.001,

released on 21 November 2005 – Quinquennial electronic publication

*Manufacturing Industry, South Australia, 2001–02*, cat. no. 8221.4.55.001,

released on 21 November 2005 – Quinquennial electronic publication

*Manufacturing Industry, Western Australia, 2001–02*, cat. no. 8221.5.55.001,

released on 21 November 2005 – Quinquennial electronic publication

*Manufacturing Industry, Tasmania, 2001–02*, cat. no. 8221.6.55.001,

released on 21 November 2005 – Quinquennial electronic publication

*Manufacturing Production, Australia*, cat. no. 8301.0.55.001

– Quarterly electronic 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

*Research and Experimental Development, Businesses, Australia, 2003–04*,

cat. no. 8104.0, released on 28 September 2005 – Annual publication

*Year Book Australia, 2006*, cat. no. 1301.0, released on 20 January 2006

– Annual publication

## RELATED PUBLICATIONS

*continued*

**36** Current publications and other products released by the ABS are listed in the *Catalogue of Publications and Products* (cat. no. 1101.0). The catalogue is available from any ABS office or the ABS web site <<http://www.abs.gov.au>>. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

## ABS DATA AVAILABLE ON REQUEST

**37** As well as the statistics included in this and related publications, the ABS may have other relevant data available on request and for a charge. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

## BACK SERIES AND ADDITIONAL DATA

**38** For the 2000–01 manufacturing collection, information was collected from manufacturing management units. (See Appendix 3 of *Manufacturing Industry*, cat. no. 8221.0 for 2001–02 and 2002–03 for information about bridged ABN unit / TAU estimates also available for that year.)

**39** 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.

**40** 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. Additional data may also be available from the 2003–04 collection. As a guide, a list of data items included on the 2003–04 manufacturing survey forms and a selection of data variables that can be derived from them are shown in Appendix 1.

**41** For management units, chain volume measures of IVA are available from 1995–96 to 2000–01. 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.

**42** However, it is important to remember that the data as contained in this publication are not comparable with earlier years' data. This is due to the introduction of the new statistical infrastructure with the 2001–02 collection.

## ROUNDING

**43** 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 31), this 'rounding rule' also applies to employment estimates.

**44** 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.

## APPENDIX 1

## DATA ITEMS, 2003–04

### INTRODUCTION

**1** This Appendix lists items included in the 2003–04 manufacturing collection, and selected items derived from those directly collected.

### AVAILABILITY OF DATA

**2** Owing to the design of this collection, the majority of information available is at the Australian level, with limited information available for states and territories. The following restrictions apply to the availability of data for dissemination:

- National estimates at the industry class level are potentially available for the data items listed below. 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.
- Businesses operating across Australia do not always apportion activity by state/territory. However, 435 ABN units / TAU's (i.e. those with significant operations in more than one state or territory) were requested to provide additional details of 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, sales and service income, wages and salaries, and IVA at the industry subdivision level. However, it is not possible to produce state/territory data by employment size or in relation to exported production.

### COLLECTED, AND SELECTED DERIVED, DATA ITEMS, 2003-04

#### 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

- Provided on a commission basis (excluding sales and agency commissions)
- Repair and maintenance services
- Delivery charges separately invoiced to customers
- Advertising income
- Other services

##### Rent, leasing and hiring income

- Land, buildings and other structures
- Other rent, leasing and hiring income

##### Interest income

##### Funding from federal, state and/or local government

- Funding for operational costs (e.g. wages and salaries, rent, food)
- Funding provided for specific capital items

##### Dividend income

##### Royalties income

- Natural resource royalties income
- Other royalties income

#### Income items

- 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 (excluding Pay As You Go withholding 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

##### Purchases

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

##### Royalties expenses

- Natural resource royalties expenses
- Other royalties expenses

COLLECTED, AND SELECTED DERIVED, DATA ITEMS, 2003-04 *continued***Expense items**

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  
 Other contract, sub-contract and commission expenses  
 Computer software expensed  
 Other operating expenses  
 Total expenses

**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

**Capital expenditure and disposal of assets**

Capital work done by own employees for own use or rental or lease  
   Capitalised wages and salaries  
   Capitalised purchases of materials  
 Capital expenditure (including capitalised work done by own employees as listed above)  
   Road vehicles  
   Other transport equipment  
   Industrial machinery and equipment  
   Computer software capitalised  
   Computers and computer peripherals  
   Electronic equipment and electrical machinery  
   Communications equipment  
   Other plant and equipment  
   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**

Income and expense items  
   Sales and service income (including rent, leasing and hiring income and royalties other than natural resources royalties)  
   Value of sales of goods exported by the business or its agent  
   Cost of sales  
   Operating profit before tax  
 Economic values  
   Purchases of goods and materials (including capitalised purchases)  
   Other intermediate input expenses- i.e. other than purchases of goods and materials  
   Change in inventories  
   Industry value added  
 Capital expenditure on  
   Plant, machinery and equipment  
   Land and intangible assets  
   Total acquisitions (including dwellings, other buildings and structures)  
   Net capital expenditure  
 Ratios  
   Sales and service income (including rent, leasing and hiring income and royalties other than natural resources royalties) per person employed at the end of June  
   Exports as a proportion of sales of goods produced  
   Industry value added per person employed at the end of June  
   Wages and salaries to industry value added  
   Wages and salaries to sales and service income (including rent, leasing and hiring income and royalties other than natural resources royalties)  
   Wages and salaries per person employed at the end of June  
   Selected non-wage labour costs as a proportion of wages and salaries  
     Employer contributions into superannuation  
     Workers' compensation premiums/costs  
     Fringe benefits tax  
     Payroll tax  
   Total

## EMPLOYMENT ESTIMATES

- 1** Over time, the ABS's annual data of industry performance have generally included measures of employment.
- 2** There are three main purposes for estimating employment:
  - to generate statistics by business size range, employment being a frequently used and well understood measure of business size; estimation of employment for each business is a prerequisite for categorising businesses for this purpose
  - to show the relative importance of each industry as an employer
  - to provide measures of labour input and labour productivity.
- 3** One implication of the use of Business Income Tax (BIT) data in these statistics is that no direct measure of employment is available for those units which contribute to the estimates through the BIT source. This is because the ATO does not collect information about employment numbers. Unlike financial variables, which have a direct relationship to the data available from the BIT files, employment data are not amenable to being modelled using the same techniques. This characteristic became increasingly apparent as the manufacturing industry data for 2001–02 and 2002–03 were being prepared for release.
- 4** Hence, the previous issue of this publication, which presented estimates for the manufacturing industry for 2001–02 and 2002–03, did not include employment estimates. Since then, further work has been undertaken to devise a suitable methodology. As a result, employment estimates have been restored to this issue. These estimates have been calculated for the two prior years, as well as for 2003–04. These time series are presented in table 1.1. Previously published estimates are not comparable with the estimates included in this publication.
- 5** In estimating employment for units whose data are sourced from the BIT files, the new methodology takes into account :
  - whether a business is recorded as paying wages and salaries
  - whether a business is an incorporated entity
  - whether a business is a sole proprietorship
  - for those businesses that are partnerships of individuals, industry averages (derived from the ABS's Labour Force Survey) are used to estimate the number of partners per partnership
  - for those businesses that are partnerships of businesses, the number of partners per partnership is zero.
- 6** For each business, an estimate of employee numbers is derived from its value of wages and salaries (if any) using industry averages. For unincorporated businesses, these employee numbers are then added to the estimate of working proprietors or partners to produce an estimate of the total employment of the business. These estimates are then aggregated to the directly collected data to produce the estimates included in this publication.
- 7** This methodology may be subject to refinement over time as further data become available.
- 8** For further information about the employment estimates included in this publication, please contact John Ridley on (02) 9268 4541 or [john.ridley@abs.gov.au](mailto:john.ridley@abs.gov.au).

## TECHNICAL NOTE 1      **METHODOLOGY** .....

### INTRODUCTION

**1** The industry estimates in this publication are produced using a combination of ABS directly collected data and Business Income Tax (BIT) data sourced from the Australian Taxation Office (ATO).

**2** The directly collected data have been reported by a sample of manufacturing businesses, as recorded on the ABS Business Register (ABSBR). The ABS uses an economic statistics units model on the ABSBR to describe the characteristics of businesses, and the structural relationships between related businesses. Within large and diverse business groups, the units model is used also to define reporting units that can provide data to the ABS at suitable levels of detail.

### STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

**3** The current economic statistics units model was introduced in mid 2002, to better use the information available as a result of The New Tax System (TNTS). This units model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO maintained population, while the remaining businesses are in the ABS maintained population. Together, these two sub-populations make up the ABSBR population.

### ATO MAINTAINED POPULATION

**4** Most businesses and organisations in Australia need to obtain an Australian Business Number (ABN). They are then included on the whole-of-government register of businesses, the Australian Business Register (ABR), which is maintained by the ATO. Most of these businesses have simple structures; therefore, the unit registered for an ABN will satisfy ABS statistical requirements. For these businesses, the ABS has aligned its statistical units structure with the ABN unit. The businesses with simple structures constitute the ATO maintained population, and the ABN unit is used as the statistical unit for all ABS economic collections.

### ABS MAINTAINED POPULATION

**5** For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with the business. These businesses constitute the ABS maintained population. This population consists typically of large, complex and diverse businesses. The statistical units model described below caters for such businesses.

*Enterprise group:* This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the *Corporations Legislation Amendment Act 1991*), including legal entities such as companies, trusts and partnerships. Majority ownership is not required for control to be exercised.

*Enterprise:* An institutional unit comprising:

- (i) a single legal entity or business entity, or
- (ii) more than one legal entity or business entity within the same enterprise group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) sub-sector).

ABS MAINTAINED  
POPULATION *continued*

*Type of activity unit (TAU):* The TAU comprises one or more business entities, sub-entities or branches of a business entity within an enterprise group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.

**6** For more information about the effects of the introduction of this economic statistics units model, refer to Information Paper: Improvements in *ABS Economic Statistics [Arising from The New Tax System]* (cat. no. 1372.0).

CONTRIBUTION OF THE  
STATISTICAL UNITS TO THE  
ESTIMATES  
*Comparison over time*

**7** The units model described above replaced one in which the statistical unit was known as the management unit. This earlier model was last used in the utilities collection for the 2000–01 year.

**8** For 2001–02 and later years, the contributing statistical units are:

- the ABN unit for businesses with simple structures
- the TAU for businesses with complex structures.

(In most cases, employing ABN units / TAUs concurred with the management units used prior to the 2001–02 year.)

TAUs

**9** All units in the ABS maintained population (i.e. TAUs) classified to manufacturing were eligible to be selected for direct collection. Direct collection of data from these units is necessary because:

- many large and complex employing businesses have more than one legal entity, making it difficult to identify all legal entities for that business in the BIT data
- BIT data do not include all of the detailed information that the ABS requires from large and complex businesses.

ABN units

**10** The balance of units on the ABSBR classified to manufacturing were ABN units, from the ATO maintained population. Cut-offs were established which determined the way in which each ABN unit contributed to the statistics:

- First, ABN units with annualised Business Activity Statement (BAS) total sales (used in lieu of EAS total income) at or greater than the cut-offs set for individual ANZSIC categories were eligible to be selected for direct collection of data by the ABS. If selected, they were sent the same mail out questionnaire for completion that was sent to selections from the ABS maintained population.
- Second, ABN units with annualised BAS total sales below the cut-offs were excluded from direct collection. For these units, BIT data were obtained and added to the directly collected estimates to produce the statistics in this publication.

CUT-OFFS FOR ABN UNITS

**11** Cut-offs for ABN units were originally established for the 2001–02 collection year, which was the first to incorporate BIT data from the ATO. More information about how the initial cut-offs were set is shown in Appendix 1: Survey Changes in the 2001–02 and 2002–03 issue of this publication. These cut-offs have not changed from the initial year.

**12** For 2003–04, a cut-off of \$500,000 applied.

MANUFACTURING INDUSTRY  
ESTIMATES

**13** Therefore, the 2003–04 manufacturing industry estimates have been derived as follows:

- A sample survey was used to estimate the contribution of:
  - all businesses in the ABS maintained population
  - those businesses at or above the cut-offs in the ATO maintained population
  - 'tax exempt' businesses, that are not required to complete business income tax returns (and so would otherwise not contribute to the statistics)

MANUFACTURING INDUSTRY  
ESTIMATES *continued*

- For the balance of businesses (i.e. in the ATO maintained population below the cut-offs for their ANZSIC category), their contribution was sourced from BIT data, with some more detailed breakdowns produced using proportional relationships derived from the sample survey. The derivation of employment estimates is discussed in Appendix 2.

*Income contribution by unit type*

**14** An indication of the importance of these populations to the data can be gained from their contribution to the estimate of sales and service income for total MANUFACTURING. The following table shows their proportional contributions to sales and service income.

CONTRIBUTION TO SALES AND SERVICE INCOME

<i>ABSBR unit</i>	<i>ATO BIT data</i>	<i>Directly collected data</i>	<i>Total</i>
	%	%	%
ABN units	3.2	30.2	33.4
TAUs	—	66.6	66.6
<b>Total</b>	<b>3.2</b>	<b>96.8</b>	<b>100.0</b>

— nil or rounded to zero (including null cells)

## TECHNICAL NOTE 2      **DATA RELIABILITY** .....

### ABS SURVEY DATA

**1** For 2003–04, the manufacturing collection was, in part, a sample survey designed primarily to deliver estimates at the industry class level for Australia. Industry subdivision estimates for states and territories are also produced for key data items, but the survey was not specifically designed for these purposes.

### SAMPLE ERROR

**2** The majority of data contained in this publication have been obtained from a sample of manufacturing businesses. 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 manufacturing businesses 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 (RSE). RSEs for the national estimates of employment, wages and salaries, sales and service income, and IVA contained in this publication are mainly 2% or less for industry subdivisions (see Technical Note 3) and most are 4% or less for industry classes. The relative standard errors for the selected estimates for the states and territories are mainly 3% or less for employment and 1% or less for sales and service income.

**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 3. Detailed relative standard errors can be made available on request.

**5** The size of the RSE may be a misleading indicator of the reliability of some of the estimates for IVA. This situation may occur where an estimate may legitimately include positive and negative values, reflecting the financial performance of individual businesses. In these cases, the aggregated estimate can be small relative to the contribution of individual businesses resulting in a standard error which is large relative to the estimate.

### NON-SAMPLE ERROR

**6** All data presented in this publication are subject to non-sample error.

**7** 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 a full census or a sample.

**8** Although 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. The ABS compares data from different ABS (and non-ABS) sources relating to the one industry, to ensure consistency and coherence.

NON-SAMPLE ERROR *continued*

**9** There are also non-sampling errors associated with the BIT data sourced from the ATO. For example, the ATO treats any non-response by either bringing forward the previous year's data for a non-responding business, or imputing the data as zero if there are no previous data to use.

TECHNICAL NOTE 3      **RELATIVE STANDARD ERRORS** .....

SELECTED DATA ITEMS

INDUSTRY SUBDIVISION		<i>Employment at end of June(a)</i>	<i>Wages and salaries(b)</i>	<i>Sales and service income(c)</i>	<i>Purchases(d)</i>	<i>Industry value added</i>	<i>Capital expenditure on plant machinery and equipment</i>
<i>ANZSIC code</i>	<i>Description</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
21	Food, beverage and tobacco mfg	1.2	0.6	0.5	0.5	0.6	2.3
22	Textile, clothing, footwear and leather mfg	1.7	1.4	0.7	1.1	1.2	6.6
23	Wood and paper product mfg	1.4	1.1	0.6	0.9	0.9	1.9
24	Printing, publishing and recorded media	1.9	1.4	1.0	2.0	1.0	5.2
25	Petroleum, coal, chemical and associated product mfg	1.2	0.9	0.4	0.4	0.7	0.6
26	Non-metallic mineral product mfg	1.4	1.3	0.8	0.9	1.1	2.6
27	Metal product mfg	1.2	1.0	0.5	0.6	0.8	1.9
28	Machinery and equipment mfg	1.3	1.1	0.6	0.7	0.9	3.5
29	Other manufacturing	2.2	2.4	1.2	1.6	2.2	10.8
<b>21-29</b>	<b>Total manufacturing</b>	<b>0.5</b>	<b>0.4</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.9</b>

(a) Includes working proprietors.

(b) Excludes the drawings of working proprietors.

(c) Includes rent, leasing and hiring

(d) Includes capitalised purchases of materials.

## GLOSSARY

Data presented in this publication have been compiled from the standard financial accounts of businesses; therefore, the definition of each reported item aligns closely with that adopted in standard business accounting practice. Definitions of particular terms, as used in this publication, are also included.

<b>ABN unit</b>	<p>The statistical unit used by the ABS to represent businesses, and for which statistics are reported, in most cases. The ABN unit is the business unit which has registered for an ABN, and thus appears on the ATO administered Australian Business Register. In most cases, the ABN unit represents the legal entity. This unit is suitable for ABS statistical needs when the business is simple in structure. For more significant and diverse businesses where the ABN unit is not suitable for ABS statistical needs, the statistical unit used is the type of activity unit (TAU).</p> <p>In most cases, employing ABN units / TAUs concurred with the management units used prior to the 2001–02 year.</p>
<b>Acquisitions</b>	See the various capital expenditure entries.
<b>Amount exported by this business or its agent</b>	This represents the sales value of goods produced by the business (or for it on commission) that are exported (or are intended for export) outside Australia by the business or by its agent.
<b>billion</b>	One thousand million.
<b>Business</b>	<p>A business is generally considered to be a person, partnership, or corporation engaged in business or commerce; for example, a textile manufacturing business.</p> <p>In this publication, the term represents the ABN unit or type of activity unit (TAU), which are the two standard statistical units for the 2003–04 manufacturing collection (these two units are explained under separate entries). For details, see Explanatory Notes paragraphs 4–8.</p>
<b>Business Activity Statement (BAS) total sales</b>	Represented by the form item G1 <i>Total sales</i> on businesses' Business Activity Statements, supplied by them to the ATO. This item comprises all payments and other consideration (including GST) received during the nominated tax period for supplies made in the course of business.
<b>Businesses that do not export</b>	Businesses that reported no exports (either by their business or for them by an agent) of goods that they produced.
<b>Businesses that export more than 50% of sales</b>	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.
<b>Businesses that export up to and including 50% of sales</b>	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.
<b>Capital expenditure on dwellings, other buildings and structures</b>	Capital expenditure incurred acquiring dwellings, other buildings and structures, including roads, factories, warehouses, offices, bridges, etc. Includes expenses (except capitalised interest) incurred during the year in acquiring such assets.
<b>Capital expenditure on other assets (including land and intangible assets)</b>	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 capitalised computer software licence fees, installation costs, the purchase or development of large databases, software developed in-house (but excluded is software maintenance expenditure), and capitalised payments to contractors and consultants for software development. Note that

<b>Capital expenditure on other assets (including land and intangible assets) <i>continued</i></b>	if the cost of software and hardware cannot be separated, the total cost is included in acquisition of plant, machinery and equipment.
<b>Capital expenditure on plant, machinery and equipment</b>	Capital expenditure incurred acquiring plant, machinery and other equipment, including motor vehicles. Includes expenses (except capitalised interest) incurred during the year in acquiring such assets.
<b>Capital work done for own use</b>	<p>Capitalised work done by the employees or proprietors of a business in manufacturing, constructing, installing or repairing assets, and the in-house development of computer software, for use by the business or for rental or lease. 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>
<b>Capitalised purchases</b>	Goods drawn from inventories for use as fixed tangible assets in capital work done by the employees or proprietors of a business for use by the business or for rental or lease.
<b>Chain volume measures</b>	<p>Annually-reweighted chain Laspeyres volume indexes referenced to the current price values in a chosen reference year (i.e. the year when the quarterly chain volume measures sum to the current price annual values). Chain Laspeyres volume measures are compiled by linking together (compounding) movements in volumes, calculated using the average prices of the previous financial year, and applying the compounded movements to the current price estimates of the reference year. Quarterly chain volume estimates are benchmarked to annual chain volume estimates, so that the quarterly estimates for a financial year sum to the corresponding annual estimate.</p> <p>Generally, chain volume measures are not additive. In other words, component chain volume measures do not sum to a total in the way original current price components do. In order to minimize the impact of this property, the ABS uses the latest base year as the reference year. A change in reference year changes levels but not growth rates, although some revision to recent growth rates can be expected because of the introduction of a more recent base year (and revisions to the current price estimates underlying the chain volume measures).</p> <p>For details, see <i>Australian National Accounts: National Income, Expenditure and Product, December Quarter 2005</i> (cat. no. 5206.0).</p>
<b>Change in inventories</b>	The value of total closing inventories less total opening inventories.
<b>Closing inventories</b>	The value of all inventories of finished goods (including inventories for resale), work-in-progress (less progress payments billed), raw materials, fuels, and containers, at the end of the reporting period.
<b>Commission manufacturing</b>	<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 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 its 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 it is excluded from the manufacturing collection.</p>

<b>Commission expenses</b>	Payments to other businesses and self-employed persons for work done or sales made on a contract or commission basis using materials supplied by the business. Payments to persons paid by commission without a retainer are also included. Excludes commissions paid to persons who receive a retainer, commission paid to the business' own employees, and in-house printing expenses.
<b>Current prices</b>	Estimates at current prices are valued at the prices of the period to which the observation relates. For example, estimates for 2003–04 are valued using 2003–04 prices. This contrasts to chain volume measures, where the prices used in valuation refer to the prices of a previous period.
<b>Disposal of assets</b>	Proceeds from the sale of tangible assets (plant, machinery, equipment, land, dwellings, other buildings and structures), and intangible assets (such as patents, licences and goodwill).
<b>Employer contributions into superannuation</b>	Includes salary sacrifice. Also includes all employer contributions to superannuation funds (including the employer productivity contribution) and provisions for employer contributions to superannuation funds. Employee contributions are excluded.
<b>Employment at end of June</b>	<p>Number of persons working for manufacturing businesses during the last pay period ending in June of the given year. Includes working proprietors and partners, employees absent on paid or prepaid leave, employees on workers' compensation who continue to be paid through the payroll, and contract workers paid through the payroll. Excludes persons paid by commission only, non-salaried directors, volunteers and self-employed persons such as consultants and contractors.</p> <p>For details of how employment estimates have been derived, see the Appendix.</p>
<b>Enterprise</b>	<p>An institutional unit comprising:</p> <ul style="list-style-type: none"> <li>■ a single legal entity or business entity; or</li> <li>■ more than one legal entity or business entity within the same enterprise group and in the same institutional sub-sector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) sub-sector).</li> </ul>
<b>Enterprise group</b>	A unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the <i>Corporations Legislation Amendment Act 1991</i> ), including legal entities such as companies, trusts and partnerships. Majority ownership is not required for control to be exercised.
<b>Exports as a proportion of sales of goods produced</b>	<p>For an individual business, 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 4.2, the proportion is calculated by dividing the value of goods exported by the value of sales of goods produced by all manufacturing businesses, not just the aggregated value for those units which exported.)</p> <p>Because the ATO data do not contain this export information, businesses whose contribution to manufacturing estimates was sourced from BIT data do not contribute to these export data. The effect of the exclusion of these businesses is likely to be minimal, in view of their small contribution to overall estimates.</p> <p>These data also exclude those businesses which operated during the given reference year but were not operating at 30 June of that reference year.</p>
<b>Freight and cartage expenses</b>	Excludes the cost of delivery by own vehicles and employees, as well as overseas freight and cartage on goods exported, and payments to couriers.
<b>Fringe benefits tax</b>	As reported by providers.

<b>Funding from government for operational costs</b>	Funding from federal, state and/or local government for operational costs (e.g. wages and salaries, rent, food). Includes bounties, subsidies, export grants, apprenticeship and traineeship schemes, and amounts reimbursed under the Australian Government's Energy Grants (Credits) Scheme.
<b>Gross valued added</b>	The value of output at basic prices minus the value of intermediate consumption at purchasers' prices. The Term is used to describe gross product by industry and by institutional sector. Basic prices valuation of output removes the distortion caused by variations in the incidence of commodity taxes and subsidies across the output of individual industries. For details, please refer to <i>Australian National Accounts: National Income, Expenditure and Product, December Quarter 2005</i> (cat. no.5206.0).
<b>Industry class</b>	The structure of ANZSIC comprises four levels, ranging from industry division (broadest level) to industry class (finest level). Activities are narrowly defined within the industry class level, which is identified by a four-digit code, e.g. Industry Class 2331 PULP, PAPER AND PAPERBOARD MANUFACTURING. Usually, an activity is primarily defined to one class. However, some activities may be primary to more than one class.
<b>Industry division</b>	The structure comprises 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.
<b>Industry group</b>	This is the intermediate level within each industry division of ANZSIC and is identified 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.
<b>Industry subdivision</b>	This is the broadest level category within each industry division of ANZSIC and is identified 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 manufacturing industry subdivisions are: <ul style="list-style-type: none"> <li>21 Food, beverage and tobacco mfg</li> <li>22 Textile, clothing, footwear and leather mfg</li> <li>23 Wood and paper product mfg</li> <li>24 Printing, publishing and recorded media</li> <li>25 Petroleum, coal, chemical and associated product mfg</li> <li>26 Non-metallic mineral product mfg</li> <li>27 Metal product mfg</li> <li>28 Machinery and equipment mfg</li> <li>29 Other manufacturing</li> </ul>
<b>Industry value added (IVA)</b>	IVA represents the value added by an industry to the intermediate inputs used by the industry. IVA is the measure of the contribution by manufacturing businesses to gross domestic product. The derivation of IVA is as follows: <ul style="list-style-type: none"> <li>Sales and service income</li> <li><i>plus</i> Funding from federal, state and/or local government for operational costs</li> <li><i>plus</i> Capital work done for own use</li> <li><i>plus</i> Closing inventories</li> <li><i>less</i> Opening inventories</li> <li><i>less</i> Purchases of goods and materials</li> <li><i>less</i> Other intermediate input expenses (for details, see the entry for total expenses)</li> <li><i>equals</i> IVA</li> </ul>

<b>Industry value added (IVA)</b> <i>continued</i>	<p>However, it should be noted that IVA is not a measure of operating profit before tax (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 total expenses for further details). On the income side, OPBT includes total income whereas IVA only includes sales and service income.</p> <p>Industry value added is related to, but different from, the national accounting variable gross value added above.</p> <p>For national accounts purposes, gross value added is calculated by adjusting industry value added to include General Government units and to also account for some other effects.</p>										
<b>Industry value added per person employed</b>	IVA of manufacturing businesses which operated during the given year ended 30 June divided by the number of persons employed by manufacturing businesses during the last pay period ending in June of that same year.										
<b>Insurance premiums</b>	Premiums for fire, general, accident, public liability, optional third-party and comprehensive motor vehicle insurance, and professional indemnity insurance and common law liability. Excludes workers' compensation insurance premiums/costs (included in selected labour costs) and compulsory third party motor vehicle insurance premiums (included in motor vehicle running expenses).										
<b>Interest expenses</b>	Includes interest paid on loans from banks, finance companies, partners, related or unrelated businesses, and in respect of finance leases. Includes interest equivalents such as hedging costs and expenses associated with discounted bills.										
<b>Interest income</b>	Includes interest from bank accounts, loans and finance leases and earnings on discount bills. Excludes capital repayments received, and charges between companies in the same TAU.										
<b>Intermediate input expenses</b>	For details, see the entry for total expenses.										
<b>Intermediate inputs</b>	<p>Intermediate inputs consist of materials and certain services which are used up in the production process.</p> <p>The calculation is:</p> <table border="0" style="margin-left: 40px;"> <tr> <td></td> <td style="text-align: right;">Intermediate input expenses</td> </tr> <tr> <td></td> <td style="text-align: right;">(for details, see the entry for total expenses)</td> </tr> <tr> <td style="text-align: right;"><i>plus</i></td> <td style="text-align: right;">Opening inventories</td> </tr> <tr> <td style="text-align: right;"><i>less</i></td> <td style="text-align: right;">Closing inventories</td> </tr> <tr> <td style="text-align: right;"><i>equals</i></td> <td style="text-align: right;">Intermediate inputs</td> </tr> </table>		Intermediate input expenses		(for details, see the entry for total expenses)	<i>plus</i>	Opening inventories	<i>less</i>	Closing inventories	<i>equals</i>	Intermediate inputs
	Intermediate input expenses										
	(for details, see the entry for total expenses)										
<i>plus</i>	Opening inventories										
<i>less</i>	Closing inventories										
<i>equals</i>	Intermediate inputs										
<b>Inventories – opening/closing</b>	The value of all inventories of finished goods (including inventories for resale), work-in-progress (less progress payments billed), raw materials, fuels, and containers, at the beginning and end of the reporting period respectively.										
<b>Management unit</b>	For collections prior to 2001–02, the management unit was the highest-level accounting unit within a business, having regard to industry homogeneity, for which accounts were maintained. In nearly all cases, it coincided with the legal entity owning the business (i.e. company, partnership, trust, sole operator, etc.).										
<b>Manufacturing business</b>	An ABN unit / TAU predominantly engaged in manufacturing activities. The data collected for such units cover all activities of the business (including non-manufacturing activities).										
<b>Motor vehicle running expenses</b>	Includes expenditure on registration fees, compulsory third-party insurance premiums, fuel and repair and maintenance expenses. Excludes expenses for off-road motor vehicles (e.g. forklifts, mobile plant).										
<b>Net capital expenditure</b>	The value of total capital expenditure less proceeds received from the disposal of assets.										

<b>Opening inventories</b>	The value of all inventories of finished goods (including inventories for resale), work-in-progress (less progress payments billed), raw materials, fuels, and containers, at the beginning of the reporting period.
<b>Operating profit before tax (OPBT)</b>	Profit before extraordinary items are brought to account and prior to the deduction of income tax and appropriations to owners (e.g. dividends paid).
<b>Other intermediate input expenses</b>	Comprises intermediate input expenses less current purchases of goods and materials used in production (i.e. excludes any capitalised purchases). Further detail is included in the entry for total expenses.
<b>Payroll tax</b>	Excludes Pay as You Go withholding tax.
<b>Production volumes</b>	See the entry for chain volume measures.
<b>Purchases of goods and materials</b>	Purchases of materials, components, containers, packaging materials, fuels, electricity and water, and purchases of finished goods for resale. Also includes capitalised purchases. Excludes purchases of parts and fuels for motor vehicles, but includes fuels for off-road vehicles, such as forklifts and mobile plant.
<b>Reference period</b>	For each collection year, 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 (apart from employment) 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 2003–04 collection, a business may have reported data for the year ended 31 December 2003.
<b>Rent, leasing and hiring expenses</b>	Payments for the rent, leasing and hiring of land, dwellings, other buildings and structures, motor vehicles, plant, machinery and other equipment (including telecommunication equipment). Includes operating lease payments; excludes finance lease payments.
<b>Rent, leasing and hiring income</b>	For details, see the entry for sales and service income.
<b>Repair and maintenance expenses</b>	Includes computer software and hardware maintenance, and repair and maintenance of off-road motor vehicles. Excludes wages and salaries of own employees and the repair and maintenance costs of on-road motor vehicles.
<b>Sales and service income</b>	Includes: <p><i>Sales of goods</i></p> <ul style="list-style-type: none"> <li>■ whether or not manufactured by the business (including goods produced for the business on a commission basis). Includes export sales, sales or transfers to related businesses or to overseas branches of the business, progress payments relating to long term contracts if they are billed in the period, and delivery charges not separately invoiced to customers. Excludes excise and duties received on behalf of the Government, sales of fixed tangible assets, interest income, and delivery charges separately invoiced to customers. Exports are valued free on board (f.o.b.) (i.e. export freight charges are excluded).</li> </ul> <p><i>Income from services</i></p> <ul style="list-style-type: none"> <li>■ includes income from consulting services, repair, maintenance and service income and fees, contract, subcontract and commission income, management fees/charges from related and unrelated businesses, installation charges, delivery charges separately invoiced to customers, and royalties from intellectual property (e.g. patents, copyrights, etc.). Excludes natural resource royalties income, interest income, and delivery charges not separately invoiced to customers.</li> </ul>

<b>Sales and service income</b> <i>continued</i>	<p><i>Rent, leasing and hiring income</i></p> <ul style="list-style-type: none"> <li>■ derived from the ownership of land, dwellings, buildings and other structures, motor vehicles, plant, machinery and other equipment. Excludes royalties from mineral leases, income from finance leases and payments received under hire purchase arrangements. This item is included in sales and service income, but is not separately published. (Under the current international standards, rent, leasing and hiring income is classified as service income.)</li> </ul> <p>These are valued net of discounts given and exclusive of goods and services tax (GST). Extraordinary items are also excluded.</p> <p>In order to produce data by state and territory, selected businesses which received mail out questionnaires were also asked to provide sales of goods and services (as well as employment and wages and salaries) for each state and/or territory in which they operated. For details, see Explanatory Notes paragraphs 20–22.</p>
<b>Sales and service income per person employed</b>	The value of sales and service income of manufacturing businesses which operated during the given year end 30 June divided by the number of persons employed by manufacturing businesses during the last pay period ending June of that same year.
<b>Sales of goods produced</b>	Sales of goods produced (manufactured) by the business (including goods produced for the business on a commission basis). Includes export sales, sales or transfers to related businesses or to overseas branches of the business, progress payments relating to long term contracts if they are billed in the period, and delivery charges not separately invoiced to customers. Excludes excise and duties received on behalf of the Government, sales of fixed tangible assets, interest income, and delivery charges separately invoiced to customers. Exports are valued free on board (f.o.b.) (i.e. export freight charges are excluded).
<b>Selected labour costs</b>	See the entry for total expenses.
<b>Selected non-wage labour costs</b>	For the purposes of table 2.5, comprises employer contributions into superannuation, workers' compensation premiums/costs, fringe benefits tax and payroll tax.
<b>Standard Institutional Sector Classification of Australia (SISCA)</b>	The SISCA is the central classification among ABS Standard Economic Sector Classifications. It is based on the System of National Accounts 1993 (SNA93) institutional sector classification, and comprises the sectors: non-financial corporations, financial corporations, general government, households, non-profit institutions serving households, and rest of the world (which includes only non-resident units, these being excluded from all other sectors). For more information, users should refer to <i>Standard Economic Sector Classifications of Australia (SESCA)</i> (cat. no. 1218.0).
<b>Superannuation</b>	See the entry for employer contributions into superannuation.
<b>Total acquisitions</b>	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 capital work done for own use.
<b>Total expenses</b>	For the purposes of calculating economic and accounting variables for manufacturing industries, expenses incurred by businesses are divided into several categories. However, some expenses are excluded entirely from all such calculations: excluded are capital repayments, costs associated with the transfer of real estate, dividends, donations, export freight charges, extraordinary losses, foreign exchange losses, goods and services tax (GST), excise and duties payable to governments, income tax and other direct taxes, losses on asset sales, and unrealised gains/losses from revaluations of assets.

**Total expenses *continued*** Those expenses used for calculations are categorised as follows:

*Intermediate input expenses*

This category covers the major expenses incurred by businesses in producing and distributing goods and services (except labour costs), and comprises two sub-categories of operating expenses:

Purchases of goods, materials and services used in production, which include:

- purchases of materials, components, containers and packaging materials, electricity, fuels and water
- purchases of goods for resale (without any further processing or assembly)
- motor vehicle running expenses
- freight and cartage expenses
- repair and maintenance expenses
- rent, leasing and hiring expenses (excluding finance lease payments)
- contract, subcontract and commission expenses.

Expenses related to the sale of goods and administrative expenses, which include:

- management fees/charges paid to related and unrelated businesses
- bank charges other than interest
- audit and other accounting expenses
- legal fees
- advertising expenses
- postal and telecommunication expenses
- office supplies and printing expenses
- travelling, accommodation and entertainment expenses
- staff training
- payments for royalties from intellectual property (e.g. patents and copyrights)
- payments to employment agencies for staff.

Excluded from intermediate input expenses are selected labour costs and other operating expenses as detailed below.

*Selected labour costs*

- wages and salaries (including provisions for employee entitlements)
- employer contributions into superannuation (including salary sacrifice)
- workers' compensation premiums/costs.

*Other operating expenses*

Some expenses are excluded from the calculation of intermediate input expenses and selected labour costs, but are included in the calculation of the accounting variable operating profit before tax (OPBT). These expenses include:

- 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 tax and land rates
- other expenses not capitalised by businesses
- natural resource royalties expenses
- payroll tax and fringe benefits tax.

**Total factor income** That part of the cost of producing the gross domestic product which consists of gross payments to factors of production (labour and capital). It represents the value added by these factors in the process of production, and is equivalent to gross domestic product less taxes plus subsidies on production and imports. For details, please refer to *Australian National Accounts: State Accounts, 2003–04* (cat. no. 5220).

<b>Type of activity unit (TAU)</b>	<p>The TAU is the statistical unit used by the ABS to represent businesses, and for statistics are reported, in cases where the ABN unit is not suitable for ABS statistical needs.</p> <p>The TAU comprises one or more business entities, sub-entities or branches of a business entity within an enterprise group that can report production and employment data for similar economic activities. When a minimum set of data items are available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.</p> <p>In most cases, employing ABN units / TAUs concurred with the management units used prior to the 2001–02 year.</p>
<b>Wages and salaries</b>	<p>The gross wages and salaries (including capitalised wages and salaries) of all employees of the business. The item includes severance, termination and redundancy payments, salaries and fees of directors and executives, retainers and commissions of persons who received a retainer, 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.</p> <p>In order to produce data by state and territory, selected businesses which received mail out questionnaires were also asked to provide wages and salaries (as well as employment and sales of goods and services) for each state and/or territory in which they operated. For details, see Explanatory Notes paragraphs 20–22.</p>
<b>Wages and salaries per person employed</b>	<p>The value of wages and salaries paid by manufacturing businesses which operated during the given year ended 30 June divided by the number of persons employed by manufacturing businesses during the last pay period ending in June of the same year.</p>
<b>Wages and salaries to sales and service income ratio</b>	<p>The wages and salaries paid by manufacturing businesses which operated during the year ended 30 June as a proportion of the sales and service income of manufacturing businesses which operated during the same year.</p>
<b>Workers' compensation premiums/costs</b>	<p>As reported by providers.</p>







## FOR MORE INFORMATION . . .

*INTERNET* **www.abs.gov.au** the ABS web site is the best place for data from our publications and information about the ABS.

*LIBRARY* A range of ABS publications are available from public and tertiary libraries Australia wide. Contact your nearest library to determine whether it has the ABS statistics you require, or visit our web site for a list of libraries.

## INFORMATION AND REFERRAL SERVICE

Our consultants can help you access the full range of information published by the ABS that is available free of charge from our web site, or purchase a hard copy publication. Information tailored to your needs can also be requested as a 'user pays' service. Specialists are on hand to help you with analytical or methodological advice.

*PHONE* 1300 135 070  
*EMAIL* client.services@abs.gov.au  
*FAX* 1300 135 211  
*POST* Client Services, ABS, GPO Box 796, Sydney NSW 2001

## FREE ACCESS TO STATISTICS

All ABS statistics can be downloaded free of charge from the ABS web site.

*WEB ADDRESS* [www.abs.gov.au](http://www.abs.gov.au)



2822100013029

ISSN 1036 2738

RRP \$28.00