



1997-98

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# MANUFACTURING INDUSTRY

AUSTRALIA  
PRELIMINARY

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- For more information about these and related statistics, contact Frank Orton on Sydney 02 9268 4541 or refer to the back cover of this publication.

## NOTES

### ANNUAL MANUFACTURING INDUSTRY COLLECTION

The 1997–98 collection was a survey of approximately 19,000 manufacturing businesses. All selected manufacturing businesses were requested to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported. Sub-samples of businesses provided additional information related to detailed structural and performance data and the value of sales for commodities produced. This publication provides preliminary estimates of employment, wages and salaries and turnover. Other data items will be published in *Manufacturing Industry, Australia, 1997–98* (Cat. no. 8221.0), other Australian Bureau of Statistics (ABS) publications, or will be available as a special data service.

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### ABOUT THIS ISSUE

Estimates for turnover in this publication reflect implementation of new international standards, specifically the introduction of the 1993 edition of the United Nations System of National Accounts (SNA93). Estimates presented in table 1 have been compiled using the new standards. Table 2 provides a measure of the effect of these changes. The definition of the difference between the new and old standards for compiling estimates of turnover is contained in paragraph 12 of the Explanatory Notes.

Analysis of the results of past manufacturing collections shows that preliminary estimates are generally slightly higher than final estimates, by about 1%.

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### MANUFACTURING PUBLICATIONS

The 1997–98 series of final *Manufacturing Industry* publications (Cat. nos 8221.0 to 8221.6) for Australia and States will be released progressively commencing with the release of *Manufacturing Industry, Australia, 1997–98* (Cat. no. 8221.0) in August 1999. The 1997–98 issue of *Manufacturing Production, Commodities Produced, Australia* (Cat. no. 8365.0) will be released in December 1999. *Manufacturing Industry, Australia, 1998* (Cat. no. 8225.0), a compendium publication, is also to be released in December 1999.

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### SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
SNA93	United Nations System of National Accounts, 1993
—	nil or rounded to zero

W. McLennan  
Australian Statistician

## MAIN FEATURES

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### OVERVIEW

Manufacturing establishments operating in Australia employed 965,000 persons at the end of June 1998. For the year to the end of June 1998, they paid \$34,135m in wages and salaries, and recorded \$214,355m in turnover.

### EMPLOYMENT

Australian manufacturing employment increased between June 1997 and June 1998 (up 2% from 944,700 persons to 965,000 persons). Increases were recorded for the Northern Territory (up 12%), the Australian Capital Territory (up 8%), Victoria and Western Australia (both up 4%), Queensland (up 3%) and South Australia (up 1%). Employment fell in Tasmania (down 2%) and New South Wales (down marginally, by 0.2%). For the first time since June 1990, employment in the Victorian manufacturing industry (318,200 persons) exceeded that for New South Wales (309,100 persons).

Nationally, the industry subdivision with the largest percentage increase was Printing, publishing and recorded media (up 6%), followed by Food, beverage and tobacco manufacturing and Textile, clothing, footwear and leather manufacturing (both up 4%), and Wood and paper product manufacturing and Other manufacturing (both up 3%). Employment fell in Non-metallic mineral product manufacturing (down 2%).

### TURNOVER

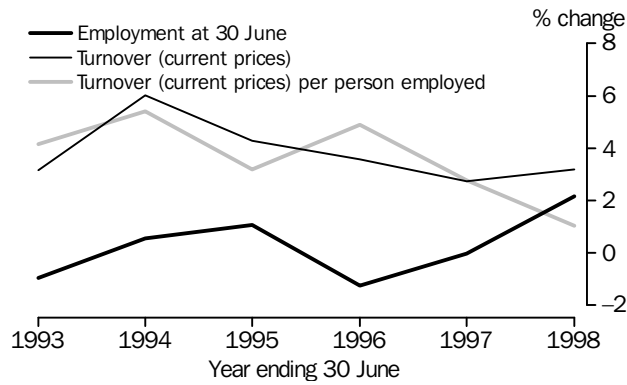
Turnover (in current prices) rose by \$6,656m or 3% from \$207,699m in 1996–97 to \$214,355m in 1997–98. Prices for manufactured goods grew by about 1% over the year, implying real turnover growth of approximately 2% compared with 1996–97.

All States and Territories recorded an increase in turnover at current prices between 1996–97 and 1997–98. The Northern Territory (up 10%) recorded the largest increase in percentage terms, followed by the Australian Capital Territory (up 7%), Queensland (up 6%), South Australia and Tasmania (both up 5%), Western Australia (up 4%) and New South Wales and Victoria (both up 2%).

Nationally, Textile, clothing, footwear and leather manufacturing (up 6%) recorded the largest percentage increase in turnover at current prices, followed by Food, beverage and tobacco manufacturing (up 5%), Wood and paper product manufacturing, Non-metallic mineral product manufacturing and Other manufacturing (all up 4%), Metal product manufacturing (up 3%) and Petroleum, coal, chemical and associated product manufacturing (up 2%).

TRENDS IN EMPLOYMENT AND TURNOVER

Percentage change from previous year(a)



(a) Percentage changes for turnover (current prices) and turnover (current prices) per person employed are calculated for the 1997-98 turnover estimate on the basis of the most recent international standard, whereas turnover for earlier years was calculated on the basis of the old standard (see paragraph 12 of the Explanatory Notes).

INDUSTRY SUBDIVISION		Employment at end of June(b)	Wages and salaries(c)	Turnover(d)
ANZSIC code	Description	'000	\$m	\$m
NEW SOUTH WALES				
21	Food, beverage and tobacco mfg	50.0	1 843	14 205
22	Textile, clothing, footwear and leather mfg	23.9	616	3 357
23	Wood and paper product mfg	19.3	638	3 515
24	Printing, publishing and recorded media	42.1	1 577	6 736
25	Petroleum, coal, chemical and associated product mfg	32.4	1 375	12 074
26	Non-metallic mineral product mfg	11.0	431	2 829
27	Metal product mfg	52.6	2 291	14 141
28	Machinery and equipment mfg	61.8	2 447	10 502
29	Other manufacturing	15.9	426	1 930
21-29	<i>Total manufacturing</i>	309.1	11 644	69 289
VICTORIA				
21	Food, beverage and tobacco mfg	48.1	1 788	14 271
22	Textile, clothing, footwear and leather mfg	40.5	1 079	5 303
23	Wood and paper product mfg	18.3	613	3 255
24	Printing, publishing and recorded media	31.1	1 066	4 710
25	Petroleum, coal, chemical and associated product mfg	36.8	1 577	11 493
26	Non-metallic mineral product mfg	9.1	361	2 199
27	Metal product mfg	39.8	1 416	8 770
28	Machinery and equipment mfg	74.8	2 949	17 554
29	Other manufacturing	19.6	482	2 276
21-29	<i>Total manufacturing</i>	318.2	11 331	69 832
QUEENSLAND				
21	Food, beverage and tobacco mfg	35.8	1 182	9 550
22	Textile, clothing, footwear and leather mfg	6.7	131	623
23	Wood and paper product mfg	11.5	363	1 830
24	Printing, publishing and recorded media	12.9	385	1 522
25	Petroleum, coal, chemical and associated product mfg	10.5	417	4 943
26	Non-metallic mineral product mfg	7.9	286	1 945
27	Metal product mfg	24.5	840	6 579
28	Machinery and equipment mfg	25.5	820	3 565
29	Other manufacturing	10.5	248	1 093
21-29	<i>Total manufacturing</i>	145.7	4 672	31 651
SOUTH AUSTRALIA				
21	Food, beverage and tobacco mfg	16.0	497	4 287
22	Textile, clothing, footwear and leather mfg	4.4	132	757
23	Wood and paper product mfg	5.4	198	1 015
24	Printing, publishing and recorded media	5.8	190	779
25	Petroleum, coal, chemical and associated product mfg	7.0	256	1 570
26	Non-metallic mineral product mfg	2.7	99	611
27	Metal product mfg	11.4	432	2 612
28	Machinery and equipment mfg	28.3	1 048	7 232
29	Other manufacturing	5.7	140	610
21-29	<i>Total manufacturing</i>	86.8	2 992	19 474

(a) See paragraph 8 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) See paragraphs 11-13 of the Explanatory Notes.

INDUSTRY SUBDIVISION		Employment at end of June(b)	Wages and salaries(c)	Turnover(d)
ANZSIC code	Description	'000	\$m	\$m
.....				
WESTERN AUSTRALIA				
21	Food, beverage and tobacco mfg	13.8	434	3 193
22	Textile, clothing, footwear and leather mfg	3.1	75	298
23	Wood and paper product mfg	4.8	126	721
24	Printing, publishing and recorded media	6.9	213	878
25	Petroleum, coal, chemical and associated product mfg	6.5	275	3 259
26	Non-metallic mineral product mfg	4.8	187	1 040
27	Metal product mfg	16.2	593	5 203
28	Machinery and equipment mfg	13.9	455	2 226
29	Other manufacturing	6.5	145	688
21-29	<i>Total manufacturing</i>	76.5	2 505	17 506
.....				
TASMANIA				
21	Food, beverage and tobacco mfg	5.7	187	1 424
22	Textile, clothing, footwear and leather mfg	1.4	39	189
23	Wood and paper product mfg	3.8	141	1 193
24	Printing, publishing and recorded media	1.6	52	183
25	Petroleum, coal, chemical and associated product mfg	0.8	30	192
26	Non-metallic mineral product mfg	0.6	22	223
27	Metal product mfg	3.5	143	1 081
28	Machinery and equipment mfg	2.7	103	453
29	Other manufacturing	0.9	17	65
21-29	<i>Total manufacturing</i>	21.1	734	5 003
.....				
NORTHERN TERRITORY				
21	Food, beverage and tobacco mfg	0.5	13	93
22	Textile, clothing, footwear and leather mfg	0.1	2	6
23	Wood and paper product mfg	0.2	7	30
24	Printing, publishing and recorded media	0.4	11	37
25	Petroleum, coal, chemical and associated product mfg	0.1	4	29
26	Non-metallic mineral product mfg	0.3	10	91
27	Metal product mfg	1.4	68	629
28	Machinery and equipment mfg	0.7	19	75
29	Other manufacturing	0.2	4	17
21-29	<i>Total manufacturing</i>	3.8	138	1 006
.....				
AUSTRALIAN CAPITAL TERRITORY				
21	Food, beverage and tobacco mfg	0.4	14	119
22	Textile, clothing, footwear and leather mfg	0.2	2	12
23	Wood and paper product mfg	0.3	8	42
24	Printing, publishing and recorded media	1.5	50	193
25	Petroleum, coal, chemical and associated product mfg	—	1	3
26	Non-metallic mineral product mfg	0.1	4	42
27	Metal product mfg	0.3	8	33
28	Machinery and equipment mfg	0.7	23	104
29	Other manufacturing	0.4	11	45
21-29	<i>Total manufacturing</i>	3.9	120	594

(a) See paragraph 8 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) See paragraphs 11-13 of the Explanatory Notes.

# 1

## MANUFACTURING ESTABLISHMENTS(a), Summary Data for States, Territories & Australia *continued*

INDUSTRY SUBDIVISION		Employment at end of June(b)	Wages and salaries(c)	Turnover(d)
ANZSIC code	Description	'000	\$m	\$m
AUSTRALIA				
21	Food, beverage and tobacco mfg	170.4	5 959	47 142
22	Textile, clothing, footwear and leather mfg	80.2	2 074	10 545
23	Wood and paper product mfg	63.6	2 093	11 602
24	Printing, publishing and recorded media	102.1	3 543	15 038
25	Petroleum, coal, chemical and associated product mfg	94.2	3 935	33 563
26	Non-metallic mineral product mfg	36.5	1 400	8 982
27	Metal product mfg	149.8	5 793	39 048
28	Machinery and equipment mfg	208.5	7 864	41 711
29	Other manufacturing	59.7	1 473	6 725
<b>21–29</b>	<b>Total manufacturing</b>	<b>965.0</b>	<b>34 135</b>	<b>214 355</b>

(a) See paragraph 8 of the Explanatory Notes.

(b) Includes working proprietors.

(c) Excludes the drawings of working proprietors.

(d) See paragraphs 11–13 of the Explanatory Notes.

# 2

## EFFECT OF CHANGES TO DEFINITIONS(a), Australia(b)

INDUSTRY SUBDIVISION		Effect on estimates of turnover
ANZSIC code	Description	%
21	Food, beverage and tobacco mfg	—
22	Textile, clothing, footwear and leather mfg	0.1
23	Wood and paper product mfg	—
24	Printing, publishing and recorded media	0.1
25	Petroleum, coal, chemical and associated product mfg	0.3
26	Non-metallic mineral product mfg	0.1
27	Metal product mfg	—
28	Machinery and equipment mfg	—
29	Other manufacturing	—
<b>21–29</b>	<b>Total manufacturing</b>	<b>0.1</b>

(a) This table presents percentage differences between estimates for turnover calculated on the basis of the most recent international standards and corresponding estimates calculated on the basis of the standards which applied previously. Paragraph 12 of the Explanatory Notes provides details of the changes to standards.

(b) State and Territory estimates for turnover have been affected by the changes in a very similar manner to national estimates.

# EXPLANATORY NOTES

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## INTRODUCTION

- 1** This publication presents preliminary statistics compiled from a survey of manufacturing establishments for 1997–98.
- 2** The manufacturing collection is conducted on an annual basis. For the 1997–98 collection, a sample of approximately 19,000 manufacturing businesses were requested to provide data on employment, wages and salaries, turnover, purchases and whether their products were exported.
- 3** For the 1997–98 collection, smaller samples of businesses provided additional information related to detailed structural and performance data. Information in respect of all of these data items will be released in either the publication *Manufacturing Industry, Australia, 1997–98* (Cat. no. 8221.0), other Australian Bureau of Statistics (ABS) publications, or will be available as a special data service. A small sample of businesses was also asked to supply value of sales for commodities produced. These data will be released in the publication *Manufacturing Production, Commodities Produced, Australia, 1997–98* (Cat. no. 8365.0).
- 4** Manufacturing, as specified in Division C of the Australian and New Zealand Standard Industrial Classification (ANZSIC), broadly relates to the physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand.

## SCOPE AND COVERAGE

- 5** The business unit for which statistics are presented in this publication is the establishment. A manufacturing establishment is one predominantly engaged in manufacturing activities, but the data collected for it cover all activities of the establishment (including non-manufacturing activities). Conversely, there are some establishments predominantly engaged in non-manufacturing activities which also undertake limited manufacturing activities and which are excluded.
- 6** A small number of manufacturing establishments engage, in a significant way, in a variety of activities which are normally carried out by different industries. For example, a predominantly manufacturing establishment may also undertake significant amounts of wholesaling. Similarly, a manufacturing establishment may produce significant volumes of a variety of goods which are normally produced in different manufacturing industries. In such cases, the original establishment is 'split' into a separate establishment for each significant activity which belongs to a separate industry. For the 1997–98 manufacturing collection, 'significant' was defined as turnover of \$7.3 million or more.
- 7** The statistics in this publication exclude some very small manufacturers. Those excluded are manufacturers not employing staff at 30 June 1998 (such as sole proprietorships or family partnerships) which had not registered as group employers with the Australian Taxation Office. Though a substantial number, these businesses would contribute only marginally to aggregate data were they to be included. In addition, the ABS attempts to obtain data for those businesses which ceased operation during the year, but it is not possible to obtain data for all of them.



## EXPLANATORY NOTES *continued*

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### UNIT DEFINITION

**8** *Establishment.* The establishment is the smallest accounting unit of a business, within a State or Territory, controlling its productive activities and maintaining a specified range of detailed data enabling value added to be calculated. In general, an establishment covers all operations at a physical location, but may consist of a group of locations provided they are within the same State or Territory. The majority of establishments operate at one location only.

### DATA ITEM DEFINITIONS

**9** *Employment at end of June.* The number of working proprietors, working partners, permanent, part-time, temporary and casual employees, and managerial and executive employees working for an establishment during the last pay period ending in June 1998. Employees absent on paid or prepaid leave are included, as are employees on workers' compensation who continue to be paid through the payroll system. Non-salaried directors, self-employed persons such as consultants, contractors and persons paid solely by commission without a retainer, and volunteer workers are excluded.

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

**11** *Turnover.* Sales (exclusive of excise and sales tax) of goods whether produced by the establishment or not, plus transfers out of goods to other establishments of the same business, plus bounties and subsidies on production, plus all other operating income from outside the establishment (such as commission income, repair and service income, and rent, leasing and hiring income), plus capital work done by an establishment's own employees for the business' own use, or for rental or lease and (from the 1997–98 collection, following the introduction of revised international standards) income from royalties from intellectual property (such as patents and copyright). Receipts from interest, natural resource royalties, dividends and the sale of fixed tangible assets are excluded.

### CHANGES TO DATA ITEM DEFINITIONS

**12** From the 1997–98 collection, turnover includes income from royalties from intellectual property (such as patents and copyright) which was previously excluded. This definition reflects implementation of new international standards for the compilation of estimates of turnover. The effect on the estimates is shown in table 2.

**13** Some further differences exist between the previous and current definitions of turnover (particularly in relation to mineral/petroleum exploration income and expenses, and the purchase of artistic originals). However, these items are understood to be relatively insignificant for manufacturers and their omission would have virtually no effect on the estimates.

### RELIABILITY OF ESTIMATES

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

**15** The standard error can also be expressed as a percentage of the estimate, and this is known as the relative standard error. The relative standard errors for the data as presented in this publication are less than 4% for all Australian estimates. Relative standard errors across all States and Territories are generally higher. Detailed estimates of relative standard errors can be made available on request.

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

### DATA ADJUSTED

**17** Data in this issue have been adjusted to allow for lags in processing new businesses to the ABS business register, i.e. adjustments have been made to allow for new businesses which had commenced operations but for which details had not been processed to the ABS business register in time for inclusion in the annual manufacturing industry collection. Adjustments of this type will continue to be applied in future periods. The majority of businesses affected by these lags are small in size. The effect of these adjustments on 1997–98 Australian turnover is an increase of 0.2% while the effect on employment is an increase of 1.2%. Most States and Territories and most industries were affected to a similar degree. The exception is the Northern Territory (for which the adjustment for employment is 3.2%).

### ACKNOWLEDGMENT

**18** 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*.

## EXPLANATORY NOTES *continued*

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### RELATED PUBLICATIONS

**19** More detailed manufacturing industry statistics will be released in the publication *Manufacturing Industry, Australia, 1997–98* (Cat. no. 8221.0), which will be released in August 1999. State publications (Cat. nos 8221.1–8221.6) will be produced for each State. The publication for New South Wales (Cat. no. 8221.1) also contains selected data for the Australian Capital Territory. Commodities sold information will be released in the publication *Manufacturing Production, Commodities Produced, Australia, 1997–98* (Cat. no. 8365.0), to be released in December 1999. *Manufacturing Industry, Australia, 1998* (Cat. no. 8225.0), a compendium publication, is also to be released in December 1999.

**20** Users may also wish to refer to the publication *Price Indexes of Articles Produced by Manufacturing Industry, Australia* (Cat. no. 6412.0).

### ROUNDING

**21** Where figures have been rounded, discrepancies may occur between totals and the sums of the component items. However, estimates of change shown in the Main Features have been calculated using unrounded estimates and may be different from, but are more accurate than, movements obtained from the rounded estimates.

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