

Western Australia



1991-92
Manufacturing Industry
Western Australia

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**MANUFACTURING INDUSTRY
WESTERN AUSTRALIA
1991-92**

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AUSTRALIAN BUREAU OF STATISTICS

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INQUIRIES

- for further information about statistics in this publication and the availability of related unpublished statistics, contact Mark Wise on Sydney (02) 268 4541 or any other ABS office.
- for information about other ABS statistics and services please refer to the back page of this publication.

INTRODUCTION

This publication contains detailed industry statistics compiled from a census of manufacturing establishments conducted in respect of 1991–92 and some comparative statistics for earlier years. It provides more detailed information on manufacturing in Western Australia than was published in the previous publications from this census—*Manufacturing Industry, Australia, 1991–92, Preliminary* (8201.0), which was released on 25 May 1993 and *Manufacturing Industry, Australia, 1991–92* (8221.0), which was released on 21 February 1994.

The 1990–91 census data presented in this publication generally differ from those published in the 1990–91 issue of this publication. This is due to further processing of that year's data. All time series statistics presented in this publication show these revised data. Further details about the extent of these revisions can be obtained by contacting ABS NSW—see previous page for contact details.

For the 1991–92 manufacturing census, information on only employment, wages and salaries paid and turnover were collected. However, as with the 1990–91 census, the 1991–92 census also included some questions related to environmental protection by manufacturers. The environmental protection issues covered in 1991–92 were different to those covered in 1990–91. These data are presented in Table 6. Information at the ASIC class level showing both current and capital expenditure on environmental protection are presented in Table 7. This expands on the information collected in 1990–91.

This publication has also brought together data from sources other than the manufacturing census to provide a more complete picture of the manufacturing industry, as follows:

- Census of Population and Housing (1991) data are presented in Tables 2 and 3. This includes information on the characteristics of persons employed in the manufacturing industry.
- A concordance between the ASIC and ANZSIC industry classifications is presented in Table 9. For a detailed explanation of this concordance, see the introduction to Table 9.

The standard units definitions employed in the system of integrated economic censuses have undergone revisions, which were first reflected in the 1988–89 manufacturing census results. In the 1988–89 census, the revisions were partially in place on the ABS central business register. By the 1989–90 census, the revised units definitions were in place for all large businesses. The 1990–91 and 1991–92 census results reflect the full implementation of the revised units definitions.

Unpublished data

A considerable amount of data from the manufacturing census exists in unpublished form. More detailed information to satisfy individual user requirements may be available on request. Further details can be obtained by contacting ABS NSW—see previous page for contact details.

SUMMARY OF FINDINGS

Overview

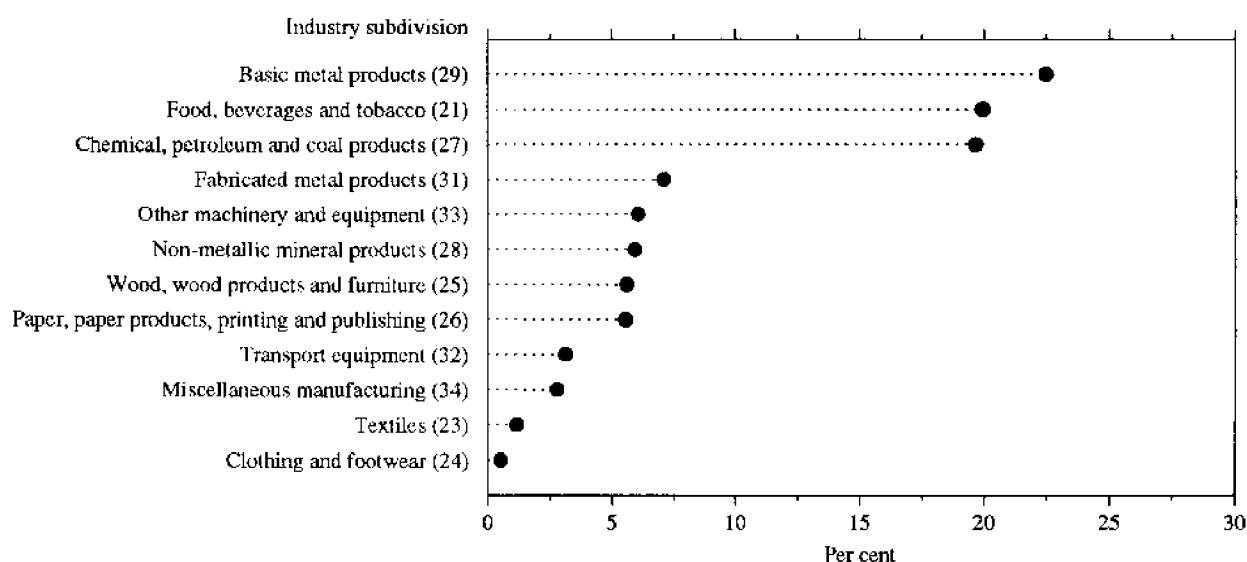
Turnover for the year 1991–92 by manufacturing establishments operating in Western Australia was \$12,903.0 million. This represents a 1.6 per cent decrease, in current price terms, from the \$13,114.6 million in turnover recorded for the year 1990–91. Manufacturing employment at the end of June 1992 was 62,475, some 3.1 per cent lower than 12 months earlier.

Turnover (Tables 1 and 4)

The chart below ranks industry subdivisions from the largest to the smallest contributor for 1991–92 manufacturing turnover. Basic metal products continues as the largest contributor with 22.5 per cent of total turnover. Food, beverages and tobacco (19.9%) continues as the second largest contributor, ahead of Chemical, petroleum and coal products (19.7%). Clothing and footwear (0.5%) and Textiles (1.2%) continue to be the smallest contributors to total turnover.

Turnover of manufacturing establishments decreased, in current price terms, by 1.6 per cent between 1990–91 and 1991–92. Six industry subdivisions recorded decreases and six recorded increases. Transport equipment (up 14.3%—from \$355.4m to \$406.3m) and Non-metallic mineral products (up 7.6%—from \$712.7m to \$766.5m) recorded the largest percentage increases. The largest percentage decreases were recorded by Basic metal products (down 12.9%—from \$3,328.5m to \$2,900.5m) and Miscellaneous manufacturing (down 11.6%—from \$408.2m to \$360.8m).

DISTRIBUTION OF TURNOVER, WESTERN AUSTRALIA, 1991–92



The percentage contribution by Western Australia to total Australian manufacturing turnover in 1991–92 was unchanged at 7.7 per cent. The percentage contribution to turnover by the other States and Territories in 1991–92 was: New South Wales 34.6 per cent; Victoria 31.6 per cent; Queensland 13.7 per cent; South Australia 9.3 per cent; Tasmania 2.3 per cent; the Northern Territory 0.4 per cent; and the Australian Capital Territory 0.3 per cent.

Longer term trends (1988–89 to 1991–92)

Turnover for the manufacturing industry in Western Australia increased by 20.8 per cent over the period 1988–89 to 1991–92 in current price terms. While analyses of turnover data over the longer term in current prices are affected by movements in prices and quantities produced, some indications of relative growth across manufacturing industries can still be produced. Five industry subdivisions recorded increases and seven recorded decreases. Chemical, petroleum and coal products (up 206.5%—from \$828.2m to \$2,538.1m) (see paragraph 29 of the Explanatory Notes for comparability of these data over time) and Basic metal products (up 32.2%—from \$2,194.6m to \$2,900.5m) showed the largest percentage growth in turnover over the period. The largest percentage decreases were recorded in Fabricated metal products (down 20.6%—from \$1,154.1m to \$916.0m), Miscellaneous manufacturing (down 19.1%—from \$446.0m to \$360.8m) and Clothing and footwear (down 18.9%—from \$83.3m to \$67.5m).

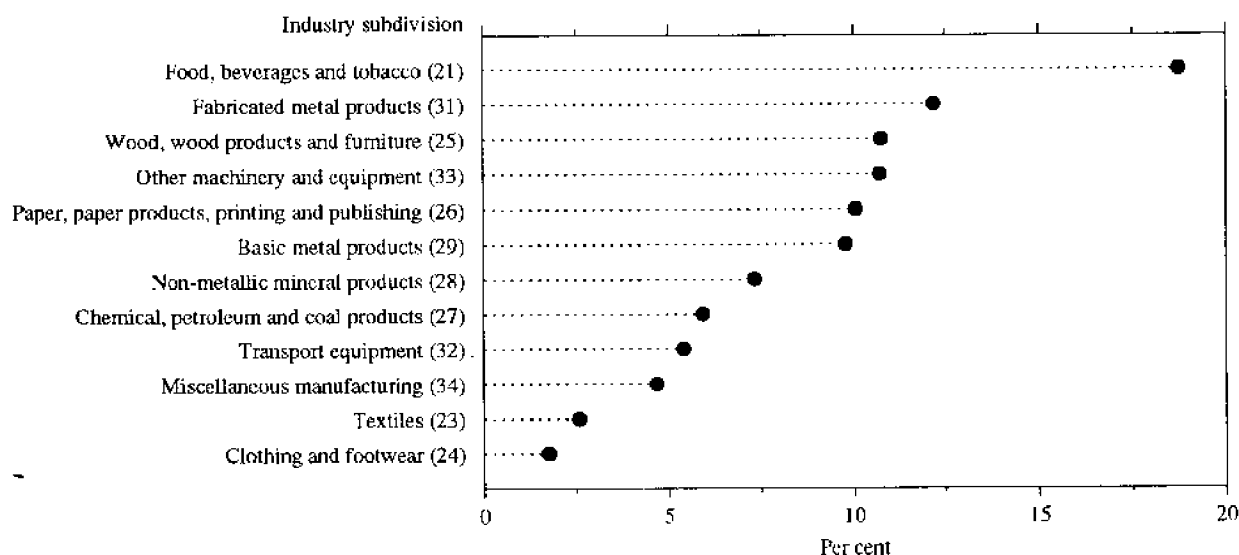
The percentage contribution by Western Australia to total Australian manufacturing turnover has increased since 1988–89, increasing by 0.7 percentage points to 7.7 per cent. Other States to increase their percentage share of turnover were: South Australia (up 0.7 percentage points to 9.3%); New South Wales (up 0.5 percentage points to 34.6%); and Queensland (up 0.5 percentage points to 13.7%). Victoria's percentage share of turnover decreased over this period (down 2.4 percentage points to 31.6%), as did Tasmania's percentage share (down 0.2 percentage points to 2.3%). Both the Northern Territory (0.4%) and the Australian Capital Territory (0.3%) held their percentage share.

Employment (Tables 1 and 4)

Employment was more evenly distributed across industry subdivisions than was turnover, with Food, beverages and tobacco (18.8%) and Fabricated metal products (12.2%) once again being the major contributors to employment in the manufacturing industry. Clothing and footwear (1.8%) and Textiles (2.6%) remain the smallest contributors to employment in the manufacturing industry.

Manufacturing employment decreased by 3.1 per cent between June 1991 and June 1992. Nine of the 12 industry subdivisions recorded decreases in the level of employment over this period. Textiles (down 9.4%—from 1,778 persons to 1,611 persons) and Food, beverages and tobacco (down 6.7%—from 12,563 persons to 11,715 persons) recorded the largest percentage decreases. The three industry subdivisions to record an increase were: Transport equipment (up 12.0%—from 3,020 persons to 3,383 persons); Non-metallic mineral products (up 7.7%—from 4,250 persons to 4,578 persons); and Chemical, petroleum and coal products (up 5.1%—from 3,524 persons to 3,704 persons).

DISTRIBUTION OF EMPLOYMENT, WESTERN AUSTRALIA, 1991–92

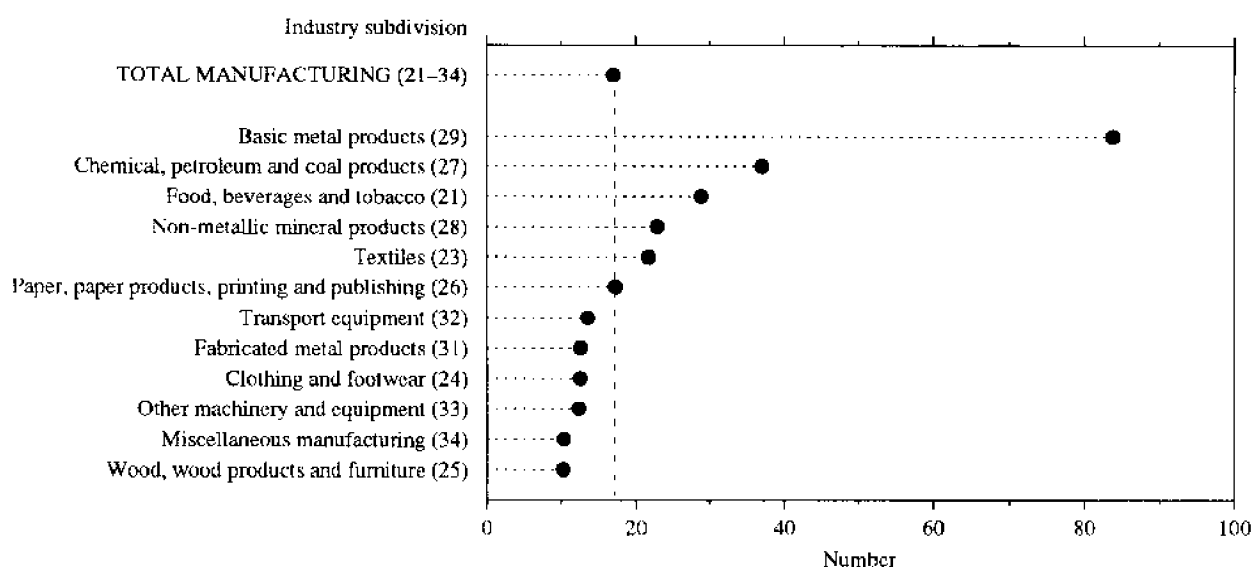


The percentage contribution by Western Australia to total Australian manufacturing employment at the end of June 1992 was 6.9 per cent. This represents an increase of 0.2 percentage points on the total contribution reported at the end of June 1991. The percentage contribution to total manufacturing employment by the other States and Territories at the end of June 1992 was: New South Wales 34.1 per cent; Victoria 32.7 per cent; Queensland 13.5 per cent; South Australia 9.5 per cent; Tasmania 2.6 per cent; the Australian Capital Territory 0.4 per cent; and the Northern Territory 0.3 per cent.

On average, each manufacturing establishment in Western Australia employed 17 persons at the end of June 1992, which continues the steady decline evident since June 1989 (when the average was 22 persons employed per establishment). The average fell by 1 person over the period June 1991 to June 1992. Over the same period, however, the ratio of turnover per person employed has grown considerably. In 1988–89, the average turnover per person employed for all manufacturing establishments was \$143,400. By 1991–92, this had risen to \$206,500, a growth of 44.0 per cent. This is above the 20.8 per cent increase in turnover and suggests that some growth in overall manufacturing productivity has occurred (even allowing for the change in the basis of reporting for the Chemical, petroleum and coal products industry—see paragraph 29 of the Explanatory Notes).

As the chart below shows, the number of persons employed per establishment varied greatly across industry subdivisions, ranging from 10 persons for Wood, wood products and furniture and Miscellaneous manufacturing to an average of 84 persons for Basic metal products.

PERSONS EMPLOYED PER ESTABLISHMENT, WESTERN AUSTRALIA, 1991-92



Chemical, petroleum and coal products and Basic metal products comprised substantially larger shares of turnover than of employment, which resulted in these subdivisions recording substantially higher values of turnover per person employed than other subdivisions in the manufacturing industry (\$685,200 and \$473,500 respectively). Clothing and footwear recorded the lowest value for this ratio (\$61,500). Turnover per person employed for total manufacturing in 1991-92 was \$206,500. Various factors affect the magnitude of turnover per person employed. In general, industries which are labour intensive will record lower values of turnover per person employed than will those industries which are capital intensive. This ratio may also be influenced by commodity prices.

Longer term trends (June 1989 to June 1992)

Employment in the Western Australian manufacturing industry decreased by 12,025 persons (down 16.1%—from 74,500 persons to 62,475 persons) over the period June 1989 to June 1992. Nine industry subdivisions recorded decreases and three recorded increases over this period. Textiles (up 22.2%—from 1,318 persons to 1,611 persons), Chemical, petroleum and coal products (up 15.9%—from 3,195 persons to 3,704 persons) and Basic metal products (up 7.3%—from 5,707 persons to 6,126 persons) recorded the increases. The industry subdivisions recording the largest percentage decreases were: Clothing and footwear (down 42.1%—from 1,896 persons to 1,098 persons); Transport equipment (down 33.8%—from 5,114 persons to 3,383 persons); Wood, wood products and furniture (down 29.0% from 9,470 persons to 6,727 persons); and Fabricated metal products (down 24.9%—from 10,138 persons to 7,614 persons).

All States and Territories recorded decreases in manufacturing employment between June 1989 and June 1992. The largest decrease in both absolute and percentage terms was recorded by Victoria, where employment decreased by 78,201 persons (down 20.9%—from 374,309 persons to 296,108 persons). The decreases recorded by the other States and Territories were: South Australia (down 17.6%—from 105,063 persons to 86,601 persons); the Northern Territory (down 16.8%—from 3,392 persons to 2,821 persons); New South Wales (down 16.6%—from 370,436 persons to 309,124 persons); Tasmania (down 15.4%—from 27,532 persons to 23,303 persons); Queensland (down 11.0%—from 137,479 persons to 122,424 persons); and the Australian Capital Territory (down 10.0%—from 4,099 persons to 3,691 persons).

The percentage contribution by Western Australia to Australian manufacturing employment has increased since June 1989, increasing by 0.1 percentage points to 6.9 per cent. Queensland also increased its percentage share of employment over this period (up 1.0 percentage points to 13.5%), as did New South Wales (up 0.3 percentage points to 34.1%) and Tasmania (up 0.1 percentage points to 2.6%). Victoria's percentage share of employment decreased over this period (down 1.4 percentage points to 32.7%), as did South Australia (down 0.1 percentage points to 9.5%). The Australian Capital Territory (0.4%) and the Northern Territory (0.3%) held their percentage share of employment over this period.

1991 Census of Population and Housing (Tables 2 and 3)

The 1991 Census of Population and Housing provides additional information to the manufacturing census on the characteristics of persons employed in the manufacturing industry. It shows that employment at August 1991 among manufacturing sole proprietors and partnerships not employing others was 5,105. (Note: These persons are excluded from the scope of the manufacturing census—see paragraph 9 of the Explanatory Notes.) The population census also recorded 61,685 'other' persons employed in the manufacturing industry in Western Australia at August 1991. (Note: Whilst these population census figures are conceptually similar to the data collected in the manufacturing census, there are many reasons why the data do not agree—see paragraphs 32 to 35 of the Explanatory Notes.)

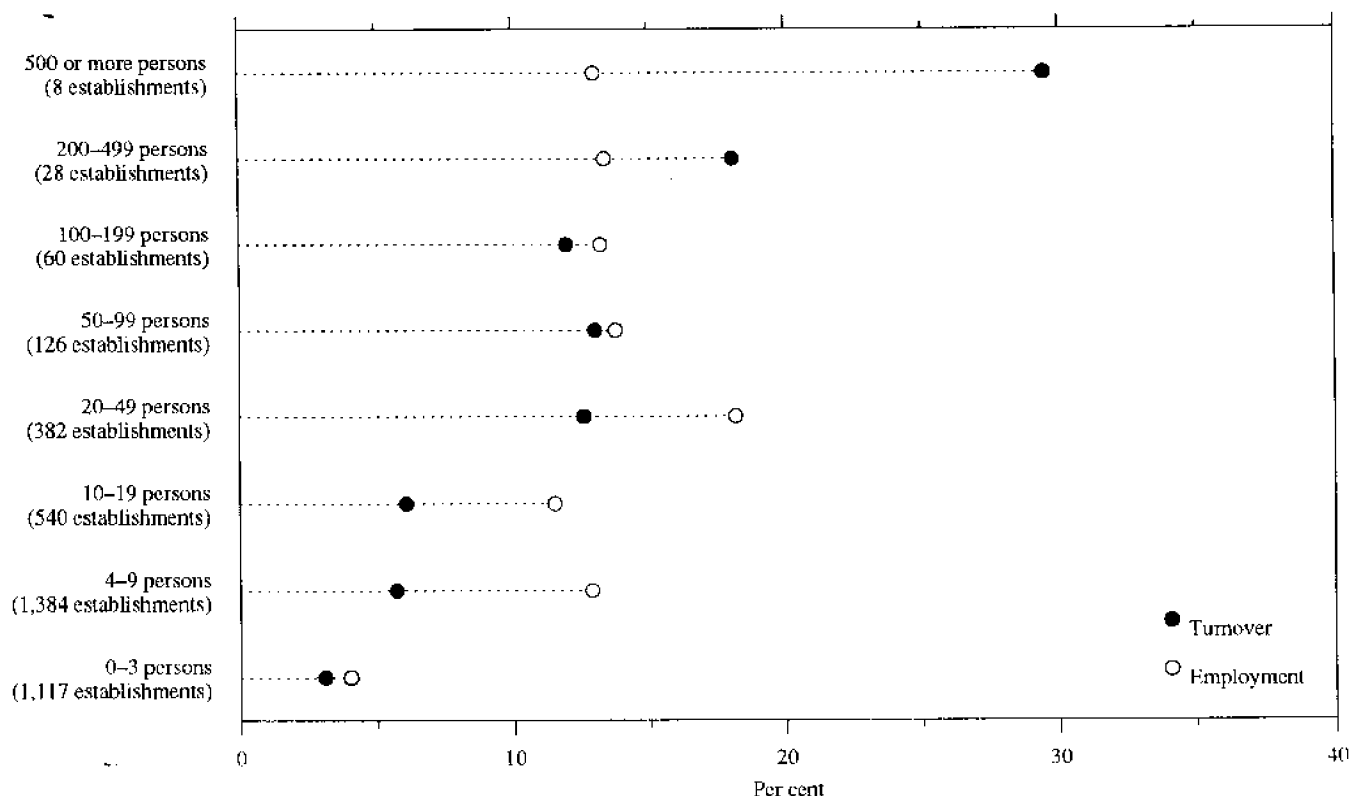
A breakdown of the age composition of persons employed in the manufacturing industry shows that it has a similar distribution as for all industries combined. However, there are slightly fewer young people working in manufacturing (19.0% aged 15–24 years compared with 19.7% for all industries) and a slightly higher proportion of persons employed aged 25–34 years (27.6% compared with 26.2%). The age distribution across the manufacturing industry subdivisions is more variable, but still broadly consistent with the average for all manufacturing industry. The major variations to this pattern were the younger employment recorded in Wood, wood products and furniture (where 23.3% of persons employed were in the age group 15–24 years, with 40.0% in the age group 35–54 years) and Chemical, petroleum and coal products (where the corresponding percentages were 13.0% and 49.5% respectively) where the average age of persons employed was higher.

The proportion of those employed in the manufacturing industry who were male was 76.3 per cent, whilst females made up 23.7 per cent. These are substantial differences from the average for all industries (males—57.8%; females—42.2%), showing the significance of male employment in the manufacturing industry. The highest concentration of male employment in the manufacturing industry was in Basic metal products, where 90.7 per cent of persons employed were male. The highest incidence of female employment in the manufacturing industry was, by far, in Clothing and footwear, where 75.0 per cent of persons employed were female.

Employment size (Table 5)

Of the 3,645 manufacturing establishments operating at 30 June 1992, 96 were large establishments (employing 100 or more persons). While comprising only 2.6 per cent of all establishments, they accounted for 59.6 per cent of manufacturing turnover for 1991–92 and 39.7 per cent of employment at the end of June 1992. Although establishments employing 0–19 persons comprised 83.4 per cent of manufacturing establishments in Western Australia at 30 June 1992, they accounted for only 14.8 per cent of turnover and 28.4 per cent of employment. There were eight manufacturing establishments employing 500 or more persons at the end of June 1992. They employed 13.0 per cent of all persons in the manufacturing industry in Western Australia and contributed 29.5 per cent of all manufacturing turnover.

DISTRIBUTION OF MANUFACTURING TURNOVER AND EMPLOYMENT BY EMPLOYMENT SIZE
WESTERN AUSTRALIA, 1991–92

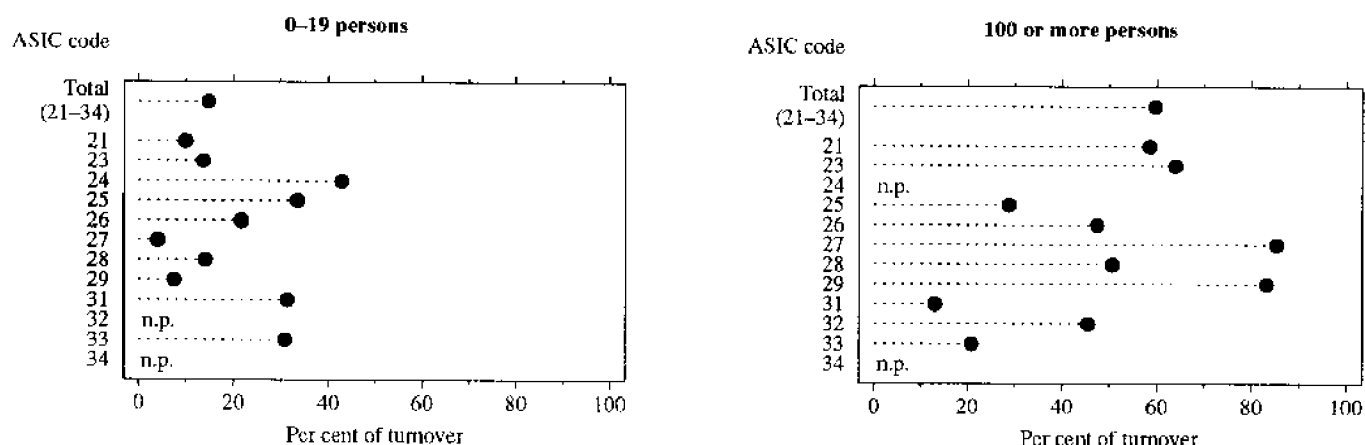


For 1991-92, the percentage distribution of turnover by employment size for the manufacturing industry was:

0-19 persons	14.8 per cent
20-49 persons	12.6 per cent
50-99 persons	13.0 per cent
100 or more persons	59.6 per cent

For 5 of the 12 industry subdivisions, more than 50 per cent of turnover was contributed by large establishments (employing 100 or more persons). The industries where large establishments contributed most to turnover were the Chemical, petroleum and coal products (85.3%) and Basic metal products (83.2%) industries. For the ten industry subdivisions for which data are available for publication, small establishments (employing 0-19 persons) made relatively significant contributions to turnover for Clothing and footwear (43.0%) and Wood, wood products and furniture (33.5%).

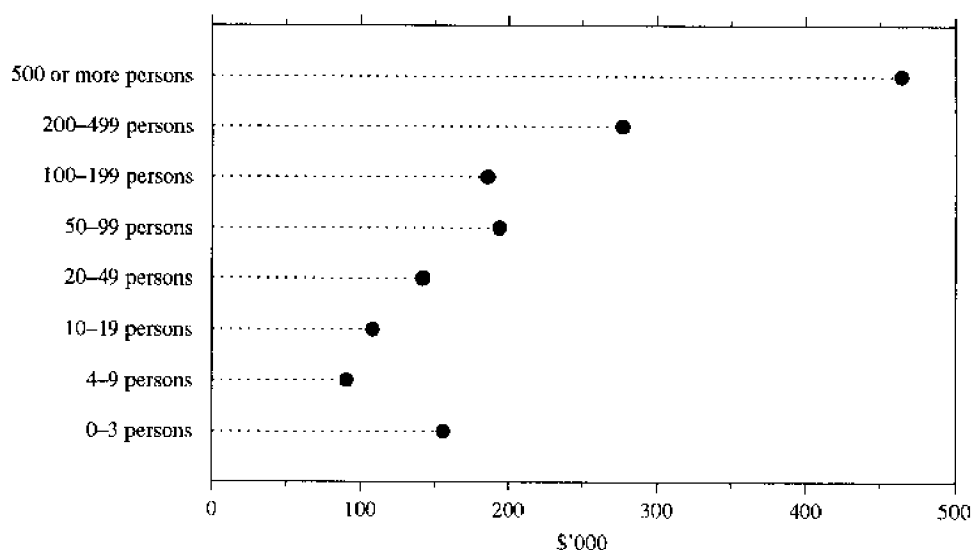
DISTRIBUTION OF TURNOVER BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION (a), WESTERN AUSTRALIA, 1991-92



(a) Refer to graphs on pages 1 to 3 for ASIC subdivision descriptions.

Whilst establishments employing 0-3 persons recorded a relatively high ratio of average turnover per person employed at the end of June 1992 (\$155,600), small establishments (i.e. those employing 0-19 persons) displayed a much lower overall ratio of average turnover per person employed at the end of June 1992 (\$107,000) than establishments in the larger size categories. Large establishments (employing 100 or more persons) recorded an average turnover per person employed at the end of June 1992 of \$307,600, with establishments employing 500 or more persons having a ratio of \$464,000. It should be remembered that the data include all manufacturing industries and that somewhat different patterns may emerge through analysis of individual industries.

TURNOVER PER PERSON EMPLOYED BY EMPLOYMENT SIZE, WESTERN AUSTRALIA, 1991-92



Environmental protection (Tables 6 and 7)

General issues associated with environmental impact assessments or audits, return of containers or packaging, and marketing or production of goods or services relating to the environment

The 1991-92 manufacturing census included questions related to environmental protection. The following three questions were asked of all manufacturers:

- During 1991-92, did this business conduct any environmental impact assessments (for proposed new production) or any environmental audits (on existing production processes)?
- Does this business permit and/or encourage the return of its own packaging (e.g. returnable bottles, cardboard boxes, polystyrene, etc.)?
- Does this business market or produce any goods or services for monitoring, maintaining or improving the environment?

In determining the proportion of the manufacturing industry for which these environmental issues are applicable, two measures have been calculated. The first is the proportion of establishments undertaking these activities to the total number of manufacturing establishments. The second measure is the proportion of total manufacturing turnover contributed by those establishments that reported a positive response to the environmental issues. For each of the environmental issues raised, the percentage contribution to total turnover was significantly higher than the proportion of total establishments. This indicates that larger establishments generally make up a relatively higher proportion of manufacturing establishments involved in these environmental protection activities.

In all, 4 per cent of manufacturing establishments in Western Australia reported conducting environmental impact assessments or audits in 1991-92. These establishments contributed 44 per cent of total manufacturing turnover, reflecting the substantially higher incidence of environmental impact assessments or audits being conducted by larger establishments. The highest proportion of establishments which conducted environmental impact assessments or audits occurred in Chemical, petroleum and coal products and Food, beverages and tobacco, where 11 per cent and 9 per cent (respectively) of all establishments conducted these studies. Other industry subdivisions with a relatively high incidence of the conduct of these studies were Basic metal products (7%) and Non-metallic mineral products (6%). Apart from Clothing and footwear, in which no environmental impact assessments or audits were reported as being conducted, the lowest incidence of the conduct of these studies occurred in Wood, wood products and furniture and Transport equipment (both 2%).

In terms of the proportion of total turnover covered by establishments conducting environmental impact assessments or audits, Chemical, petroleum and coal products with 84 per cent was, by far, the highest, followed by Basic metal products (61%). The smallest contributions were recorded in Miscellaneous manufacturing (5%) and Other machinery and equipment (12%).

Overall, 21 per cent of all manufacturing establishments permitted and/or encouraged the return of their own containers or packaging. Those establishments contributed 30 per cent of total manufacturing turnover. The highest incidence of the return of containers or packaging was reported in both the Textiles and Chemical, petroleum and coal products industries, where 33 per cent of all establishments in these industries did so. Those establishments were also likely to be the larger ones, as they contributed 66 per cent and 62 per cent (respectively) of turnover in those industries. These proportions were, by far, the highest recorded.

Only 6 per cent of all manufacturing establishments reported that they were engaged in the marketing or production of goods or services for monitoring, maintaining or improving the environment. Those establishments contributed 16 per cent of total manufacturing turnover. The results show that the size of the businesses marketing or producing environmental goods or services varied depending on the industry subdivision. Turnover data for two of the industry subdivisions are not available for publication. For the ten remaining industry subdivisions, the incidence of larger businesses marketing or producing goods or services to monitor, maintain or improve the environment was high in Miscellaneous manufacturing (with the 10% of manufacturing establishments marketing or producing these goods or services contributing 20% of the turnover in the industry) and Non-metallic mineral products (where the corresponding percentages were 9% and 19%). The incidence of smaller businesses undertaking these activities was high in Chemical, petroleum and coal products, where the 11 per cent of all establishments involved contributed only 2 per cent of the industry's turnover.

Expenditure on Environmental Protection

All manufacturers (with the exception of single establishment businesses with less than four persons employed) were also asked to provide information on their total current and capital expenditure related to environmental protection.

In selected industries, the following breakdowns were also requested:

- Current expenditure on environmental protection in respect of:
 - (i) Government and council fees, charges and taxes relating to pollution abatement and control;
 - (ii) Purchased services (e.g. payments to non-government contractors to remove and dispose of wastes); and
 - (iii) Other current expenditure on environmental protection.
- Current expenditure on environmental protection in respect of:
 - (i) Research and development carried out by individual businesses; and
 - (ii) Research and development carried out for individual businesses by other businesses.
- Current expenditure on environmental protection in respect of:
 - (i) Expenditure incurred on environmental impact assessments (for proposed new production);
 - (ii) Expenditure incurred on environmental audits (for existing production processes); and
 - (iii) Expenditure incurred on energy audits.
- Capital expenditure by individual businesses for new plant, machinery or equipment designed to abate or control water, hazardous and non-hazardous solid wastes, air, noise and other pollutants through:
 - (i) end-of-line techniques; and
 - (ii) change-in-production processes.

In 1991–92, total current expenditure by manufacturing establishments in Western Australia on environmental protection was \$73.1m. This amounts to 0.6 per cent of the total manufacturing industry turnover for the year. Of the total current expenditure on environmental protection 78.4 per cent was spent by manufacturers in just two industry subdivisions—Basic metal products (\$38.7m) and Chemical, petroleum and coal products (\$18.6m).

At the ASIC group level, the highest amount of current expenditure on environmental protection in 1991–92 was the \$37.7m spent by the Basic non-ferrous metals (ASIC group 295) industry, followed by the \$15.8m spent by the Basic chemicals (ASIC group 275) industry. However, these amounts were very small relative to total turnover in the two industry groups (1.5% and 2.7% respectively). Nevertheless, these figures were the highest recorded for any industry group. In nearly all industries, less than 1.0 per cent of total turnover for that industry was spent on ongoing environmental protection.

In 1991–92, reported total capital expenditure by manufacturers to abate pollution in Western Australia was \$93.1m. Of this total expenditure, \$81.9m (88.0%) was spent by manufacturers in just the Basic metal products industry. Nearly all of this amount (\$81.4m) was spent by manufacturers in the Basic non-ferrous metals industry group.

Further information on the environmental protection issues covered in the 1991–92 manufacturing census will be published in *Cost of Environment Protection, Australia, 1991–92* (4603.0).

Regional manufacturing activity (Table 8)

The Perth Statistical Division continued to dominate manufacturing activity in Western Australia in 1991–92. It contributed 81.4 per cent of all locations at 30 June 1992, 78.7 per cent of employment at the end of June 1992 and 70.8 per cent of turnover for 1991–92. The only other statistical division to contribute significantly was South West (13.3% of employment and 19.8% of turnover).

The Perth Statistical Division was also the leading contributor, by far, in 11 of the 12 industry subdivisions. The Basic metal products subdivision was the exception, where the South West Statistical Division (with 3,925 persons employed) was greater than Perth (1,658 persons employed). For this industry subdivision, turnover for the Balance of Western Australia was \$2,269.5m compared to \$630.9m for Perth Statistical Division.

Australian and New Zealand Standard Industrial Classification (ANZSIC) (Table 9)

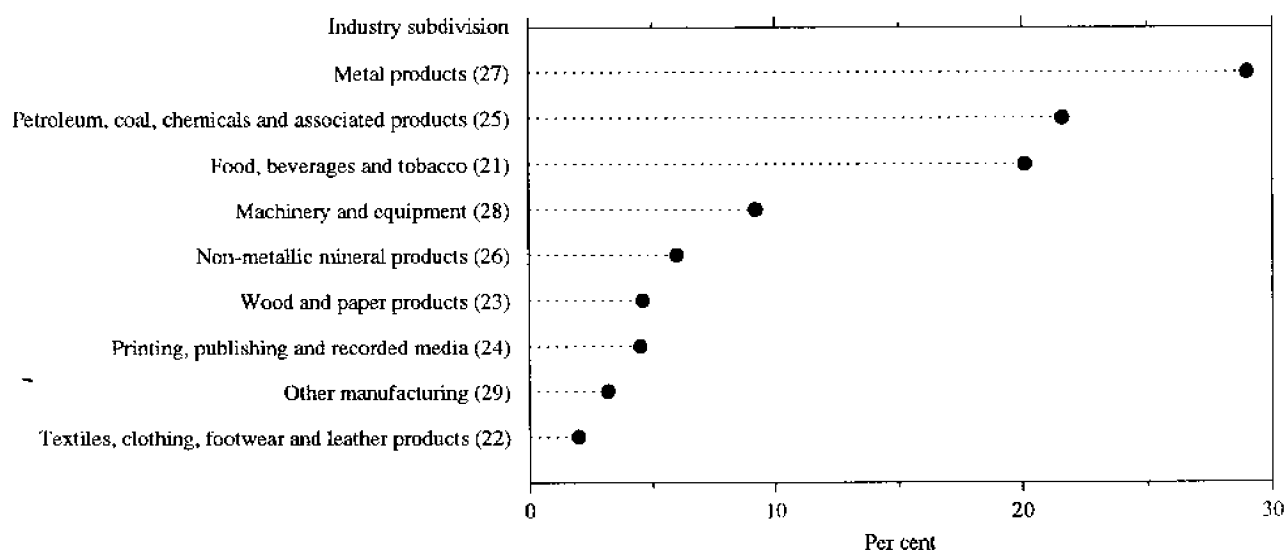
As explained in the introduction to Table 9, a new industry classification called the Australian and New Zealand Standard Industrial Classification (ANZSIC) is being introduced to replace the ASIC currently in use. Table 9 presents a concordance of data between those two industry classifications in respect of the 1991-92 reference year.

At the total manufacturing level, there is very little difference in the figures reported for Western Australia under the two industry classifications. Under ANZSIC, there are 2.0 per cent fewer establishments in the manufacturing industry, 1.1 per cent fewer persons employed and 0.2 per cent less turnover than under ASIC. This is because, on balance, there are more establishments classified to industries other than manufacturing under ANZSIC than under ASIC.

The major differences between the two classifications becomes apparent at the industry subdivision level. As the chart below shows, under ANZSIC, there is one very large, two large and one medium sized industry subdivision, with the remaining five industry subdivisions being small to very small in size. Under ASIC (for which there were 12 subdivisions), there were three large industry subdivisions of about equal size, with the remaining nine subdivisions being of a small to very small size (see the chart on page 1).

The chart below ranks ANZSIC industry subdivisions from the largest to the smallest contributor for 1991-92 manufacturing turnover. With the introduction of this new industry classification, Metal products is the largest contributor with 29.0 per cent of total turnover, Petroleum, coal, chemicals and associated products (21.7%) and Food, beverages and tobacco (20.1%) are, by far, the next highest contributors. The remaining six industry subdivisions each contributed less than 10 per cent to total turnover, with Textiles, clothing, footwear and leather products (2.0%) being the smallest contributor.

DISTRIBUTION OF TURNOVER, ANZSIC SUBDIVISIONS, WESTERN AUSTRALIA, 1991-92



Detailed tabulations of data included in this publication, classified according to ANZSIC, are available on request. The contact officer for these data is Mark Wise on Sydney (02) 268 4541.

**TABLE 1. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY INDUSTRY SUBDIVISION
WESTERN AUSTRALIA, 1988-89 TO 1991-92 (b)**

<i>Industry subdivision</i>		<i>Establishments at 30 June (c) (No.)</i>	<i>Employment at end of June (d) ('000)</i>	<i>Wages and salaries (e)(f) (\$m)</i>	<i>Turnover (f) (\$m)</i>	<i>Persons employed per establishment (No.)</i>	<i>Turnover per person employed (f) (\$'000)</i>
<i>ASIC code</i>	<i>Description</i>						
21	Food, beverages and tobacco	1991-92	406	11.7	319.4	2,572.8	29
		1990-91 (g)	384	12.6	312.2	2,516.5	33
		1989-90	390	12.6	301.6	2,364.5	32
		1988-89	421	12.3	275.3	2,225.1	29
23	Textiles	1991-92	74	1.6	39.6	151.0	22
		1990-91 (g)	73	1.8	41.9	159.8	24
		1989-90	67	1.7	38.2	155.7	26
		1988-89	59	1.3	23.8	118.9	22
24	Clothing and footwear	1991-92	88	1.1	21.1	67.5	12
		1990-91 (g)	94	1.1	22.1	71.4	12
		1989-90	96	1.6	30.0	86.2	17
		1988-89	90	1.9	30.0	83.3	21
25	Wood, wood products and furniture	1991-92	658	6.7	152.7	722.8	10
		1990-91 (g)	668	7.2	160.5	715.2	11
		1989-90	653	8.0	172.4	779.9	12
		1988-89	657	9.5	187.0	872.1	14
26	Paper, paper products, printing and publishing	1991-92	364	6.3	165.8	715.9	17
		1990-91 (g)	348	6.5	167.8	697.9	19
		1989-90	345	6.5	163.6	676.2	19
		1988-89	313	8.1	162.8	691.5	26
27	Chemical, petroleum and coal products	1991-92	100	3.7	138.7	2,538.1	37
		1990-91 (g)	88	3.5	137.9	2,374.1	40
		1989-90	79	3.7	129.2	2,159.3	47
		1988-89	87	3.2	94.4	828.2	37
28	Non-metallic mineral products	1991-92	200	4.6	136.0	766.5	23
		1990-91 (g)	179	4.3	131.0	712.7	24
		1989-90	179	4.7	137.5	845.6	26
		1988-89	178	5.1	130.9	809.4	29
29	Basic metal products	1991-92	73	6.1	264.0	2,900.5	84
		1990-91 (g)	59	6.4	248.5	3,328.5	109
		1989-90	70	6.1	230.5	3,288.8	87
		1988-89	50	5.7	193.2	2,194.6	114
31	Fabricated metal products	1991-92	603	7.6	196.9	916.0	13
		1990-91 (g)	593	8.0	210.9	969.5	14
		1989-90	581	9.5	246.2	1,223.3	16
		1988-89	580	10.1	233.8	1,154.1	17
32	Transport equipment	1991-92	248	3.4	94.7	406.3	14
		1990-91 (g)	225	3.0	84.2	355.4	13
		1989-90	237	3.5	86.0	393.5	15
		1988-89	232	5.1	117.5	409.6	22
33	Other machinery and equipment	1991-92	547	6.7	185.6	784.6	12
		1990-91 (g)	535	7.1	192.3	805.3	13
		1989-90	506	8.2	216.5	911.1	16
		1988-89	490	8.7	209.8	852.2	18
34	Miscellaneous manufacturing	1991-92	284	2.9	70.4	360.8	10
		1990-91 (g)	264	3.0	70.5	408.2	11
		1989-90	262	2.9	65.7	392.8	11
		1988-89	282	3.5	72.8	446.0	12
21-34	Total manufacturing	1991-92	3,645	62.5	1,785.0	12,903.0	17
		1990-91 (g)	3,510	64.5	1,779.7	13,114.6	18
		1989-90	3,465	69.1	1,817.5	13,276.8	20
		1988-89	3,439	74.5	1,731.4	10,684.8	22

(a) See paragraph 30 of the Explanatory Notes. (b) For comparability of data over the time periods shown, see paragraphs 27 to 29 of the Explanatory Notes. (c) See paragraphs 4 to 10 and 28 of the Explanatory Notes. (d) Includes working proprietors. (e) Excludes the drawings of working proprietors. (f) Value data are at current prices and, therefore, do not discount the impact of price changes. (g) Data presented for 1990-91 have undergone extensive revision due to further processing of that year's data and, therefore, generally differ from those previously published.

TABLE 2. MANUFACTURING EMPLOYMENT INCLUDING SOLE PROPRIETORS AND PARTNERSHIPS NOT EMPLOYING OTHERS BY INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991

Industry subdivision		Manufacturing employment, August 1991 (a)		Manufacturing census employment at end of June 1991 (b)
		Sole proprietors and partnerships not employing others (No.)	Total other (b) (No.)	
ASIC code	Description			(No.)
21	Food, beverages and tobacco	357	10,442	12,563
23	Textiles	130	1,310	1,778
24	Clothing and footwear	242	1,128	1,135
25	Wood, wood products and furniture	664	6,255	7,182
26	Paper, paper products, printing and publishing	394	6,371	6,451
27	Chemical, petroleum and coal products	137	3,400	3,524
28	Non-metallic mineral products	378	4,029	4,250
29	Basic metal products	134	4,763	6,449
31	Fabricated metal products	574	6,948	8,019
32	Transport equipment	474	4,081	3,020
33	Other machinery and equipment	467	7,354	7,126
34	Miscellaneous manufacturing	467	2,881	2,994
..	Manufacturing undefined (c)	687	2,723	..
21-34	Total manufacturing	5,105	61,685	64,491

(a) Source: 1991 Census of Population and Housing. (b) Includes working proprietors with employees. For an explanation of the differences between 'Total other' and 'Manufacturing census employment at end of June 1991', see paragraphs 18, 19 and 32 to 35 of the Explanatory Notes. (c) Those persons who indicated that they were employed in the manufacturing industry but the description given was insufficient to enable them to be attributed to a specific industry subdivision.

TABLE 3. DEMOGRAPHIC CHARACTERISTICS OF PERSONS EMPLOYED BY INDUSTRY SUBDIVISION WESTERN AUSTRALIA, AUGUST 1991 (Per cent)

Industry		Proportion of industry					
		Sex		Age group (years)			
ASIC code	Description	Males	Females	15-24	25-34	35-54	55 and over
	MANUFACTURING—						
21	Food, beverages and tobacco	66.9	33.1	20.3	27.0	44.4	8.4
23	Textiles	55.4	44.6	18.0	27.4	46.5	8.1
24	Clothing and footwear	25.0	75.0	18.4	25.8	49.7	6.1
25	Wood, wood products and furniture	81.6	18.4	23.3	27.4	40.0	9.3
26	Paper, paper products, printing and publishing	61.4	38.6	18.7	25.5	47.7	8.0
27	Chemical, petroleum and coal products	82.2	17.8	13.0	31.3	49.5	6.2
28	Non-metallic mineral products	84.8	15.2	14.4	26.9	49.1	9.6
29	Basic metal products	90.7	9.4	13.4	30.0	48.1	8.5
31	Fabricated metal products	84.6	15.4	20.7	26.8	44.0	8.5
32	Transport equipment	88.1	11.9	20.2	28.5	42.9	8.5
33	Other machinery and equipment	79.1	20.9	19.8	28.0	44.8	7.4
34	Miscellaneous manufacturing	73.2	26.8	20.1	27.7	44.8	7.5
..	Manufacturing undefined (a)	80.0	20.0	20.0	27.1	43.9	9.0
21-34	Total manufacturing	76.3	23.7	19.0	27.6	45.2	8.2
01-99	ALL INDUSTRIES	57.8	42.2	19.7	26.2	45.6	8.5

Source: 1991 Census of Population and Housing.

(a) Those persons who indicated that they were employed in the manufacturing industry but the description given was insufficient to enable them to be attributed to a specific industry subdivision.

**TABLE 4. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY INDUSTRY CLASS
WESTERN AUSTRALIA, 1991-92**

<i>Industry class</i>		<i>Establishments at 30 June (b) (No.)</i>	<i>Employment at end of June (c) (No.)</i>	<i>Wages and salaries (d) (\$m)</i>	<i>Turnover (\$m)</i>	<i>Persons employed per establishment (No.)</i>	<i>Turnover per person employed (\$'000)</i>
<i>ASIC code</i>	<i>Description</i>						
FOOD, BEVERAGES AND TOBACCO—							
Meat products—							
2115	Meat (except smallgoods or poultry)	53	2,108	72.8	483.5	40	229.4
2116	Poultry	15	788	14.5	126.6	53	160.6
2117	Bacon, ham and smallgoods n.e.c.	14	674	18.2	129.9	48	192.7
211	<i>Total</i>	82	3,570	105.6	740.0	44	207.3
Milk products—							
2121	Liquid milk and cream	5	415	n.p.	n.p.	83	n.p.
2122	Butter	1	n.p.	n.p.	n.p.	n.p.	n.p.
2123	Cheese	8	179	n.p.	n.p.	22	n.p.
2124	Ice cream and frozen confections	3	n.p.	n.p.	n.p.	n.p.	n.p.
2125	Milk products n.e.c.	—	—	—	—	—	—
212	<i>Total</i>	17	916	n.p.	n.p.	54	n.p.
Fruit and vegetable products—							
2131	Fruit products	3	n.p.	n.p.	n.p.	n.p.	n.p.
2132	Vegetable products	9	n.p.	n.p.	n.p.	n.p.	n.p.
213	<i>Total</i>	12	324	6.6	63.6	27	196.4
214	<i>Margarine and oils and fats n.e.c.</i>	4	132	n.p.	n.p.	33	n.p.
Flour mill and cereal food products—							
2151	Flour mill products	4	183	4.9	49.9	46	272.7
2152	Starch, gluten and starch sugars	1	n.p.	n.p.	n.p.	n.p.	n.p.
2153	Cereal foods and baking mixes	10	n.p.	n.p.	n.p.	n.p.	n.p.
215	<i>Total</i>	15	325	7.3	76.6	22	235.8
Bread, cakes and biscuits—							
2161	Bread	97	1,562	35.5	130.1	16	83.3
2162	Cakes and pastries	34	n.p.	n.p.	n.p.	n.p.	n.p.
2163	Biscuits	1	n.p.	n.p.	n.p.	n.p.	n.p.
216	<i>Total</i>	132	2,332	65.4	230.1	18	98.7
Other food products—							
2171	Raw sugar	—	—	—	—	—	—
2173	Confectionery and cocoa products	8	45	0.6	2.5	6	55.0
2174	Processed seafoods	29	1,355	23.1	363.2	47	268.1
2175	Prepared animal and bird foods	29	314	7.7	107.5	11	342.4
2176	Food products n.e.c.	33	672	19.9	165.1	20	245.6
217	<i>Total</i>	99	2,386	51.2	638.3	24	267.5
Beverages and malt—							
2185	Soft drinks, cordials and syrups	9	714	20.7	181.2	79	253.8
2186	Beer	2	n.p.	n.p.	n.p.	n.p.	n.p.
2187	Malt	2	n.p.	n.p.	n.p.	n.p.	n.p.
2188	Wine and brandy	32	445	7.6	42.4	14	95.2
2189	Alcoholic beverages n.e.c.	—	—	—	—	—	—
218	<i>Total</i>	45	1,730	48.4	503.7	38	291.1
219	<i>Tobacco products</i>	—	—	—	—	—	—
21	<i>Total food, beverages and tobacco</i>	406	11,715	319.4	2,572.8	29	219.6

For footnotes see end of table.

TABLE 4. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY INDUSTRY CLASS
WESTERN AUSTRALIA, 1991-92—continued

Industry class		Establishments at 30 June (b) (No.)	Employment at end of June (c) (No.)	Wages and salaries (d) (\$m)	Turnover (\$m)	Persons employed per establishment (No.)	Turnover per person employed (\$'000)
ASIC code	Description						
TEXTILES—							
Textile fibres, yarns and woven fabrics—							
2341	Cotton ginning	—	—	—	—	—	—
2342	Wool scouring and top making	5	190	n.p.	n.p.	38	n.p.
2343	Man-made fibres and yarns	—	—	—	—	—	—
2344	Man-made fibre broadwoven fabrics	5	12	0.1	0.4	2	30.8
2345	Cotton yarns and broadwoven fabrics	2	n.p.	n.p.	n.p.	n.p.	n.p.
2346	Worsted yarns and broadwoven fabrics	—	—	—	—	—	—
2347	Woollen yarns and broadwoven fabrics	1	n.p.	n.p.	n.p.	n.p.	n.p.
2348	Narrow woven and elastic textiles	—	—	—	—	—	—
2349	Textile finishing	4	n.p.	n.p.	n.p.	n.p.	n.p.
234	Total	17	539	17.0	54.1	32	100.3
Other textile products—							
2351	Household textiles	5	52	0.9	3.6	10	69.6
2352	Textile floor coverings	5	n.p.	n.p.	n.p.	n.p.	n.p.
2353	Felt and felt products	—	—	—	—	—	—
2354	Canvas and associated products n.e.c.	31	864	19.2	83.9	28	97.1
2355	Rope, cordage and twine	4	n.p.	n.p.	n.p.	n.p.	n.p.
2356	Textile products n.e.c.	12	n.p.	n.p.	n.p.	n.p.	n.p.
235	Total	57	1,072	22.7	97.0	19	90.4
23	Total textiles	74	1,611	39.6	151.0	22	93.8
CLOTHING AND FOOTWEAR—							
Knitting mills—							
2441	Hosiery	—	—	—	—	—	—
2442	Cardigans and pullovers	4	90	n.p.	n.p.	23	n.p.
2443	Knitted goods n.e.c.	5	19	n.p.	n.p.	4	n.p.
244	Total	9	109	n.p.	n.p.	12	n.p.
Clothing—							
2451	Men's trousers and shorts; work clothing	4	167	3.2	7.1	42	42.5
2452	Men's suits and coats; waterproof clothing	4	56	1.1	3.2	14	57.4
2453	Women's outerwear n.e.c.	21	155	2.6	8.8	7	57.1
2454	Foundation garments	1	n.p.	n.p.	n.p.	n.p.	n.p.
2455	Underwear and infants' clothing n.e.c.	9	n.p.	n.p.	n.p.	n.p.	n.p.
2456	Headwear and clothing n.e.c.	30	252	n.p.	n.p.	8	n.p.
245	Total	69	798	15.2	45.0	12	56.4
246	Footwear	10	191	n.p.	n.p.	19	n.p.
24	Total clothing and footwear	88	1,098	21.1	67.5	12	61.5
WOOD, WOOD PRODUCTS AND FURNITURE—							
Wood and wood products—							
2531	Log sawmilling	39	954	22.8	72.9	24	76.4
2532	Resawn and dressed timber	9	380	10.5	56.5	42	148.7
2533	Veneers and manufactured boards of wood	3	n.p.	n.p.	n.p.	n.p.	n.p.
2534	Wooden doors	8	80	n.p.	n.p.	10	n.p.
2535	Wooden structural fittings and joinery n.e.c.	164	1,046	22.7	98.9	6	94.5
2536	Wooden containers	7	156	n.p.	n.p.	22	n.p.
2537	Hardwood woodchips	1	n.p.	n.p.	n.p.	n.p.	n.p.
2538	Wood products n.e.c.	54	256	4.4	25.2	5	98.4
253	Total	285	3,343	82.2	446.7	12	133.6
Furniture and mattresses—							
2541	Furniture (except sheet metal)	364	3,135	64.6	243.4	9	77.7
2542	Mattresses (except rubber)	9	249	6.0	32.6	28	131.1
254	Total	373	3,384	70.6	276.1	9	81.6
25	Total wood, wood products and furniture	658	6,727	152.7	722.8	10	107.5

For footnotes see end of table.

TABLE 4. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY INDUSTRY CLASS
WESTERN AUSTRALIA, 1991-92—continued

<i>Industry class</i>		<i>Establishments at 30 June (b) (No.)</i>	<i>Employment at end of June (c) (No.)</i>	<i>Wages and salaries (d) (\$m)</i>	<i>Turnover (\$m)</i>	<i>Persons employed per establishment (No.)</i>	<i>Turnover per person employed (\$'000)</i>
<i>ASIC code</i>	<i>Description</i>						
PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING—							
Paper and paper products—							
2631	Pulp, paper and paperboard	2	n.p.	n.p.	n.p.	n.p.	n.p.
2632	Paper bags (including textile bags)	2	n.p.	n.p.	n.p.	n.p.	n.p.
2633	Solid fibreboard containers	3	196	2.8	8.7	65	44.4
2634	Corrugated fibreboard containers	2	n.p.	n.p.	n.p.	n.p.	n.p.
2635	Paper products n.e.c.	4	43	0.9	7.6	11	177.6
263	<i>Total</i>	13	n.p.	n.p.	n.p.	n.p.	n.p.
Printing and allied industries—							
2641	Publishing	54	379	8.3	32.7	7	86.3
2642	Printing and publishing	39	2,397	63.5	281.2	61	117.3
2643	Paper stationery	23	430	12.3	40.1	19	93.3
2644	Printing and bookbinding	176	1,960	49.9	196.2	11	100.1
2645	Printing trade services n.e.c.	59	n.p.	n.p.	n.p.	n.p.	n.p.
264	<i>Total</i>	351	n.p.	n.p.	n.p.	n.p.	n.p.
26	Total paper, paper products, printing and publishing	364	6,301	165.8	715.9	17	113.6
CHEMICAL, PETROLEUM AND COAL PRODUCTS—							
Basic chemicals—							
2751	Chemical fertilisers	5	675	n.p.	n.p.	135	n.p.
2752	Industrial gases	3	n.p.	n.p.	n.p.	n.p.	n.p.
2753	Synthetic resins and rubber	7	112	n.p.	n.p.	16	n.p.
2754	Organic industrial chemicals n.e.c.	2	n.p.	n.p.	n.p.	n.p.	n.p.
2755	Inorganic industrial chemicals n.e.c.	12	911	n.p.	n.p.	76	n.p.
275	<i>Total</i>	29	1,805	69.7	626.1	62	346.8
Other chemical products—							
2761	Ammunition, explosives and fireworks	5	170	n.p.	n.p.	34	n.p.
2762	Paints	19	477	12.6	92.8	25	194.5
2763	Pharmaceutical and veterinary products	5	217	n.p.	n.p.	43	n.p.
2764	Pesticides	4	71	2.5	72.9	18	1,026.1
2765	Soap and other detergents	13	161	4.8	30.6	12	189.8
2766	Cosmetics and toilet preparations	2	n.p.	n.p.	n.p.	n.p.	n.p.
2767	Inks	2	n.p.	n.p.	n.p.	n.p.	n.p.
2768	Chemical products n.e.c.	13	137	4.0	29.0	11	211.3
276	<i>Total</i>	63	n.p.	n.p.	n.p.	n.p.	n.p.
277	<i>Petroleum refining</i>	3	567	n.p.	n.p.	189	n.p.
278	<i>Petroleum and coal products n.e.c.</i>	5	n.p.	n.p.	n.p.	n.p.	n.p.
27	Total chemical, petroleum and coal products	100	3,704	138.7	2,538.1	37	685.2

For footnotes see end of table.

**TABLE 4. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY INDUSTRY CLASS
WESTERN AUSTRALIA, 1991-92—continued**

<i>Industry class</i>		<i>Establishments at 30 June (b) (No.)</i>	<i>Employment at end of June (c) (No.)</i>	<i>Wages and salaries (d) (\$m)</i>	<i>Turnover (e) (\$m)</i>	<i>Persons employed per establishment (f) (No.)</i>	<i>Turnover per person employed (g) (\$'000)</i>
<i>ASIC code</i>	<i>Description</i>						
NON-METALLIC MINERAL PRODUCTS—							
285	<i>Glass and glass products</i>	28	322	n.p.	n.p.	12	n.p.
<i>Clay products and refractories—</i>							
2861	Clay bricks	9	n.p.	n.p.	n.p.	n.p.	n.p.
2862	Refractories	9	131	3.8	17.8	15	135.7
2863	Ceramic tiles and pipes	7	n.p.	n.p.	n.p.	n.p.	n.p.
2864	Ceramic goods n.e.c.	20	261	5.2	13.3	13	51.0
286	<i>Total</i>	45	1,576	45.8	188.8	35	119.8
<i>Cement and concrete products—</i>							
2871	Cement	3	313	n.p.	n.p.	104	n.p.
2872	Ready mixed concrete	24	414	10.5	135.1	17	326.4
2873	Concrete pipes and box culverts	3	159	n.p.	n.p.	53	n.p.
2874	Concrete products n.e.c.	53	1,018	27.4	132.9	19	130.5
287	<i>Total</i>	83	1,904	55.9	358.0	23	188.0
<i>Other non-metallic mineral products—</i>							
2881	Plaster products and expanded minerals	11	217	n.p.	n.p.	20	n.p.
2882	Stone products	11	102	2.3	7.9	9	77.6
2883	Glass wool and mineral wool products	7	64	n.p.	n.p.	9	n.p.
2884	Non-metallic mineral products n.e.c.	15	393	13.7	116.1	26	295.4
288	<i>Total</i>	44	776	n.p.	n.p.	18	n.p.
28	<i>Total non-metallic mineral products</i>	200	4,578	136.0	766.5	23	167.4
BASIC METAL PRODUCTS—							
<i>Basic iron and steel—</i>							
2941	Iron and steel basic products	31	480	15.1	176.0	15	366.6
2942	Iron casting	3	134	n.p.	n.p.	45	n.p.
2943	Steel casting	6	n.p.	n.p.	n.p.	n.p.	n.p.
2944	Iron and steel forging	4	n.p.	n.p.	n.p.	n.p.	n.p.
2945	Steel pipes and tubes	7	n.p.	n.p.	n.p.	n.p.	n.p.
294	<i>Total</i>	51	1,127	35.7	266.0	22	236.0
<i>Basic non-ferrous metals—</i>							
2951	Copper smelting, refining	—	—	—	—	—	—
2952	Silver, lead, zinc smelting, refining	1	n.p.	n.p.	n.p.	n.p.	n.p.
2953	Alumina	6	n.p.	n.p.	n.p.	n.p.	n.p.
2954	Aluminium smelting	—	—	—	—	—	—
2955	Nickel smelting, refining	2	n.p.	n.p.	n.p.	n.p.	n.p.
2956	Non-ferrous metals n.e.c. smelting, refining	1	n.p.	n.p.	n.p.	n.p.	n.p.
2957	Secondary recovery and alloying of non-ferrous metals n.e.c.	2	n.p.	n.p.	n.p.	n.p.	n.p.
295	<i>Total</i>	12	4,863	224.3	2,609.5	405	536.6
<i>Non-ferrous metal basic products—</i>							
2961	Aluminium rolling, drawing, extruding	3	n.p.	n.p.	n.p.	n.p.	n.p.
2962	Non-ferrous metals n.e.c. rolling, drawing, extruding	2	n.p.	n.p.	n.p.	n.p.	n.p.
2963	Non-ferrous metal casting	5	57	n.p.	n.p.	11	n.p.
296	<i>Total</i>	10	136	4.1	25.0	14	183.7
29	<i>Total basic metal products</i>	73	6,126	264.0	2,900.5	84	473.5

For footnotes see end of table.

TABLE 4. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY INDUSTRY CLASS
WESTERN AUSTRALIA, 1991-92—continued

<i>Industry class</i>		<i>Establishments at 30 June (b) (No.)</i>	<i>Employment at end of June (c) (No.)</i>	<i>Wages and salaries (d) (\$m)</i>	<i>Turnover (e) (\$m)</i>	<i>Persons employed per establishment (No.)</i>	<i>Turnover per person employed (\$'000)</i>
<i>ASIC code</i>	<i>Description</i>						
FABRICATED METAL PRODUCTS—							
Structural metal products—							
3141	Fabricated structural steel	158	2,481	70.5	345.8	16	139.4
3142	Architectural aluminium products	81	1,132	25.6	136.1	14	120.2
3143	Architectural metal products n.e.c.	38	274	5.9	29.6	7	108.0
314	<i>Total</i>	277	3,887	102.0	511.5	14	131.6
Sheet metal products—							
3151	Metal containers	10	158	7.0	53.1	16	335.9
3152	Sheet metal furniture	14	248	6.0	22.8	18	91.8
3153	Sheet metal products n.e.c.	94	1,121	27.3	119.1	12	106.3
315	<i>Total</i>	118	1,527	40.3	195.0	13	127.7
Other fabricated metal products—							
3161	Cutlery and hand tools n.e.c.	7	50	1.3	3.1	7	61.5
3162	Springs and wire products	24	269	5.1	34.3	11	127.5
3163	Nuts, bolts, screws and rivets	11	240	7.0	28.8	22	120.0
3164	Metal coating and finishing	50	534	15.1	44.7	11	83.7
3165	Non-ferrous steam, gas and water fittings	5	89	2.3	7.7	18	86.8
3166	Boiler and plate work	13	121	4.2	13.3	9	109.6
3167	Metal blinds and awnings	8	109	2.5	11.0	14	101.0
3168	Fabricated metal products n.e.c.	90	788	17.2	66.6	9	84.6
316	<i>Total</i>	208	2,200	54.5	209.5	11	95.2
31	<i>Total fabricated metal products</i>	603	7,614	196.9	916.0	13	120.3
TRANSPORT EQUIPMENT—							
Motor vehicles and parts—							
3231	Motor vehicles	2	n.p.	n.p.	n.p.	n.p.	n.p.
3232	Motor vehicle bodies, trailers, caravans	42	n.p.	n.p.	n.p.	n.p.	n.p.
3233	Motor vehicle instruments and electrical equipment n.e.c.	1	n.p.	n.p.	n.p.	n.p.	n.p.
3234	Motor vehicle parts n.e.c.	97	764	17.0	60.5	8	79.2
323	<i>Total</i>	142	1,469	33.8	141.3	10	96.2
Other transport equipment—							
3241	Ships	17	730	28.1	106.8	43	146.4
3242	Boats	61	n.p.	n.p.	n.p.	n.p.	n.p.
3243	Railway rolling stock and locomotives	2	n.p.	n.p.	n.p.	n.p.	n.p.
3244	Aircraft	24	400	12.2	70.4	17	175.9
3245	Transport equipment n.e.c.	2	n.p.	n.p.	n.p.	n.p.	n.p.
324	<i>Total</i>	106	1,914	60.9	265.0	18	138.5
32	<i>Total transport equipment</i>	248	3,383	94.7	406.3	14	120.1

For footnotes see end of table.

TABLE 4. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY INDUSTRY CLASS
WESTERN AUSTRALIA, 1991-92—continued

Industry class		Establishments at 30 June (b) (No.)	Employment at end of June (c) (No.)	Wages and salaries (d) (\$m)	Turnover (\$m)	Persons employed per establishment (No.)	Turnover per person employed (\$'000)
ASIC code	Description						
OTHER MACHINERY AND EQUIPMENT—							
Photographic, professional and scientific equipment—							
3341	Photographic and optical goods	4	44	0.8	3.7	11	83.6
3342	Photographic film processing	60	553	10.3	43.5	9	78.8
3343	Measuring, professional and scientific equipment n.e.c.	18	192	4.5	14.9	11	77.7
334	Total	82	789	15.5	62.2	10	78.8
Appliances and electrical equipment—							
3351	Radio and TV receivers; audio equipment	11	71	1.5	6.8	6	95.4
3352	Electronic equipment n.e.c.	47	790	23.3	97.7	17	123.7
3353	Refrigerators and household appliances	23	251	5.4	20.8	11	82.7
3354	Water heating systems	10	251	6.0	30.6	25	122.0
3355	Electric and telephone cable and wire	5	38	1.3	8.8	8	231.0
3356	Batteries	—	—	—	—	—	—
3357	Electrical machinery and equipment n.e.c.	57	606	16.5	60.3	11	99.4
335	Total	153	2,007	53.9	224.9	13	112.1
Industrial machinery and equipment—							
3361	Agricultural machinery	43	321	6.9	33.0	7	102.7
3362	Construction machinery	13	n.p.	n.p.	n.p.	n.p.	n.p.
3363	Materials handling equipment	29	470	10.5	55.3	16	117.8
3364	Wood and metal working machinery	16	93	2.4	7.4	6	79.6
3365	Pumps and compressors	11	n.p.	n.p.	n.p.	n.p.	n.p.
3366	Commercial space heating and cooling equipment	7	261	7.8	46.5	37	178.3
3367	Dies, saw blades and machine tool accessories	29	188	4.1	12.7	6	67.7
3368	Food processing machinery	2	n.p.	n.p.	n.p.	n.p.	n.p.
3369	Industrial machinery and equipment n.e.c.	162	2,123	70.2	260.8	13	122.9
336	Total	312	3,905	116.3	497.6	13	127.4
33	Total other machinery and equipment	547	6,701	185.6	784.6	12	117.1
MISCELLANEOUS MANUFACTURING—							
Leather and leather products—							
3451	Leather tanning and fur dressing	14	181	5.0	21.3	13	117.7
3452	Leather and leather substitute goods n.e.c.	4	56	n.p.	n.p.	14	n.p.
345	Total	18	237	n.p.	n.p.	13	n.p.
Rubber products—							
3461	Rubber tyres, tubes, belts, hose and sheets	8	n.p.	n.p.	n.p.	n.p.	n.p.
3462	Rubber products n.e.c.	13	n.p.	n.p.	n.p.	n.p.	n.p.
346	Total	21	300	7.8	40.3	14	134.4
Plastic and related products—							
3471	Flexible packaging and abrasive papers	5	n.p.	n.p.	n.p.	n.p.	n.p.
3472	Rigid plastic sheeting	2	n.p.	n.p.	n.p.	n.p.	n.p.
3473	Hard surface floor coverings n.e.c.	—	—	—	—	—	—
3474	Plastic products n.e.c.	95	1,077	n.p.	n.p.	11	n.p.
347	Total	102	1,357	36.3	212.8	13	156.8
Other manufacturing—							
3481	Ophthalmic articles	7	n.p.	n.p.	n.p.	n.p.	n.p.
3482	Jewellery and silverware	16	104	2.6	18.4	7	176.9
3483	Brooms and brushes	1	n.p.	n.p.	n.p.	n.p.	n.p.
3484	Signs and advertising displays	73	549	11.0	37.0	8	67.4
3485	Sporting equipment	19	115	1.8	7.5	6	65.3
3486	Writing and marking equipment	7	36	0.7	2.0	5	56.8
3487	Manufacturing n.e.c.	20	101	1.5	6.8	5	67.8
348	Total	143	1,023	n.p.	n.p.	7	n.p.
34	Total miscellaneous manufacturing	284	2,917	70.4	360.8	10	123.7
21-34	TOTAL MANUFACTURING	3,645	62,475	1,785.0	12,903.0	17	206.5

(a) See paragraph 30 of the Explanatory Notes. (b) See paragraphs 4 to 10 of the Explanatory Notes. (c) Includes working proprietors. (d) Excludes the drawings of working proprietors.

TABLE 5. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92

<i>Employment size group</i>	<i>Establishments at 30 June (b)</i>		<i>Employment at end of June (c)</i>		<i>Wages and salaries (d) (e)</i>		<i>Turnover (e)</i>	
	<i>Number</i>	<i>Proportion (Per cent)</i>	<i>Number</i>	<i>Proportion (Per cent)</i>	<i>(\$m)</i>	<i>Proportion (Per cent)</i>	<i>(\$m)</i>	<i>Proportion (Per cent)</i>
FOOD, BEVERAGES AND TOBACCO								
0 - 3 persons	80	19.7	180	1.5	6.5	2.2	34.7	1.4
4 - 9 persons	156	38.4	937	8.0	13.9	4.6	104.3	4.2
10 - 19 persons	56	13.8	756	6.5	19.3	6.4	108.6	4.3
20 - 49 persons	62	15.3	1,974	16.9	41.3	13.8	397.6	15.9
50 - 99 persons	25	6.2	1,757	15.0	43.5	14.5	392.2	15.6
<i>Total less than 100 persons</i>	<i>379</i>	<i>93.3</i>	<i>5,604</i>	<i>47.8</i>	<i>124.5</i>	<i>41.6</i>	<i>1,037.4</i>	<i>41.4</i>
100 - 199 persons	12	3.0	1,554	13.3	41.7	13.9	445.4	17.8
200 - 499 persons	15	3.7	4,557	38.9	133.4	44.5	1,025.5	40.9
500 - 999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>27</i>	<i>6.7</i>	<i>6,111</i>	<i>52.2</i>	<i>175.1</i>	<i>58.4</i>	<i>1,470.9</i>	<i>58.6</i>
Total	406	100.0	11,715	100.0	299.6	100.0	2,508.3	100.0
TEXTILES								
0 - 3 persons	23	31.1	48	3.0	0.7	1.8	3.2	2.1
4 - 9 persons	30	40.5	181	11.2	3.3	8.3	12.8	8.5
10 - 19 persons	6	8.1	76	4.7	1.5	3.7	4.6	3.0
20 - 49 persons	10	13.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50 - 99 persons	2	2.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	<i>71</i>	<i>95.9</i>	<i>722</i>	<i>44.8</i>	<i>15.5</i>	<i>39.2</i>	<i>54.4</i>	<i>36.0</i>
100 - 199 persons	2	2.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200 - 499 persons	—	—	—	—	—	—	—	—
500 - 999 persons	1	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>3</i>	<i>4.1</i>	<i>889</i>	<i>55.2</i>	<i>24.1</i>	<i>60.8</i>	<i>96.6</i>	<i>64.0</i>
Total	74	100.0	1,611	100.0	39.6	100.0	151.0	100.0
CLOTHING AND FOOTWEAR								
0 - 3 persons	26	29.5	62	5.6	0.9	4.3	3.7	5.5
4 - 9 persons	35	39.8	214	19.5	3.5	16.5	15.6	23.3
10 - 19 persons	14	15.9	187	17.0	3.6	17.2	9.6	14.3
20 - 49 persons	9	10.2	260	23.7	4.9	23.3	12.4	18.5
50 - 99 persons	2	2.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total less than 100 persons</i>	<i>86</i>	<i>97.7</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
100 - 199 persons	2	2.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200 - 499 persons	—	—	—	—	—	—	—	—
500 - 999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>2</i>	<i>2.3</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Total	88	100.0	1,098	100.0	21.0	100.0	67.1	100.0
WOOD, WOOD PRODUCTS AND FURNITURE								
0 - 3 persons	237	36.0	548	8.1	7.2	4.7	33.2	4.6
4 - 9 persons	282	42.9	1,600	23.8	27.0	17.9	106.3	14.9
10 - 19 persons	85	12.9	1,164	17.3	24.7	16.4	100.5	14.0
20 - 49 persons	37	5.6	1,151	17.1	29.6	19.6	131.1	18.3
50 - 99 persons	11	1.7	691	10.3	18.7	12.4	138.8	19.4
<i>Total less than 100 persons</i>	<i>652</i>	<i>99.1</i>	<i>5,154</i>	<i>76.6</i>	<i>107.2</i>	<i>71.0</i>	<i>509.8</i>	<i>71.2</i>
100 - 199 persons	3	0.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200 - 499 persons	3	0.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500 - 999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
<i>Total 100 or more persons</i>	<i>6</i>	<i>0.9</i>	<i>1,573</i>	<i>23.4</i>	<i>43.8</i>	<i>29.0</i>	<i>206.0</i>	<i>28.8</i>
Total	658	100.0	6,727	100.0	151.0	100.0	715.8	100.0

For footnotes see end of table.

TABLE 5. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92 *continued*

Employment size group	Establishments at 30 June (b)		Employment at end of June (c)		Wages and salaries (d) (e)		Turnover (e)	
	Number	Proportion (Per cent)	Number	Proportion (Per cent)	(\$m)	Proportion (Per cent)	(\$m)	Proportion (Per cent)
PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING								
0 - 3 persons	96	26.4	217	3.4	3.5	2.1	15.1	2.1
4 - 9 persons	153	42.0	898	14.3	17.7	10.8	77.6	10.9
10 - 19 persons	59	16.2	745	11.8	16.8	10.2	62.1	8.7
20 - 49 persons	42	11.5	1,205	19.1	33.4	20.2	125.4	17.6
50 - 99 persons	7	1.9	533	8.5	18.9	11.5	94.3	13.2
Total less than 100 persons	357	98.1	3,598	57.1	90.4	54.8	374.5	52.6
100 - 199 persons	4	1.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200 - 499 persons	1	0.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500 - 999 persons	1	0.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1000 or more persons	1	0.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total 100 or more persons	7	1.9	2,703	42.9	74.5	45.2	338.2	47.4
Total	364	100.0	6,301	100.0	164.8	100.0	712.7	100.0
CHEMICAL, PETROLEUM AND COAL PRODUCTS								
0 - 3 persons	27	27.0	56	1.5	1.0	0.7	9.8	0.4
4 - 9 persons	24	24.0	135	3.6	3.1	2.2	34.2	1.4
10 - 19 persons	17	17.0	232	6.3	7.9	5.7	55.9	2.2
20 - 49 persons	18	18.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
50 - 99 persons	6	6.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total less than 100 persons	92	92.0	1,352	36.5	39.4	28.5	370.7	14.7
100 - 199 persons	4	4.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200 - 499 persons	2	2.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500 - 999 persons	2	2.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	8	8.0	2,352	63.5	98.6	71.5	2,158.7	85.3
Total	100	100.0	3,704	100.0	138.0	100.0	2,529.4	100.0
NON-METALLIC MINERAL PRODUCTS								
0 - 3 persons	51	25.5	115	2.5	1.7	1.2	14.8	1.9
4 - 9 persons	75	37.5	444	9.7	8.7	6.4	46.0	6.0
10 - 19 persons	28	14.0	363	7.9	7.7	5.7	46.2	6.0
20 - 49 persons	25	12.5	732	16.0	20.4	15.0	111.6	14.6
50 - 99 persons	10	5.0	669	14.6	21.5	15.8	159.7	20.8
Total less than 100 persons	189	94.5	2,323	50.7	60.0	44.1	378.4	49.4
100 - 199 persons	8	4.0	1,098	24.0	38.9	28.6	237.7	31.0
200 - 499 persons	2	1.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500 - 999 persons	1	0.5	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	11	5.5	2,255	49.3	76.0	55.9	388.1	50.6
Total	200	100.0	4,578	100.0	136.0	100.0	766.5	100.0
BASIC METAL PRODUCTS								
0 - 3 persons	18	24.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
4 - 9 persons	22	30.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
10 - 19 persons	8	11.0	93	1.5	3.5	1.3	34.0	1.2
20 - 49 persons	10	13.7	325	5.3	9.8	3.7	87.1	3.0
50 - 99 persons	8	11.0	554	9.0	19.1	7.3	181.4	6.3
Total less than 100 persons	66	90.4	1,131	18.5	35.8	13.6	486.3	16.8
100 - 199 persons	3	4.1	524	8.6	17.5	6.6	54.9	1.9
200 - 499 persons	2	2.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500 - 999 persons	1	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1000 or more persons	1	1.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total 100 or more persons	7	9.6	4,995	81.5	227.9	86.4	2,417.6	83.2
Total	73	100.0	6,126	100.0	263.7	100.0	2,897.9	100.0

For footnotes see end of table.

TABLE 5. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92—continued

Employment size group	Establishments at 30 June (b)		Employment at end of June (c)		Wages and salaries (d) (e)		Turnover (e)	
	Number	Proportion (Per cent)	Number	Proportion (Per cent)	(\$m)	Proportion (Per cent)	(\$m)	Proportion (Per cent)
FABRICATED METAL PRODUCTS								
0 - 3 persons	157	26.0	357	4.7	6.7	3.5	31.9	3.5
4 - 9 persons	244	40.5	1,393	18.3	26.6	13.7	118.4	13.0
10 - 19 persons	103	17.1	1,354	17.8	31.5	16.2	135.8	15.0
20 - 49 persons	66	10.9	1,926	25.3	50.7	26.1	216.7	23.9
50 - 99 persons	27	4.5	1,806	23.7	58.8	30.3	287.5	31.7
Total less than 100 persons	597	99.0	6,836	89.8	174.3	89.8	790.2	87.1
100 - 199 persons	6	1.0	778	10.2	19.8	10.2	117.6	12.9
200 - 499 persons	—	—	—	—	—	—	—	—
500 - 999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	6	1.0	778	10.2	19.8	10.2	117.6	12.9
Total	603	100.0	7,614	100.0	194.1	100.0	907.8	100.0
TRANSPORT EQUIPMENT								
0 - 3 persons	91	36.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
4 - 9 persons	79	31.9	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
10 - 19 persons	44	17.7	595	17.6	13.7	14.8	68.1	17.2
20 - 49 persons	23	9.3	671	19.8	15.6	16.8	50.0	12.6
50 - 99 persons	4	1.6	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total less than 100 persons	241	97.2	2,235	66.1	50.3	54.3	216.2	54.5
100 - 199 persons	5	2.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200 - 499 persons	2	0.8	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500 - 999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	7	2.8	1,148	33.9	42.3	45.7	180.8	45.5
Total	248	100.0	3,383	100.0	92.6	100.0	397.0	100.0
OTHER MACHINERY AND EQUIPMENT								
0 - 3 persons	196	35.8	435	6.5	7.7	4.1	38.0	4.8
4 - 9 persons	193	35.3	1,148	17.1	24.9	13.4	113.5	14.5
10 - 19 persons	75	13.7	1,007	15.0	25.3	13.7	90.9	11.6
20 - 49 persons	54	9.9	1,532	22.9	44.2	23.9	184.3	23.5
50 - 99 persons	19	3.5	1,207	18.0	43.1	23.3	194.9	24.9
Total less than 100 persons	537	98.2	5,329	79.5	145.2	78.4	621.6	79.2
100 - 199 persons	10	1.8	1,372	20.5	40.0	21.6	162.8	20.8
200 - 499 persons	—	—	—	—	—	—	—	—
500 - 999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	10	1.8	1,372	20.5	40.0	21.6	162.8	20.8
Total	547	100.0	6,701	100.0	185.2	100.0	784.4	100.0
MISCELLANEOUS MANUFACTURING								
0 - 3 persons	115	40.5	262	9.0	4.0	5.6	21.7	6.0
4 - 9 persons	91	32.0	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
10 - 19 persons	45	15.8	625	21.4	13.8	19.7	62.4	17.3
20 - 49 persons	26	9.2	777	26.6	19.1	27.2	94.0	26.1
50 - 99 persons	5	1.8	374	12.8	11.1	15.8	67.2	18.6
Total less than 100 persons	282	99.3	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
100 - 199 persons	1	0.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
200 - 499 persons	1	0.4	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
500 - 999 persons	—	—	—	—	—	—	—	—
1000 or more persons	—	—	—	—	—	—	—	—
Total 100 or more persons	2	0.7	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
Total	284	100.0	2,917	100.0	70.3	100.0	360.7	100.0

For footnotes see end of table.

TABLE 5. MANUFACTURING ESTABLISHMENTS (a): SUMMARY OF OPERATIONS BY EMPLOYMENT SIZE AND INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92—continued

<i>Employment size group</i>	<i>Establishments at 30 June (b)</i>		<i>Employment at end of June (c)</i>		<i>Wages and salaries (d) (e)</i>		<i>Turnover (e)</i>	
	<i>Number</i>	<i>Proportion (Per cent)</i>	<i>Number</i>	<i>Proportion (Per cent)</i>	<i>(\$m)</i>	<i>Proportion (Per cent)</i>	<i>(\$m)</i>	<i>Proportion (Per cent)</i>
TOTAL MANUFACTURING								
0 - 3 persons	1,117	30.6	2,512	4.0	43.6	2.5	390.9	3.1
4 - 9 persons	1,384	38.0	8,033	12.9	150.8	8.6	729.4	5.7
10 - 19 persons	540	14.8	7,197	11.5	169.4	9.6	778.5	6.1
20 - 49 persons	382	10.5	11,360	18.2	290.9	16.6	1,612.4	12.6
50 - 99 persons	126	3.5	8,592	13.8	261.6	14.9	1,663.6	13.0
<i>Total less than 100 persons</i>	<i>3,549</i>	<i>97.4</i>	<i>37,694</i>	<i>60.3</i>	<i>916.3</i>	<i>52.2</i>	<i>5,174.8</i>	<i>40.4</i>
100 - 199 persons	60	1.6	8,270	13.2	252.5	14.4	1,533.4	12.0
200 - 499 persons	28	0.8	8,376	13.4	264.1	15.0	2,315.8	18.1
500 - 999 persons	6	0.2	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
1000 or more persons	2	0.1	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
<i>Total 100 or more persons</i>	<i>96</i>	<i>2.6</i>	<i>24,781</i>	<i>39.7</i>	<i>839.5</i>	<i>47.8</i>	<i>7,623.7</i>	<i>59.6</i>
Total	3,645	100.0	62,475	100.0	1,755.8	100.0	12,798.5	100.0

(a) See paragraphs 30, 31 and 36 of the Explanatory Notes. (b) See paragraphs 4 to 10 of the Explanatory Notes. (c) Includes working proprietors. (d) Excludes the drawings of working proprietors. (e) Figures may differ slightly from those presented in other tables, because they exclude those manufacturing establishments which operated during 1991-92 but were not operating at 30 June 1992. See paragraph 36 of the Explanatory Notes.

TABLE 6. MANUFACTURING ESTABLISHMENTS (a): ENVIRONMENTAL PROTECTION ISSUES (b), SUMMARY STATISTICS BY INDUSTRY SUBDIVISION
WESTERN AUSTRALIA, 1991-92

Industry subdivision (c) ASIC code	Description	Establishments that conducted environmental impact assessments or environmental audits			Establishments that encouraged the return of their own containers or packaging			Establishments engaged in the marketing or production of goods or services for monitoring, maintaining or improving the environment		
		Number	Proportion of total establishments (d) (Per cent)	Proportion of total turnover (e) (Per cent)	Number	Proportion of total establishments (d) (Per cent)	Proportion of total turnover (e) (Per cent)	Number	Proportion of total establishments (d) (Per cent)	Proportion of total turnover (e) (Per cent)
21	Food, beverages and tobacco	37	9	30	107	26	37	14	3	1
23	Textiles	3	4	27	25	33	66	5	7	1
24	Clothing and footwear	—	—	—	20	22	13	4	4	n.p.
25	Wood, wood products and furniture	13	2	17	82	12	8	13	2	1
26	Paper, paper products, printing and publishing	12	3	38	111	30	21	40	11	17
27	Chemical, petroleum and coal products	11	11	84	34	33	62	11	11	2
28	Non-metallic mineral products	12	6	31	48	24	31	18	9	19
29	Basic metal products	5	7	61	11	14	4	2	3	n.p.
31	Fabricated metal products	25	4	18	100	16	23	39	6	10
32	Transport equipment	5	2	15	49	20	31	9	4	3
33	Other machinery and equipment	18	3	12	104	19	20	45	8	5
34	Miscellaneous manufacturing	9	3	5	67	24	40	29	10	20
21-34	Total manufacturing	150	4	44	758	21	30	229	6	16

(a) See paragraph 30 of the Explanatory Notes. (b) See paragraph 37 of the Explanatory Notes. Establishments which did not respond to the environmental protection issues are treated as not participating in the relevant issue. (c) Data are also available on request by ASIC class. (d) Proportion of total establishments which operated at any time during 1991-92. (e) See paragraph 24 of the Explanatory Notes.

Note: The 1991-92 manufacturing census included a number of questions related to environmental protection. The following three questions were asked of all manufacturers:

- During 1991-92, did this business conduct any environmental impact assessments (for proposed new production) or any environmental audits (on existing production processes)?
- Does this business permit and/or encourage the return of its own containers or packaging (eg returnable bottles, cardboard boxes, polystyrene, etc)?
- Does this business market or produce any goods or services for monitoring, maintaining or improving the environment?

**TABLE 7. MANUFACTURING ESTABLISHMENTS (a): EXPENDITURE ON ENVIRONMENTAL PROTECTION (b)
BY INDUSTRY CLASS, WESTERN AUSTRALIA, 1991-92**

Industry class		Current expenditure on environmental protection		Capital expenditure to abate pollution (\$ '000)
ASIC code	Description	(\$ '000)	Proportion of total turnover (c) (Per cent)	
FOOD, BEVERAGES AND TOBACCO—				
Meat products—				
2115	Meat (except smallgoods or poultry)	1,289	0.3	333
2116	Poultry	479	0.4	213
2117	Bacon, ham and smallgoods n.e.c.	131	0.1	33
211	Total	1,899	0.3	579
Milk products—				
2121	Liquid milk and cream	n.p.	n.p.	—
2122	Butter	n.p.	n.p.	n.p.
2123	Cheese	n.p.	n.p.	—
2124	Ice cream and frozen confections	n.p.	n.p.	n.p.
2125	Milk products n.e.c.	—	—	—
212	Total	908	n.p.	n.p.
Fruit and vegetable products—				
2131	Fruit products	n.p.	n.p.	n.p.
2132	Vegetable products	n.p.	n.p.	n.p.
213	Total	281	0.4	n.p.
214	Margarine and oils and fats n.e.c.	n.p.	n.p.	n.p.
Flour mill and cereal food products—				
2151	Flour mill products	n.p.	n.p.	n.p.
2152	Starch, gluten and starch sugars	n.p.	n.p.	n.p.
2153	Cereal foods and baking mixes	n.p.	n.p.	n.p.
215	Total	n.p.	n.p.	n.p.
Bread, cakes and biscuits—				
2161	Bread	293	0.3	n.p.
2162	Cakes and pastries	n.p.	n.p.	n.p.
2163	Biscuits	n.p.	n.p.	n.p.
216	Total	408	0.2	n.p.
Other food products—				
2171	Raw sugar	—	—	—
2173	Confectionery and cocoa products	n.p.	n.p.	—
2174	Processed seafoods	106	—	—
2175	Prepared animal and bird foods	126	0.1	n.p.
2176	Food products n.e.c.	n.p.	n.p.	n.p.
217	Total	274	—	152
Beverages and malt—				
2185	Soft drinks, cordials and syrups	78	—	n.p.
2186	Beer	n.p.	n.p.	n.p.
2187	Malt	n.p.	n.p.	n.p.
2188	Wine and brandy	64	0.2	12
2189	Alcoholic beverages n.e.c.	—	—	—
218	Total	2,255	0.5	1,045
219	Tobacco products	—	—	—
21	Total food, beverages and tobacco	6,261	0.3	2,309

For footnotes see end of table.

**TABLE 7. MANUFACTURING ESTABLISHMENTS (a): EXPENDITURE ON ENVIRONMENTAL PROTECTION (b)
BY INDUSTRY CLASS, WESTERN AUSTRALIA, 1991-92—continued**

Industry class		Current expenditure on environmental protection		Capital expenditure to abate pollution
ASIC code	Description	(\$'000)	Proportion of total turnover (c) (Per cent)	(\$ '000)
TEXTILES—				
Textile fibres, yarns and woven fabrics—				
2341	Cotton ginning	—	—	—
2342	Wool scouring and top making	n.p.	n.p.	n.p.
2343	Man-made fibres and yarns	—	—	—
2344	Man-made fibre broadwoven fabrics	—	—	—
2345	Cotton yarns and broadwoven fabrics	n.p.	n.p.	n.p.
2346	Worsted yarns and broadwoven fabrics	—	—	—
2347	Woollen yarns and broadwoven fabrics	n.p.	n.p.	n.p.
2348	Narrow woven and elastic textiles	—	—	—
2349	Textile finishing	n.p.	n.p.	n.p.
234	Total	480	0.9	n.p.
Other textile products—				
2351	Household textiles	n.p.	n.p.	—
2352	Textile floor coverings	n.p.	n.p.	n.p.
2353	Felt and felt products	—	—	—
2354	Canvas and associated products n.e.c.	192	0.2	—
2355	Rope, cordage and twine	n.p.	n.p.	n.p.
2356	Textile products n.e.c.	n.p.	n.p.	n.p.
235	Total	210	0.2	n.p.
23	Total textiles	690	0.5	n.p.
CLOTHING AND FOOTWEAR—				
Knitting mills—				
2441	Hosiery	—	—	—
2442	Cardigans and pullovers	n.p.	n.p.	—
2443	Knitted goods n.e.c.	n.p.	n.p.	—
244	Total	n.p.	n.p.	—
Clothing—				
2451	Men's trousers and shorts; work clothing	—	—	n.p.
2452	Men's suits and coats; waterproof clothing	n.p.	n.p.	—
2453	Women's outerwear n.e.c.	153	2.0	—
2454	Foundation garments	n.p.	n.p.	n.p.
2455	Underwear and infants' clothing n.e.c.	n.p.	n.p.	n.p.
2456	Headwear and clothing n.e.c.	n.p.	n.p.	—
245	Total	n.p.	n.p.	n.p.
246	Footwear	n.p.	n.p.	n.p.
24	Total clothing and footwear	180	0.3	n.p.
WOOD, WOOD PRODUCTS AND FURNITURE—				
Wood and wood products—				
2531	Log sawmilling	67	0.1	27
2532	Resawn and dressed timber	n.p.	n.p.	n.p.
2533	Veneers and manufactured boards of wood	n.p.	n.p.	n.p.
2534	Wooden doors	18	n.p.	n.p.
2535	Wooden structural fittings and joinery n.e.c.	110	0.1	19
2536	Wooden containers	61	n.p.	—
2537	Hardwood woodchips	n.p.	n.p.	n.p.
2538	Wood products n.e.c.	13	0.1	n.p.
253	Total	459	0.1	66
Furniture and mattresses—				
2541	Furniture (except sheet metal)	347	0.2	n.p.
2542	Mattresses (except rubber)	29	0.1	n.p.
254	Total	376	0.2	47
25	Total wood, wood products and furniture	835	0.1	113

For footnotes see end of table.

**TABLE 7. MANUFACTURING ESTABLISHMENTS (a): EXPENDITURE ON ENVIRONMENTAL PROTECTION (b)
BY INDUSTRY CLASS, WESTERN AUSTRALIA, 1991-92—continued**

<i>Industry class</i>		<i>Current expenditure on environmental protection</i>		<i>Capital expenditure to abate pollution</i>
<i>ASIC code</i>	<i>Description</i>	<i>(\$'000)</i>	<i>Proportion of total turnover (c) (Per cent)</i>	<i>(\$ '000)</i>
PAPER, PAPER PRODUCTS, PRINTING AND PUBLISHING—				
Paper and paper products—				
2631	Pulp, paper and paperboard	n.p.	n.p.	n.p.
2632	Paper bags (including textile bags)	n.p.	n.p.	n.p.
2633	Solid fibreboard containers	n.p.	n.p.	—
2634	Corrugated fibreboard containers	n.p.	n.p.	n.p.
2635	Paper products n.e.c.	n.p.	n.p.	—
263	<i>Total</i>	n.p.	n.p.	n.p.
Printing and allied industries—				
2641	Publishing	5	—	—
2642	Printing and publishing	n.p.	n.p.	—
2643	Paper stationery	98	0.3	n.p.
2644	Printing and bookbinding	124	0.1	34
2645	Printing trade services n.e.c.	n.p.	n.p.	n.p.
264	<i>Total</i>	n.p.	n.p.	n.p.
26	Total paper, paper products, printing and publishing	1,328	0.2	389
CHEMICAL, PETROLEUM AND COAL PRODUCTS—				
Basic chemicals				
2751	Chemical fertilisers	n.p.	n.p.	n.p.
2752	Industrial gases	n.p.	n.p.	n.p.
2753	Synthetic resins and rubber	20	n.p.	—
2754	Organic industrial chemicals n.e.c.	n.p.	n.p.	n.p.
2755	Inorganic industrial chemicals n.e.c.	14,299	n.p.	n.p.
275	<i>Total</i>	15,826	2.7	1,036
Other chemical products—				
2761	Ammunition, explosives and fireworks	n.p.	n.p.	n.p.
2762	Paints	123	0.1	39
2763	Pharmaceutical and veterinary products	47	n.p.	n.p.
2764	Pesticides	n.p.	n.p.	n.p.
2765	Soap and other detergents	218	0.7	n.p.
2766	Cosmetics and toilet preparations	n.p.	n.p.	n.p.
2767	Inks	n.p.	n.p.	n.p.
2768	Chemical products n.e.c.	116	0.4	194
276	<i>Total</i>	n.p.	n.p.	n.p.
277	<i>Petroleum refining</i>	n.p.	n.p.	n.p.
278	<i>Petroleum and coal products n.e.c.</i>	n.p.	n.p.	n.p.
27	Total chemical, petroleum and coal products	18,553	0.8	6,621

For footnotes see end of table.

**TABLE 7. MANUFACTURING ESTABLISHMENTS (a): EXPENDITURE ON ENVIRONMENTAL PROTECTION (b)
BY INDUSTRY CLASS, WESTERN AUSTRALIA, 1991-92—continued**

<i>Industry class</i>		<i>Current expenditure on environmental protection</i>		<i>Capital expenditure to abate pollution</i>
<i>ASIC code</i>	<i>Description</i>	<i>(\$'000)</i>	<i>Proportion of total turnover (c) (Per cent)</i>	<i>(\$ '000)</i>
285	NON-METALLIC MINERAL PRODUCTS— Glass and glass products	249	n.p.	—
	Clay products and refractories—			
2861	Clay bricks	n.p.	n.p.	n.p.
2862	Refractories	n.p.	n.p.	—
2863	Ceramic tiles and pipes	n.p.	n.p.	n.p.
2864	Ceramic goods n.e.c.	36	0.3	n.p.
286	<i>Total</i>	464	0.3	n.p.
	Cement and concrete products—			
2871	Cement	n.p.	n.p.	n.p.
2872	Ready mixed concrete	480	0.4	265
2873	Concrete pipes and box culverts	n.p.	n.p.	—
2874	Concrete products n.e.c.	162	0.1	n.p.
287	<i>Total</i>	1,408	0.4	454
	Other non-metallic mineral products—			
2881	Plaster products and expanded minerals	151	n.p.	n.p.
2882	Stone products	n.p.	n.p.	n.p.
2883	Glass wool and mineral wool products	n.p.	n.p.	n.p.
2884	Non-metallic mineral products n.e.c.	861	0.8	n.p.
288	<i>Total</i>	1,197	n.p.	n.p.
28	Total non-metallic mineral products	3,318	0.5	608
	BASIC METAL PRODUCTS—			
	Basic iron and steel—			
2941	Iron and steel basic products	135	0.1	28
2942	Iron casting	60	n.p.	n.p.
2943	Steel casting	n.p.	n.p.	n.p.
2944	Iron and steel forging	n.p.	n.p.	n.p.
2945	Steel pipes and tubes	n.p.	n.p.	n.p.
294	<i>Total</i>	830	0.3	414
	Basic non-ferrous metals—			
2951	Copper smelting, refining	—	—	—
2952	Silver, lead, zinc smelting, refining	n.p.	n.p.	n.p.
2953	Alumina	n.p.	n.p.	n.p.
2954	Aluminium smelting	—	—	—
2955	Nickel smelting, refining	n.p.	n.p.	n.p.
2956	Non-ferrous metals n.e.c. smelting, refining	n.p.	n.p.	n.p.
2957	Secondary recovery and alloying of non-ferrous metals n.e.c.	n.p.	n.p.	n.p.
295	<i>Total</i>	37,668	1.5	81,389
	Non-ferrous metal basic products—			
2961	Aluminium rolling, drawing, extruding	n.p.	n.p.	n.p.
2962	Non-ferrous metals n.e.c. rolling, drawing, extruding	n.p.	n.p.	n.p.
2963	Non-ferrous metal casting	4	n.p.	—
296	<i>Total</i>	213	0.9	111
29	Total basic metal products	38,711	1.3	81,914

For footnotes see end of table.

**TABLE 7. MANUFACTURING ESTABLISHMENTS (a): EXPENDITURE ON ENVIRONMENTAL PROTECTION (b)
BY INDUSTRY CLASS, WESTERN AUSTRALIA, 1991-92—continued**

Industry class		Current expenditure on environmental protection		Capital expenditure to abate pollution (\$ '000)
ASIC code	Description	(\$'000)	Proportion of total turnover (c) (Per cent)	
FABRICATED METAL PRODUCTS—				
Structural metal products—				
3141	Fabricated structural steel	326	0.1	45
3142	Architectural aluminium products	111	0.1	n.p.
3143	Architectural metal products n.e.c.	50	0.2	n.p.
314	Total	487	0.1	81
Sheet metal products—				
3151	Metal containers	185	0.4	n.p.
3152	Sheet metal furniture	17	0.1	n.p.
3153	Sheet metal products n.e.c.	135	0.1	n.p.
315	Total	337	0.2	59
Other fabricated metal products—				
3161	Cutlery and hand tools n.e.c.	4	0.1	n.p.
3162	Springs and wire products	39	0.1	n.p.
3163	Nuts, bolts, screws and rivets	13	0.1	n.p.
3164	Metal coating and finishing	205	0.5	52
3165	Non-ferrous steam, gas and water fittings	5	0.1	—
3166	Boiler and plate work	n.p.	n.p.	n.p.
3167	Metal blinds and awnings	n.p.	n.p.	n.p.
3168	Fabricated metal products n.e.c.	108	0.2	67
316	Total	386	0.2	145
31	Total fabricated metal products	1,210	0.1	285
TRANSPORT EQUIPMENT—				
Motor vehicles and parts—				
3231	Motor vehicles	n.p.	n.p.	n.p.
3232	Motor vehicle bodies, trailers, caravans	n.p.	n.p.	n.p.
3233	Motor vehicle instruments and electrical equipment n.e.c.	n.p.	n.p.	n.p.
3234	Motor vehicle parts n.e.c.	69	0.1	35
323	Total	190	0.2	349
Other transport equipment—				
3241	Ships	201	0.2	n.p.
3242	Boats	n.p.	n.p.	n.p.
3243	Railway rolling stock and locomotives	n.p.	n.p.	n.p.
3244	Aircraft	9	—	n.p.
3245	Transport equipment n.e.c.	n.p.	n.p.	n.p.
324	Total	264	0.1	43
32	Total transport equipment	454	0.1	392

For footnotes see end of table.

TABLE 7. MANUFACTURING ESTABLISHMENTS (a): EXPENDITURE ON ENVIRONMENTAL PROTECTION (b)
BY INDUSTRY CLASS, WESTERN AUSTRALIA, 1991-92—continued

<i>Industry class</i>		<i>Current expenditure on environmental protection</i>		<i>Capital expenditure to abate pollution</i>
<i>ASIC code</i>	<i>Description</i>	<i>(\$'000)</i>	<i>Proportion of total turnover (c) (Per cent)</i>	<i>(\$ '000)</i>
OTHER MACHINERY AND EQUIPMENT—				
Photographic, professional and scientific equipment—				
3341	Photographic and optical goods	n.p.	n.p.	—
3342	Photographic film processing	n.p.	n.p.	—
3343	Measuring, professional and scientific equipment n.e.c.	9	0.1	n.p.
334	<i>Total</i>	34	0.1	n.p.
Appliances and electrical equipment—				
3351	Radio and TV receivers, audio equipment	—	—	—
3352	Electronic equipment n.e.c.	92	0.1	29
3353	Refrigerators and household appliances	16	0.1	n.p.
3354	Water heating systems	n.p.	n.p.	—
3355	Electric and telephone cable and wire	n.p.	n.p.	n.p.
3356	Batteries	—	—	—
3357	Electrical machinery and equipment n.e.c.	150	0.3	81
335	<i>Total</i>	293	0.1	126
Industrial machinery and equipment—				
3361	Agricultural machinery	24	0.1	n.p.
3362	Construction machinery	n.p.	n.p.	n.p.
3363	Materials handling equipment	116	0.2	n.p.
3364	Wood and metal working machinery	11	0.2	n.p.
3365	Pumps and compressors	n.p.	n.p.	n.p.
3366	Commercial space heating and cooling equipment	39	0.1	—
3367	Dies, saw blades and machine tool accessories	8	0.1	—
3368	Food processing machinery	n.p.	n.p.	n.p.
3369	Industrial machinery and equipment n.e.c.	302	0.1	29
336	<i>Total</i>	524	0.1	n.p.
33	Total other machinery and equipment	851	0.1	180
MISCELLANEOUS MANUFACTURING—				
Leather and leather products—				
3451	Leather tanning and fur dressing	86	0.4	n.p.
3452	Leather and leather substitute goods n.e.c.	n.p.	n.p.	n.p.
345	<i>Total</i>	n.p.	n.p.	n.p.
Rubber products—				
3461	Rubber tyres, tubes, belts, hose and sheets	n.p.	n.p.	n.p.
3462	Rubber products n.e.c.	n.p.	n.p.	n.p.
346	<i>Total</i>	n.p.	n.p.	n.p.
Plastic and related products—				
3471	Flexible packaging and abrasive papers	n.p.	n.p.	n.p.
3472	Rigid plastic sheeting	n.p.	n.p.	n.p.
3473	Hard surface floor coverings n.e.c.	—	—	—
3474	Plastic products n.e.c.	n.p.	n.p.	n.p.
347	<i>Total</i>	456	0.2	142
Other manufacturing—				
3481	Ophthalmic articles	n.p.	n.p.	n.p.
3482	Jewellery and silverware	n.p.	n.p.	n.p.
3483	Brooms and brushes	n.p.	n.p.	n.p.
3484	Signs and advertising displays	54	0.2	15
3485	Sporting equipment	8	0.1	n.p.
3486	Writing and marking equipment	n.p.	n.p.	—
3487	Manufacturing n.e.c.	n.p.	n.p.	—
348	<i>Total</i>	101	n.p.	22
34	Total miscellaneous manufacturing	674	0.2	197
21-34	TOTAL MANUFACTURING	73,065	0.6	93,050

(a) Data in this table exclude expenditure by single establishment businesses with less than four persons employed. (b) See paragraph 38 of the Explanatory Notes. Establishments which did not respond to the questions are treated as having nil expenditure. (c) See paragraph 24 of the Explanatory Notes.

**TABLE 8. MANUFACTURING LOCATIONS(a): SUMMARY OF OPERATIONS IN STATISTICAL DIVISIONS
BY INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92**

<i>Industry subdivision</i>		<i>Locations at 30 June (a) (No.)</i>	<i>Employment at end of June (b) (No.)</i>	<i>Wages and salaries (c) (\$m)</i>	<i>Turnover (d) (\$m)</i>
<i>ASIC Code</i>	<i>Description</i>				
PERTH STATISTICAL DIVISION					
21	Food, beverages and tobacco	262	7,745	222.7	1,836.3
23	Textiles	68	1,438	n.p.	n.p.
24	Clothing and footwear	82	1,041	n.p.	n.p.
25	Wood, wood products and furniture	554	5,283	120.4	549.9
26	Paper, paper products, printing and publishing	336	5,842	154.1	683.9
27	Chemical, petroleum and coal products	94	2,756	99.8	2,186.8
28	Non-metallic mineral products	169	4,025	122.4	688.1
29	Basic metal products	58	1,658	54.7	630.9
31	Fabricated metal products	523	7,017	182.3	855.2
32	Transport equipment	221	3,188	91.1	393.0
33	Other machinery and equipment	469	6,098	170.4	730.4
34	Miscellaneous manufacturing	258	2,776	67.8	348.9
21-34	Total manufacturing	3,094	48,867	1,339.6	9,099.3
SOUTH WEST STATISTICAL DIVISION					
21	Food, beverages and tobacco	55	1,522	37.3	221.7
23	Textiles	2	n.p.	n.p.	n.p.
24	Clothing and footwear	2	n.p.	n.p.	n.p.
25	Wood, wood products and furniture	64	1,174	27.6	155.2
26	Paper, paper products, printing and publishing	14	103	2.3	5.8
27	Chemical, petroleum and coal products	10	687	29.2	273.1
28	Non-metallic mineral products	25	190	n.p.	n.p.
29	Basic metal products	5	3,925	n.p.	n.p.
31	Fabricated metal products	31	248	4.4	20.3
32	Transport equipment	15	86	1.6	5.8
33	Other machinery and equipment	30	246	7.0	21.4
34	Miscellaneous manufacturing	13	43	0.7	3.3
21-34	Total manufacturing	266	8,241	304.8	2,548.4
LOWER GREAT SOUTHERN STATISTICAL DIVISION					
21	Food, beverages and tobacco	22	301	12.4	52.4
23	Textiles	3	158	n.p.	n.p.
24	Clothing and footwear	5	44	0.7	2.9
25	Wood, wood products and furniture	17	117	2.1	7.1
26	Paper, paper products, printing and publishing	3	n.p.	n.p.	n.p.
27	Chemical, petroleum and coal products	1	n.p.	n.p.	n.p.
28	Non-metallic mineral products	7	48	0.9	4.7
29	Basic metal products	—	—	—	—
31	Fabricated metal products	9	47	0.8	4.8
32	Transport equipment	3	29	n.p.	n.p.
33	Other machinery and equipment	14	57	0.8	3.5
34	Miscellaneous manufacturing	5	20	0.4	1.2
21-34	Total manufacturing	89	1,052	32.0	136.4
UPPER GREAT SOUTHERN STATISTICAL DIVISION					
21	Food, beverages and tobacco	4	19	n.p.	n.p.
23	Textiles	—	—	—	—
24	Clothing and footwear	—	—	—	—
25	Wood, wood products and furniture	8	37	0.5	1.3
26	Paper, paper products, printing and publishing	3	24	n.p.	n.p.
27	Chemical, petroleum and coal products	—	—	—	—
28	Non-metallic mineral products	4	20	n.p.	n.p.
29	Basic metal products	2	n.p.	n.p.	n.p.
31	Fabricated metal products	5	20	0.2	1.1
32	Transport equipment	—	—	—	—
33	Other machinery and equipment	5	23	0.4	1.6
34	Miscellaneous manufacturing	2	n.p.	n.p.	n.p.
21-34	Total manufacturing	33	237	6.1	56.8

For footnotes see end of table.

**TABLE 8. MANUFACTURING LOCATIONS(a): SUMMARY OF OPERATIONS IN STATISTICAL DIVISIONS
BY INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92** *continued*

<i>Industry subdivision</i>		<i>Locations at 30 June (a) (No.)</i>	<i>Employment at end of June (b) (No.)</i>	<i>Wages and salaries (c) (\$m)</i>	<i>Turnover (d) (\$m)</i>
<i>ASIC Code</i>	<i>Description</i>				
MIDLANDS STATISTICAL DIVISION					
21	Food, beverages and tobacco	25	418	8.7	70.4
23	Textiles	—	—	—	—
24	Clothing and footwear	—	—	—	—
25	Wood, wood products and furniture	4	21	0.2	1.3
26	Paper, paper products, printing and publishing	4	24	0.5	1.2
27	Chemical, petroleum and coal products	—	—	—	—
28	Non-metallic mineral products	7	23	0.6	2.6
29	Basic metal products	3	n.p.	n.p.	n.p.
31	Fabricated metal products	13	54	0.9	4.9
32	Transport equipment	4	18	0.3	1.0
33	Other machinery and equipment	8	49	0.7	5.5
34	Miscellaneous manufacturing	2	n.p.	n.p.	n.p.
21-34	Total manufacturing	70	715	14.6	95.2
SOUTH EASTERN STATISTICAL DIVISION					
21	Food, beverages and tobacco	12	117	2.6	14.8
23	Textiles	—	—	—	—
24	Clothing and footwear	—	—	—	—
25	Wood, wood products and furniture	7	19	0.2	1.0
26	Paper, paper products, printing and publishing	5	49	0.9	2.5
27	Chemical, petroleum and coal products	4	73	n.p.	n.p.
28	Non-metallic mineral products	10	33	0.9	11.9
29	Basic metal products	3	332	n.p.	n.p.
31	Fabricated metal products	19	100	n.p.	n.p.
32	Transport equipment	3	13	0.2	0.8
33	Other machinery and equipment	14	n.p.	n.p.	n.p.
34	Miscellaneous manufacturing	2	n.p.	n.p.	n.p.
21-34	Total manufacturing	79	924	31.3	498.8
CENTRAL STATISTICAL DIVISION					
21	Food, beverages and tobacco	31	1,047	19.0	256.2
23	Textiles	1	n.p.	n.p.	n.p.
24	Clothing and footwear	—	—	—	—
25	Wood, wood products and furniture	10	n.p.	n.p.	n.p.
26	Paper, paper products, printing and publishing	6	63	n.p.	n.p.
27	Chemical, petroleum and coal products	2	n.p.	n.p.	n.p.
28	Non-metallic mineral products	15	94	2.2	11.2
29	Basic metal products	3	16	0.4	2.8
31	Fabricated metal products	15	77	1.8	6.5
32	Transport equipment	6	35	0.6	2.2
33	Other machinery and equipment	13	36	0.7	2.9
34	Miscellaneous manufacturing	6	22	0.2	1.1
21-34	Total manufacturing	108	1,472	28.5	302.9
PILBARA STATISTICAL DIVISION					
21	Food, beverages and tobacco	7	160	n.p.	n.p.
23	Textiles	—	—	—	—
24	Clothing and footwear	1	n.p.	n.p.	n.p.
25	Wood, wood products and furniture	1	n.p.	n.p.	n.p.
26	Paper, paper products, printing and publishing	1	n.p.	n.p.	n.p.
27	Chemical, petroleum and coal products	2	n.p.	n.p.	n.p.
28	Non-metallic mineral products	11	77	1.7	15.1
29	Basic metal products	2	n.p.	n.p.	n.p.
31	Fabricated metal products	4	35	n.p.	n.p.
32	Transport equipment	2	n.p.	n.p.	n.p.
33	Other machinery and equipment	2	n.p.	n.p.	n.p.
34	Miscellaneous manufacturing	1	n.p.	n.p.	n.p.
21-34	Total manufacturing	34	330	10.2	79.3

For footnotes see end of table.

**TABLE 8. MANUFACTURING LOCATIONS(a): SUMMARY OF OPERATIONS IN STATISTICAL DIVISIONS
BY INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92—continued**

Industry subdivision		Locations at 30 June (a) (No.)	Employment at end of June (b) (No.)	Wages and salaries (c) (\$m)	Turnover (\$m)
ASIC Code	Description				
KIMBERLEY STATISTICAL DIVISION					
21	Food, beverages and tobacco	7	167	n.p.	n.p.
23	Textiles	1	n.p.	n.p.	n.p.
24	Clothing and footwear	—	—	—	—
25	Wood, wood products and furniture	3	7	0.1	0.6
26	Paper, paper products, printing and publishing	4	16	0.3	0.9
27	Chemical, petroleum and coal products	—	—	—	—
28	Non-metallic mineral products	4	8	n.p.	n.p.
29	Basic metal products	—	—	—	—
31	Fabricated metal products	4	9	0.1	0.6
32	Transport equipment	2	n.p.	n.p.	n.p.
33	Other machinery and equipment	3	19	0.2	0.6
34	Miscellaneous manufacturing	1	n.p.	n.p.	n.p.
21-34	Total manufacturing	29	238	4.7	27.8
WESTERN AUSTRALIA EXCLUDING PERTH STATISTICAL DIVISION					
21	Food, beverages and tobacco	163	3,751	90.1	690.5
23	Textiles	7	173	n.p.	n.p.
24	Clothing and footwear	8	57	n.p.	n.p.
25	Wood, wood products and furniture	114	1,418	31.6	169.6
26	Paper, paper products, printing and publishing	40	473	11.7	35.4
27	Chemical, petroleum and coal products	19	848	35.2	341.5
28	Non-metallic mineral products	83	493	11.6	76.7
29	Basic metal products	18	4,468	209.3	2,269.5
31	Fabricated metal products	100	590	14.4	60.0
32	Transport equipment	35	195	3.7	13.3
33	Other machinery and equipment	89	603	15.2	54.2
34	Miscellaneous manufacturing	32	140	2.6	11.9
21-34	Total manufacturing	708	13,209	432.1	3,745.6
WESTERN AUSTRALIA					
21	Food, beverages and tobacco	425	11,496	312.8	2,526.9
23	Textiles	75	1,611	39.6	151.0
24	Clothing and footwear	90	1,098	21.1	67.5
25	Wood, wood products and furniture	668	6,701	152.0	719.6
26	Paper, paper products, printing and publishing	376	6,315	165.8	719.3
27	Chemical, petroleum and coal products	113	3,604	135.0	2,528.3
28	Non-metallic mineral products	252	4,518	134.0	764.8
29	Basic metal products	76	6,126	264.0	2,900.5
31	Fabricated metal products	623	7,607	196.7	915.3
32	Transport equipment	256	3,383	94.7	406.3
33	Other machinery and equipment	558	6,701	185.6	784.6
34	Miscellaneous manufacturing	290	2,916	70.4	360.8
21-34	Total manufacturing	3,802	62,076	1,771.7	12,844.9

(a) See paragraphs 10 and 39 to 41 of the Explanatory Notes. (b) Includes working proprietors. (c) Excludes the drawings of working proprietors.

INTRODUCTION OF THE ANZSIC INDUSTRY CLASSIFICATION INTO MANUFACTURING STATISTICS

The Australian and New Zealand Standard Industrial Classification (ANZSIC) has been developed for use in both Australia and New Zealand for the production and analysis of industrial statistics. ANZSIC replaces the Australian Standard Industrial Classification (ASIC) previously used. The data in Table 9 present a concordance between the outgoing ASIC and the ANZSIC for data collected in respect of the 1991-92 reference year. Data presented in Tables 1 to 8 of this publication are ASIC-based.

The ASIC classification was first released in 1969 and underwent an extensive revision in 1978 and a partial revision in 1983. In 1985, a major review of the ASIC commenced. The principal objectives were to improve the alignment of the ASIC with the International Standard Industrial Classification (ISIC), to achieve a better balance across the classification by giving more attention to the services sector (including segments relating to culture, entertainment and other recreational industries), and to take into account the effects of technological changes and changes in structure of the industry generally since the previous edition.

A succession of economic agreements between Australia and New Zealand have operated since 1922. The most recent of these (the Australia - New Zealand Closer Economic Relations Trade Agreement [CER]) became effective from 1 January 1983. This has resulted in joint working relationships being set up to harmonise statistics wherever possible. This ultimately resulted in the ANZSIC being developed and adopted as the standard industry classification in both countries.

The major change between ASIC and ANZSIC for the manufacturing division is that the number of industry subdivisions has decreased from twelve to nine. In very broad terms, the three industry subdivisions (or parts thereof) under ASIC that have been merged in ANZSIC are:

- Textiles and Clothing and footwear have been combined to form the Textiles, clothing, footwear and leather industry subdivision.
- Basic metal products and Fabricated metal products have been combined to form the Metal products industry subdivision.
- Transport equipment has been combined with Other machinery and equipment to form the Machinery and equipment industry subdivision.

There have been further changes at the industry group and industry class levels, which were made to address changes in technology and structure in the manufacturing industry.

In addition, a small number of activities which were classified to the manufacturing industry under ASIC have been classified to non-manufacturing industries under ANZSIC. The reverse has also occurred.

From the 1992-93 reference year onwards, the manufacturing industry publications 8201.0 and 8221.0 to 8221.7 will be ANZSIC-based. Manufacturing collections dating back to the 1989-90 reference year have been coded using both classifications to assist in time series analysis in future years. In the meantime, these data are available as unpublished data. There is also a range of ANZSIC-based data (in addition to the following concordance) which is available as unpublished data from the 1991-92 manufacturing census.

TABLE 9. MANUFACTURING ESTABLISHMENTS (a): ASIC-ANZSIC CONCORDANCE (b) BY INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92

		ANZSIC subdivision description and code																		
Industry subdivision		Food, beverages and tobacco		Textiles, clothing, footwear and leather products		Wood and paper products		Printing, publishing and recorded media		Petroleum, coal, chemicals and associated products		Non-metallic mineral products		Machinery and equipment		Other manufacturing		Total manufacturing (under ANZSIC)		Total ASIC
ASIC code	Description	21	22	23	24	25	26	27	28	29	21-29	Non-manufacturing (under ANZSIC)	Total ASIC							
ESTABLISHMENTS AT 30 JUNE (c) (No.)																				
21	Food, beverages and tobacco	341	—	—	—	2	—	—	—	—	343	63	406							
23	Textiles	—	74	—	—	—	—	—	—	—	74	—	74							
24	Clothing and footwear	—	88	—	—	—	—	—	—	—	88	—	88							
25	Wood, wood products and furniture	—	1	275	—	—	—	—	—	382	658	—	658							
26	Paper, paper products, printing and publishing	—	—	13	351	—	—	—	—	—	364	—	364							
27	Chemical, petroleum and coal products	—	—	—	—	99	—	1	—	—	100	—	100							
28	Non-metallic mineral products	—	—	—	—	—	200	—	—	—	200	—	200							
29	Basic metal products	—	—	—	—	1	—	72	—	—	73	—	73							
31	Fabricated metal products	—	—	—	—	—	—	555	48	—	603	—	603							
32	Transport equipment	—	—	—	—	—	—	—	248	—	248	—	248							
33	Other machinery and equipment	—	—	—	—	—	—	—	487	—	487	60	547							
34	Miscellaneous manufacturing	—	18	—	—	124	—	—	13	123	278	6	284							
21-34	Total manufacturing	341	181	288	351	226	200	628	750	553	3,516	129	3,645							
	Non-manufacturing (under ASIC)	4	—	—	—	—	—	—	53	—	57	—	—							
	Total ANZSIC	345	181	288	351	226	200	628	801	553	3,573	—	—							
EMPLOYMENT AT END OF JUNE (d) ('000)																				
21	Food, beverages and tobacco	11.2	—	—	—	—	—	—	—	—	11.3	0.4	11.7							
23	Textiles	—	1.6	—	—	—	—	—	—	—	1.6	—	1.6							
24	Clothing and footwear	—	1.1	—	—	—	—	—	—	—	1.1	—	1.1							
25	Wood, wood products and furniture	—	0.1	3.3	—	—	—	—	—	3.4	6.7	—	6.7							
26	Paper, paper products, printing and publishing	—	—	0.7	5.6	—	—	—	—	—	6.3	—	6.3							
27	Chemical, petroleum and coal products	—	—	—	—	3.7	—	—	—	—	3.7	—	3.7							
28	Non-metallic mineral products	—	—	—	—	—	4.6	—	—	—	4.6	—	4.6							
29	Basic metal products	—	—	—	—	—	—	6.1	—	—	6.1	—	6.1							
31	Fabricated metal products	—	—	—	—	—	—	6.9	—	0.7	7.6	—	7.6							
32	Transport equipment	—	—	—	—	—	—	—	3.4	—	3.4	—	3.4							
33	Other machinery and equipment	—	—	—	—	—	—	—	6.1	—	6.1	0.6	6.7							
34	Miscellaneous manufacturing	—	0.2	—	—	1.7	—	—	0.2	0.8	2.9	—	2.9							
21-34	Total manufacturing	11.2	3.0	4.0	5.6	5.4	4.6	13.1	9.7	4.9	61.5	1.0	62.5							
	Non-manufacturing (under ASIC)	0.1	—	—	—	—	—	—	0.2	—	0.3	—	—							
	Total ANZSIC	11.4	3.0	4.0	5.6	5.4	4.6	13.1	9.9	4.9	61.8	—	—							

For footnotes see end of table.

TABLE 9. MANUFACTURING ESTABLISHMENTS (a): ASIC-ANZSIC CONCORDANCE (b) BY INDUSTRY SUBDIVISION, WESTERN AUSTRALIA, 1991-92—continued

ANZSIC subdivision description and code																									
Industry subdivision		Food, beverages and tobacco		Textiles, clothing, footwear and leather products		Wood and paper products		Printing, publishing and recorded media		Petroleum, coal, chemicals and associated products		Non-metallic mineral products		Metal products		Machinery and equipment		Other manufacturing		Total manufacturing		Non-manufacturing (under ANZSIC)		Total ASIC	
ASIC code	Description	21	22	23	24	25	26	27	28	29	21-29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
WAGES AND SALARIES (e) (\$m)																									
21	Food, beverages and tobacco	311.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	Textiles	—	39.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	Clothing and footwear	—	21.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	Wood, wood products and furniture	—	1.9	81.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	Paper, paper products, printing and publishing	—	—	22.1	143.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	Chemical, petroleum and coal products	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	Non-metallic mineral products	—	—	—	—	138.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	Basic metal products	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31	Fabricated metal products	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32	Transport equipment	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
33	Other machinery and equipment	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
34	Miscellaneous manufacturing	—	6.0	—	—	44.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21-34	Total manufacturing	311.6	68.7	103.5	143.6	183.2	136.0	444.4	274.2	101.7	1,766.9	18.0	1,785.0	—	—	—	—	—	—	—	—	—	—	—	—
	Non-manufacturing (under ASIC)	2.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total ANZSIC	314.2	68.7	103.5	143.6	183.2	136.0	444.4	277.5	101.7	1,772.8	18.0	1,785.0	—	—	—	—	—	—	—	—	—	—	—	—
TURNOVER (\$m)																									
21	Food, beverages and tobacco	2,540.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	Textiles	—	151.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	Clothing and footwear	—	67.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	Wood, wood products and furniture	—	10.2	442.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	Paper, paper products, printing and publishing	—	—	140.3	575.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	Chemical, petroleum and coal products	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	Non-metallic mineral products	—	—	—	—	2,538.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	Basic metal products	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31	Fabricated metal products	—	—	—	—	0.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32	Transport equipment	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
33	Other machinery and equipment	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
34	Miscellaneous manufacturing	—	25.6	—	—	253.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21-34	Total manufacturing	2,540.9	254.4	582.3	575.6	2,792.4	766.5	3,730.5	1,161.0	423.9	12,827.6	75.4	12,903.0	—	—	—	—	—	—	—	—	—	—	—	—
	Non-manufacturing (under ASIC)	45.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Total ANZSIC	2,586.6	254.4	582.3	575.6	2,792.4	766.5	3,730.5	1,170.5	423.9	12,882.6	75.4	12,903.0	—	—	—	—	—	—	—	—	—	—	—	—

(a) See paragraph 30 of the Explanatory Notes. (b) See paragraph 42 of the Explanatory Notes. (c) See paragraphs 4 to 10 of the Explanatory Notes. (d) Includes working proprietors. (e) Excludes the drawings of working proprietors.

EXPLANATORY NOTES

Introduction

This publication presents final statistics compiled from a census of manufacturing establishments for 1991-92, with some comparative statistics relating to preceding years. In this respect it should be noted that there have been extensive revisions to the data from the 1990-91 census, due to further processing of that year's data subsequent to the release of the previous issue of this publication.

2. For the 1991-92 manufacturing census, businesses were requested to provide data on only employment, wages and salaries paid, turnover and issues relating to environmental protection.

3. Manufacturing, as specified in Division C of the *Australian Standard Industrial Classification* (ASIC), 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

4. The unit for which statistics are reported in the manufacturing census is the establishment. Prior to the 1988-89 census, this unit covered, in general, all the operations carried on under the ownership of one enterprise (business) at a single physical location.

5. The standard units definitions were revised for the 1988-89 census, with the establishment now being generally delineated on the basis of availability of accounting data rather than in terms of a location (refer to paragraph 10).

6. These new definitions were progressively implemented on the ABS central business register as reporting arrangements with individual businesses were finalised. The new management unit and establishment definitions were implemented on the ABS central business register in time for the 1990-91 census for those units classified to the manufacturing industry.

7. 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.

8. Some of those establishments predominantly engaged in one activity are 'split' into two or more establishments, when the secondary activity exceeds a specific value. (For 1991-92, this value was \$6.6 million in terms of sales and transfers out of goods and services.) These separate establishments are then classified to the industry appropriate to their activity.

9. In general, data contained in this publication relate to all manufacturing establishments which operated in Western Australia during the year ended 30 June 1992, except for sole proprietorships or family partnerships not employing staff at 30 June 1992. Information about these businesses was collected in the 1991 Census of Population and Housing, with summary employment information presented in Table 2 of this publication. As these data indicate, these businesses contribute only

marginally to statistical aggregates (other than number of establishments). In addition, the ABS attempts to obtain data for employing businesses which either commenced or ceased operation during the year, but it is not possible to obtain data for all of them.

Unit definitions

10. The standard units now in use are:

(a) *Management unit.* The management unit is the highest-level unit within a business, having regard to industry homogeneity, for which accounts are maintained; in nearly all cases, it coincides with the legal entity owning the business (that is, company, partnership, trust, sole operator, etc). In the case of large diversified businesses, however, there may be more than one management unit, each coinciding with a 'division' or 'line of business'. A division or line of business is recognised where separate and comprehensive accounts are compiled for it.

(b) *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.

(c) *Location.* A location is a physical unit of the establishment. It consists usually of an unbroken physical area or site, occupied by an establishment, at which, or from which, the establishment engages in productive activity on a relatively permanent basis. An establishment can consist of one or more locations. In specified circumstances, non-contiguous sites occupied by the same establishment can be combined to form a location.

Data item definitions

11. *Establishments at 30 June.* The number of establishments in operation at 30 June.

12. *Locations at 30 June.* The number of locations in operation at 30 June.

13. *Employment at end of June.* The number of working proprietors and the number of employees on the payroll for the last pay period ending in June. (Sole proprietors and partnerships not employing others are excluded.)

14. *Wages and salaries.* The gross wages and salaries of all employees of the establishment. The drawings of working proprietors are excluded.

15. *Turnover* (see Note below). Sales (exclusive of excise and sales tax) of goods whether produced by the establishment or not, plus transfers out of goods to other establishments of the same business, plus bounties and subsidies on production, plus all other operating revenue from outside the business (such as commission revenue, repair and service revenue, and rent, leasing and hiring

revenue), plus capital work done for own use, or for rental or lease. Receipts from interest, royalties, dividends and the sale of fixed tangible assets are excluded.

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

16. *Persons employed per establishment.* Employment at the last pay period ending in June divided by the number of establishments in operation at 30 June of the same year.

17. *Turnover per person employed.* Turnover of manufacturing establishments which operated during the year ended 30 June divided by the total number of persons employed at the last pay period ending in June of the same year.

18. *Manufacturing employment, August 1991.* These statistics are from the 1991 Census of Population and Housing and represent those persons who were classified as being employed in the manufacturing industry. 'Sole proprietors and partnerships not employing others' were those persons that indicated that they were employed in the manufacturing industry in this category but they did not have any salaried employees. The 'Total other' employed were those persons who worked for employing units (ie total employment excluding sole proprietors and partnerships not employing others).

19. *Manufacturing census employment at end of June 1991.* The number of working proprietors and the number of employees on manufacturing establishments' payrolls for the last pay period ending in June 1991. (Sole proprietors and partnerships not employing others are excluded). These data are from the 1990-91 manufacturing census.

20. *Demographic characteristics of persons employed, August 1991.* The source of these data is the 1991 Census of Population and Housing. The statistics presented show (in percentage terms) the sex and age characteristics of persons employed in the manufacturing industry and for all industries.

21. *Establishments that conducted environmental impact assessments or environmental audits.* Establishments that either conducted their own environmental impact assessments or environmental audits (including energy audits) or contracted others to do so.

22. *Establishments that encouraged the return of their own containers or packaging.* Establishments that encouraged and/or permitted the return of containers or packaging used in the marketing or distribution of their product.

23. *Establishments engaged in the marketing or production of goods or services for monitoring, maintaining or improving the environment.* Establishments involved in marketing or producing goods or services specifically for monitoring, maintaining or improving the environment.

24. *Proportion of total turnover.* The percentage of total manufacturing industry turnover attributed to establishments that gave positive responses to questions on environmental protection issues (for Table 6). The percentage of total reported turnover (excluding single establishment businesses with less than four persons employed) of establishments that had current expenditure on environmental protection (for Table 7).

25. *Current expenditure on environmental protection.* Expenditure on waste management plus other operational or maintenance costs incurred in protection of the environment from pollution. Included are such expenses as government and council fees, charges and taxes relating to pollution abatement and control, charges to remove and dispose of wastes arising from an establishment's production processes, research and development expenditure on pollution abatement and control, and expenditure on environmental impact assessments and environmental audits.

26. *Capital expenditure to abate pollution.* Expenditure on new plant, machinery or equipment designed to abate or control air, water, solid waste, noise or other pollutants by using either end-of-line techniques or change-in-production processes.

Comparability with previous statistics

27. As explained above, the standard units definitions were revised for the 1988-89 census and the new definitions have been implemented on the ABS central business register for units classified to the manufacturing industry.

28. For a detailed explanation of the various factors which affected the count of 'Number of manufacturing establishments' in the years to 1989-90, see the Appendix to the 1989-90 issue of this publication. Also, as indicated in paragraph 34 of the Explanatory Notes to that issue, there was a fairly constant level of undercoverage on the ABS central business register for the years from 1982. Coverage factors to convert previous years' data (with the exception of number of establishments) to a comparable basis with 1989-90 data are shown in Table 7 of the 1989-90 issue of this publication.

29. Prior to the 1989-90 census, most commodities produced in the petroleum refining industry (ASIC class 2770) were manufactured on commission for non-manufacturing businesses from materials owned and supplied by those businesses. In these cases, manufacturing turnover reflected only the value of commission earned by manufacturing establishments involved (not the gross value of the commodities produced). In 1989-90 and again in 1990-91 (but to a lesser extent), some businesses changed their accounting practices to report gross value of commodities produced. The effect of this change was not present for this census.

30. As with the 1990-91 issue, this publication no longer makes the distinction in tables presented between

those single establishment businesses with less than four persons employed and all other establishments. All time series statistics included in this publication now reflect this change (except where indicated).

31. For users still interested in the dissection between establishments employing less than four persons and establishments employing four or more persons, attention is drawn to Table 5 and the employment size category 0 - 3 persons. This new category includes all establishments employing less than four persons. In most cases, data in this new employment size category equates to the 'old' category of less than four persons employed (the major exception being Subdivision 28). A detailed break up of the differences can be made available on request.

Comparability of manufacturing and population census data

32. There are variations between the conceptually similar population census 'Total other' and manufacturing census employment figures presented in Table 2. These variations occur because of differences in the reference periods and collection methods used.

33. The manufacturing census estimates relate to employment in the last pay period ending in June 1991. The population census estimates relate to employment during the week ended 6 August 1991.

34. The population census was conducted through self-enumeration from individual households. The manufacturing census was collected through mail forms sent to all manufacturing establishments (except for single establishment businesses not employing staff) as recorded on the ABS central business register and which operated in Australia during the year ended 30 June 1991.

35. In the processing of the population census, there were cases where the industry of employment was not stated by the householder or where it could not be classified from the response provided. In these cases, a not classified code was allocated, which accounted for 7.2 per cent of total employment (across all industries). In the manufacturing census, all businesses (and, thereby, their total employment) were industry coded.

Employment size data

36. Summary of operations data at the industry subdivision level classified by employment size are presented in Table 5. These statistics relate to only those manufacturing establishments operating at 30 June 1992. As such, the figures presented in Table 5 may be slightly less than those presented in the other manufacturing census tables. These other tables include data for those manufacturing establishments which operated at any time during 1991-92.

Environmental statistics

37. A summary of environmental protection issues data at the industry subdivision level are presented in Table 6. All manufacturing establishments were asked to provide a 'yes' or 'no' answer as to whether they participated in the environment-related activities set out. The statistics presented relate to those establishments which responded 'yes' to the relevant issues. Establishments which did not respond were treated as if they had responded 'no'.

38. Data contained in Table 7 relate to current and capital expenditure on environmental protection in the year ended 30 June 1992. Data were not collected from those single establishment businesses with less than four persons employed. Establishments which did not respond were treated as if they had no current or capital expenditure on environmental protection.

Statistical division data

39. The location data presented in Table 8 are based on additional data collected in the 1991-92 census. The extra data requested were the activity carried out at the location, the number of persons employed and the address of the location.

40. Employment data shown in this table are based on reported employment, but in the case of wages and salaries and turnover data they do not reflect reported data in all cases. This is because in those circumstances where an establishment operates at more than one location, the data have been synthesised to derive location-level wages and salaries and turnover data. (However, it should be noted that most establishments operate at only the one location.) The location-level synthesised data were derived by using the location data collected on activity and employment, and then prorating wages and salaries and turnover based on the reported employment.

41. As indicated in paragraph 7, a manufacturing establishment covers all activities of the establishment, including any non-manufacturing activities. In Table 8, the non-manufacturing locations of manufacturing establishments have been excluded. For this reason, the State totals (for location data, other than the number of locations) in Table 8 may be less than those shown in Tables 1, 4, 5 and 9 (for establishment data). However, it is also possible for the State totals in Table 8 to be greater than those shown in Tables 1, 4, 5 and 9, as a result of individual locations of establishments being allocated a different industry classification to that of the 'parent' establishment.

Introduction of ANZSIC

42. The Australian and New Zealand Standard Industrial Classification (ANZSIC) is to be fully introduced into the manufacturing statistics collection from the 1992-93 collection. This classification replaces the Australian Standard Industrial Classification currently in use. An ASIC/ANZSIC concordance of data from the 1991-92 census is presented in Table 9 as a forerunner to what users can expect in future collections. For a more detailed explanation, users attention is drawn to the introduction to Table 9 and to the *Australian and New Zealand Standard Industrial Classification, 1993* (1292.0).

Related publications

43. Users may also wish to refer to the following publications:

Cost of Environment Protection, Australia, 1991-92 (4603.0), to be released later in 1994.

Manufacturing Technology Statistics, Australia, 31 December 1991 (8123.0), released on 22 February 1993.

Quarterly Indexes of Industrial Production, Australia (8125.0).

Business Operations and Industry Performance, Australia, 1991-92 (8140.0), released on 31 August 1993.

Business Operations and Industry Performance, Australia, 1992-93 (8140.0), released on 22 June 1994.

Manufacturing Industry, Australia, 1992-93, Preliminary (8201.0), released on 25 August 1994.

Manufacturing Industry, Australia, 1991-92 (8221.0), released on 21 February 1994.

Manufacturing Production, Australia: Principal Commodities Produced, 1989-90 (8365.0), released on 4 February 1994.

Monthly and quarterly commodity data

44. A number of publications are produced each month or quarter showing monthly details of the quantity produced of an extensive range of the more important commodities manufactured in Australia (some 600 in all). These publications include *Production Statistics, Australia, Preliminary* (8301.0) and a series of ten publications each relating to a particular range of products (8357.0 to 8369.0).

Back data and unpublished statistics

45. A range of manufacturing industry statistics publications is available for previous years. As well, a considerable amount of data from the manufacturing census exists in unpublished form. More detailed information to satisfy individual user requirements may be available on request. A charge would normally be made for providing such information.

Symbols and other usages

ANZSIC	Australian and New Zealand Standard Industrial Classification
ASIC	Australian Standard Industrial Classification
n.e.c.	not elsewhere classified
n.p.	not available for publication but included in totals where applicable
..	not applicable
—	nil or rounded to zero

46. Where figures have been rounded, discrepancies may occur between totals and the sums of the component items.



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